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The Influence of Net Working Capital and Capital Structure on Profitability in Manufacturing Companies in the Consumer Goods Industry Sector Listed on the Indonesia Stock Exchange

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Abstract---The manufacturing industry sector in the goods and consumption sub-sector has an attraction for investors to invest in companies to increase the profitability value of the company, several indications are needed to achieve the goal by maintaining the company's assets and assets and always paying attention to the company's debt and equity finance. This study examines 15 food and beverage sub-sector manufacturing companies listed on the Indonesia Stock Exchange (IDX) in 2016-2021, using panel data regression analysis techniques that are time series and cross-section to examine the relationship between model variables. The results of the analysis study were obtained where the selection of the Chow test model obtained the Common Effect Model (CEM) selection, while the Hausman test had doubtful results and the Langrange Multiplier test selected the Common Effect Model (CEM) model, while from the estimation results of panel regression data using the option Common Effect Model in which the variables Net Working Capital (0.013) and debt to equity ratio (DER) (0.000) have a positive influence while the debt to asset ratio (DAR) (0.003) has a significant negative effect. -a variable with a value (10.84 > 3.29). Furthermore, the results of the classical assumption that this study is free from multicollinearity and heteroscedasticity tests and obtaining autocorrelation cannot be guaranteed / doubtful, besides this research shows that the data is not normal but the normality test does not matter whether it is used, or not.

Keywords---capital structure, Indonesia stock exchange, manufacturing industry, net working capital, profitability

Introduction

Manufacturing companies in the food and beverage sub-sector are one of the industries that have contributed to increased economic growth in Indonesia, sustained growth in this sector will have an impact on increasing company revenues which can be seen from the *Return On Assets* (ROA) where the high ROA value indicates that a company has been productive in carrying out company activities so that it can generate profits. ROA can be used to measure the efficiency of the actions taken by each division and the use of divisional accounting. Then, ROA will provide an

objective comparison of various kinds of achievements between divisions. ROA can be compared with industry ratios so that the company's position in the industry can be identified (Sastra, 2019; Oino & Ukaegbu, 2015; Siregar & Utama, 2008).

Table 1
Development of ROA value of manufacturing companies in the consumer goods industry sector for the 2016 – 2021 period

Company Code	RETURN ON ASSETS (ROA)					
	2016	2017	2018	2019	2020	2021
CAMP	5.10%	3.59%	6.17%	7.26%	4.05%	8.72%
CHECK	2.88%	7.71%	7.93%	15.47%	11.61%	11.02%
CLEO	8.00%	7.59%	7.59%	10.50%	10.13%	13.40%
COCO	0.88%	2.06%	1.90%	3.18%	1.04%	2.30%
DLTA	21.18%	20.86%	22.19%	22.29%	10.12%	14.37%
GOOD	39%	20%	19%	16%	4%	6%
HOCKEY	41%	18%	26%	24%	7.58%	3.62%
ICBP	13.10%	11.70%	14.10%	14.70%	10.4%	7.1%
INDF	6.10%	6%	5.40%	6.10%	6.70%	6.5%
MYOR	11%	11%	10%	11%	11%	6%
BREAD	9.58%	3%	2.90%	5.10%	3.8%	7%
SKBM	2.25%	1.59%	0.90%	0.05%	0.05%	2%
SKLT	3.6%	3.60%	4.3%	5.7%	5.5%	9.6%
STTP	7.45%	9.22%	9.69%	16.75%	18.23%	15.75%
ULTJ	16.74%	13.88%	12.63%	15.67%	12.68%	17.24%
TOTAL	167.13%	124.06%	143.83%	149.64%	48.52%	73.44%
AVERAGE	11.1%	8.2%	10%	10%	3.2%	5%

Source: Processed by Researchers

According to Syamsuddin (2011), the greater the Net Working Capital, the greater the profit or profitability obtained by the company and the amount of working capital will determine the size of the company's sales and profits in the capital structure. According to Arifin (2018), capital structure is a long-term source of funds embedded in a company with a maturity of more than one year. Fahmi (2017), stated that the capital structure is an illustration of the form of a company's financial proportions, namely between owned capital that comes from long-term debt and own capital which is a source of financing for a company. Based on the theory and research results above, it appears that there is an influence between the variables Net Working Capital, Capital Structure and Profitability in manufacturing companies in the consumer goods industry sector, the food and beverage sub-sector.

However, it still does not show consistent results on the relationship between variables. Previous *review literature* conducted by Susanti & Saputra (2015), states that partially and together, DER has an influence on profitability. Fauzan et al. (2017), state that Capital Structure (DER) has a positive influence on Profitability. Sastra (2019), states that Capital Structure (DER) has a significant influence on Profitability. Jeselin et al. (2022), state that Capital Structure (DER) partially affects Profitability.

Research by Fauzan et al. (2017), Capital Structure (DAR) has a positive influence on Profitability. Octorika et al. (2022), state that the Capital Structure (DAR) jointly affects Profitability. However, in contrast to the research conducted by Maulita & Tania (2018); Zulkarnaen (2018), states that DAR has no significant effect on Profitability. Cahyana et al. (2022), state that Capital Structure (DAR) has a negative effect on Profitability. Therefore this study discusses the Effect of Net Working Capital and Capital Structure on Profitability in Manufacturing Companies in the Consumer Goods Industry Sector Listed on the Indonesia Stock Exchange.

Research Method

Scope This study analyzes the influence of Net Working Capital and Capital Structure on Profitability in manufacturing companies in the consumer goods industry sector which are listed on the Indonesia Stock Exchange for the period 2016-2021. The data for this study were taken through the official website of the Indonesia Stock Exchange (www.idx.co.id) where there are 37 After reviewing and selecting companies according to inappropriate

criteria, 15 companies were obtained and the research object as a sample discussed in this study was 90 (15 companies x 6 years). This study uses an analysis technique that combines and combines Time Series data with Cross Section data. Determination of the panel data regression equation is through the estimation of the panel data model, as for the form of the model to be tested in this study, namely:

$$ROA_{it} = \alpha + \beta_1 NWC_{it} + \beta_2 DAR_{it} + \beta_3 DER_{it} + \varepsilon_{it}$$

Where: Y = Profitability (ROA); X1 = Net Working Capital (NWC); X2 = Debt to Asset Ratio (DAR); X3 = Debt to Equity Ratio (DER); α = Constant; β 1,2,3 = Regression Coefficient; i = Cross Section; t = Time Series.

Table 2
Selection of the best model, namely the Common Effect Model (CEM)

	CEM		FEM		BRAKE	
	coefficient	prob	coefficient	prob	coefficient	prob
C	1.332075	0.0228	0.716828	0.0078	1.058341	0.1242
LOGNWC	0.251185	0.0389	0.140451	0.0158	0.197933	0.1517
LOGGED	-1.821452	0.0005	-0.315750	0.1279	-1.114185	0.0514
LOGDER	0.777683	0.0396	-0.004809	0.9729	0.400554	0.2832

Source: data processed by researchers (September 2022).

Table 3
Table of requirements for classical regression test assumptions panel data

Test Requirements ×	OLS (FEM & CEM)	GLS (REM)
Normality	Not	Yes
Heteroscedasticity✓	Yes	Not
Multicollinearity✓	Yes, if the independent variable is more than one	Yes, if the independent variable is more than one
Autocorrelation ×	Not	Not

Source: Gujarati & Porter (2012).

Result and Discussion

Financial report analysis needs to be carried out carefully by using the right analytical methods and techniques to produce the right decisions. The financial performance of a company is very beneficial for various parties (stakeholders) such as investors, creditors, analysts, financial consultants, brokers, the government, and the management itself. From the research results, the selection of *the Chow test model, the Hausman test, and the Langrange Multiplier test* can be seen in table 4:

Table 4
Panel Data Regression Model Selection

<i>Chow test</i>		<i>Hausman test</i>		<i>Langrange Multiplier Test</i>	
df	prob	Chi-Sq. df	prob	df	prob
(14,72)	5.9815	3	0.05514	105	0.0201 (Breusch-Pagan LM)
14	4.1664				

Source: data processed by researchers (September 2022).

Seen from the output results in table 4 above, it shows that the probability value for Cross-Section F is 5.9815, which means that this number is greater than 0.05 ($5.9815 > 0.05$). So the model chosen from this Chow Test is the Common Effect Model. Compared to Fixed Effect Models. Whereas in the Hausman Test results above, it can be seen that the probability value (Prob) on Chi-Square shows the number 0.05514 which means that it is equal to the critical value of 0.05 ($0.05514 = 0.05$). So that the model chosen from the Hausman Test is still vague and unsure

between the Random Effect Model or the Fixed Effect Model, therefore it is continued with the Langrange Multiplier (LM) test. Furthermore, in the Langrange Multiplier test, the results obtained were LM_BG 0.0201 < Table Chi at the 5% level (7.814), so it can be seen that the probability value (Prob) in Breusch-Pagan shows the number 0.0201 which means that this number is smaller than the Chi-Squared table level limit (1%,5%,10%). So the model chosen from the Langrange Multiplier Test is the Common Effect Model compared to the Random Effect Model (Sugosha & Artini, 2020; Putra & Sedana, 2019).

This study examines the classic assumption test as well as the normality test which shows that this research is not normally distributed with values (probability 0.000 < 0.05 conditional limit), but Corlett (1972), statement in the book Basic Econometrics, that the assumption of normality can be ignored with a probability value of 0.000 where if the sample size is large enough, we may be able to relax the assumption of normality. This is reinforced by Ghazali (2013), that for large sample data, the normality test is not mandatory. In addition, Ghasemi & Zahediasl (2012), revealed that violations of the normality assumption cannot be used with big problems and researchers have samples consisting of hundreds of observations so they can ignore the distribution of the data, then in this panel data classical assumption testing is not necessary (Gujarati & Porter, 2012). Furthermore, in this study is free from multicollinearity tests and heteroscedasticity tests, but the data has positive autocorrelation. In this case, the autocorrelation test is not required but is ignored for *Time Series Data with Cross Section data*.

The results of the estimated panel data regression obtained in this study indicate that the best model was chosen, namely the Common Effect Model (CEM) where the results can be seen in table 5:

Table 5
Research Equation Results - Common Effect Model

Dependent Variable: YROA					
Method: Panel Least Squares					
Date: 09/22/22 Time: 01:12					
Sample: 2016 2021					
The period included: 6					
Cross-sections included: 15					
Total panel (balanced) observations: 90					
Variables	coefficient	std. Error	t-Statistics	Prob.	
C	0.569116	0.574709	2.327820	0.0228	
NWC	0.302033	0.119779	2.537173	0.0131	
DAR	-2.249037	0.502695	-4.451631	0.0000	
DER	1.107437	0.372143	2.980600	0.0038	
R-squared	0.286579	Mean dependent var		0.621169	
Adjusted R-squared	0.260220	SD dependent var		0.583167	
SE of regression	0.221079	Akaike info criterion		-0.591285	
Sum squared residue	3.9589665	Schwarz criterion		-0.702388	
Likelihood logs	9.723638	Hannan-Quinn criter.		-0.636088	
F-statistics	10.843385	Durbin-Watson stat		1.562902	
Prob(F-statistic)	0.000005				

Source: data processed by researchers (September 2022).

Based on the results of table 5 data processing, the F-statistic value is 10.84348 with a probability of 0.000005. From this probability number of less than 0.05 it can be concluded that H0 is rejected and H1 is accepted which means the independent variables (Net Working Capital, Debt to Assets Ratio and Debt to Equity Ratio) simultaneously on Profitability or Return On Assets (ROA), while simultaneously partial variable Net Working Capital (NWC) obtained a t-count value of 2.537173 with a probability of 0.0131 < 0.05 has a significant positive effect, the Debt to Assets Ratio (DAR) variable obtained a t-count value of -4.451631 with a probability of 0.0000 < 0.05 has an effect significantly negative, the Debt to Equity Ratio (DER) variable obtained a t-value of 2.980600 with a probability of 0.0038 < 0.05 having a significant positive effect. In the results 1 the coefficient R^2 is 0.286535 and Adjusted R^2 is 0.260110, which indicates that by determination, the adjusted R2 correction rate is 0.260110 or 26%, the remaining 74% is influenced by other variables outside this study (Stock & Seliger, 2016; Brunnermeier & Cohen, 2003; Mun & Jang, 2015).

The results of the significance of Net Working Capital are in line with previous research conducted by Sastra (2019), stating that there is a significant influence between Net Working Capital as a whole and Profitability. Fatimah et al. (2020), state that Net Working Capital influences Profitability and research conducted by Jeselin et al. (2022), states that Working Capital has a partial effect on Profitability. Meanwhile, the Debt to Asset Ratio (DAR) is in line with the study of Octorika et al. (2022), which states that the Capital Structure (DAR) jointly affects Profitability. Wirianata et al. (2021); Cahyana et al. (2022), stated that Capital Structure (DAR) has an effect on Profitability. Widiyanti & Elfina (2015), stated that the Debt to Asset Ratio (DAR) is a partially negative but not significant effect on profitability (ROA).

As for the Debt to Equity Ratio (DER) variable, the Debt to Equity Ratio value shows the percentage of funds provided by shareholders to lenders. The higher the ratio, the lower the company's funding provided by shareholders. The pecking Order Theory explains why profitable companies generally borrow small amounts. This is not due to having a low Debt Ratio target, but because it requires little outside funding. The results of this study are in line with previous research conducted by Desnerita (2015); Iskandar et al. (2014), and stated that Capital Structure (DER) has a negative and significant effect on Profitability. Susanti & Saputra (2015), state that partially, DER has a negative effect on profitability. Widiyanti & Elfina (2015), stated that the Debt to Equity Ratio (DER) partially had a negative but not significant effect on profitability (ROA). However, in contrast to the results of a study conducted by Cahyana et al. (2022); Fauzan et al. (2017), stated that Capital Structure (DER) has an effect on Profitability. Jeselin et al. (2022), state that Capital Structure (DER) partially affects Profitability.

Based on the results of the study, namely the coefficient of determination R^2 or more precisely Adjustable R^2 obtained by 0.260 or 26% indicates the effect of the independent variables simultaneously is not too large on the value of the independent variables used in this study, namely the variables Net Working Capital, Debt to Assets Ratio and Debt to Equity Ratio. The independent variable used in this study shows a not-too-strong influence on efforts to increase the value of profitability (Ang et al., 1997; Angelia & Suryaningsih, 2015; Lieder & Rashid, 2016). The value of income is measured by comparing it with the company's own capital or debt, namely the Debt to Equity Ratio (DER) variable which has the most dominant influence on increasing the value of profitability. The increase and decrease in the Debt to Equity Ratio (DER) variable show that debt is used as an external funding source if internal funds are insufficient as long as the amount of debt used is within reasonable limits in order to meet the company's needs in generating profit. The fluctuating income and debt of the company will make investors think again about investing in the company (Baños-Caballero et al., 2019; Jamalinesari & Soheili, 2015).

Conclusion

In this study, by examining the effect of Net Working Capital and Capital Structure on profitability, it shows that the effect of the Net Working Capital and Capital Structure variables proxied by the Debt to Assets Ratio and Debt to Equity Ratio variables have a fairly strong influence partially on company profitability. The Net Working Capital (NWC) ratio shows an indicator of whether a company is able to pay off its debts and its financial condition is good or not. If the company has positive net working capital, then the company has the potential to experience prospective business growth. The Capital Structure Ratio, which is proxied by the Debt to Assets Ratio and the Debt to Equity Ratio, shows the financial condition and debts owned by the company. Increasing corporate debt will indeed help the company's operations but will affect perceptions of the company. Efforts to maintain the company by making loans to outsiders or investors need to be reviewed by the company's management so that the company's financial statements and income are not disturbed by the company's loans.

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