WORKING CAPITAL, FIRM SIZE, SOLVABILITY, AND LIQUIDITY TOWARDS PROFITABILITY OF THE CONSUMER GOODS INDUSTRY

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Abstract

Studies in financial performance have been subject to debates due to different results between these variables. In some cases, the effect of the working capital, firm size, solvency, and liquidity varies across industries. This study examined the impact of working capital, firm size, solvency, and liquidity on profitability. The samples were taken from 83 listed companies in the consumer goods sector on the Indonesia Stock Exchange for 2017 – 2019. The data in this study was obtained from financial reports provided through IDX or the company's website. This research used quantitative approach with multiple linear regression analysis. Our results showed that working capital and company liquidity did not affect profitability. Meanwhile, firm size and solvency both influence profitability.

Keywords: Firm Size, Leverage, Liquidity, Profitability, Working capital

INTRODUCTION

A company is a business that carries out activities to earn a profit (Hery, 2016). The company certainly has goals that both the owner and management must achieve in optimizing profits. The company owner wants an optimal level of profit from operational activities. Each company must be able to keep records, books, and reports on every form of business to monitor the progress of the activities carried out. This recording can be made within a certain period in financial statements. To be able to read, understand, and comprehend the meaning of financial statements, they must first be analyzed with several commonly used analytical tools. One of these analytical tools is financial ratios (Kasmir, 2019). Financial ratios are often used to analyze financial statements (Mahaputra., 2012). Financial ratios consist of liquidity ratios, solvency ratios, profitability ratios, and activity ratios (Rusti'ani & Wiyani, 2017). The liquidity ratio focuses on the company's ability to cover daily operating costs and meet its short-term obligations as they fall due (Scott et al., 2017). The solvency ratio is used to measure the company's ability to fulfill all its obligations in the short and long term (Hery, 2016). The profitability ratio shows the company's ability to generate profits or a measure of the effectiveness of the company's management (Dewi, 2017). The activity ratio is used to measure how effective the company leveraging its assets to generate profits (Gitman & Zutter, 2015).

Financial ratios serve as a measuring tool to evaluate company performance (Hery, 2016). Better financial performance, namely by increasing profitability growth (Return on assets). Profitability growth in the manufacturing industry, in this case, Indonesian consumer goods companies, is declining due to increasingly fierce competition. The competition in the consumer goods industry, which is experiencing a slowdown in growth, has forced companies in this sector to optimize their profits to compete in the market. The decline and increase in profitability are influenced by many factors, such as working capital turnover and liquidity (Dwiyanthi & Sudiartha, 2017). Besides working capital and liquidity, company size (Ambarwati et all., 2015) and solvency.

Bintara (2020) found that working capital turnover did not affect profitability, while leverage affected profitability. The same result was found by Meidiyustiani's (2016) regarding the effect of working capital, firm size, sales growth, and liquidity on profitability. There is no effect of working capital on profitability. This is contrary to the results of research from Jana (2018), which shows that working capital turnover has an influence and leverage has no effect on profitability.

Ehiedu (2014) conducted research regarding the effect of liquidity on profitability with a financial statement analysis approach. The study found an influence between liquidity (current ratio) and profitability. Supporting research from Panigrahi and Joshi (2019) regarding the relationship between liquidity and profitability and financial error, which states an influence between liquidity and profitability. Meanwhile, Bintara's research (2020) on the effect of working capital, liquidity, and leverage on profitability, proves that there is no influence of liquidity on profitability.

Meidiyustiani (2016) and Jana (2018) research found an effect of firm size on profitability. However, the results of a study by Niresh and Velnampy (2014) on the impact of firm size on profitability prove that there is no effect between firm size to profitability.

There is inconsistency between studies. Several weaknesses in previous research will be addressed in this study. These weaknesses include having limitations in terms of research objects ranging from 2 to 15 companies, using only one independent variable. Therefore, the researcher will use 83 companies and four variables which also follow the suggestions from previous studies by Panigrahi and Joshi (2019) to add independent variables that will affect the dependent variable, namely profitability. In studies by Niresh and Velnampy (2014), Ehiedu (2014), Panigrahi and Joshi (2019), and Jana (2018), the researchers used correlation analysis, so in this study using causal analysis, following the advice given by Ehiedu (2014), for further research using causal analysis.

In this case, the author will continue research from Meidiyustiani (2016) using the same sample, namely the consumer goods industry, with the latest research data from 2017 to 2019. Using consumer goods in this study will provide an overview of the condition of the consumer goods industry in the 2017-2019 period in terms of profitability, working capital, company size, solvency, and liquidity. This study replaces one variable sales growth, with solvency. Researchers did not choose 2020 because of the COVID-19 pandemic, which caused Indonesia to experience an economic contraction or recession, including in the consumer goods sector (Badan Pusat Statistik, 2021)). Therefore, the 2017-2019 election is used to get more accurate results according to the situation before COVID-19.

LITERATURE REVIEW AND HYPOTHESIS DEVELOPMENT

Profitability

Profitability is a relative measure of business performance. Each of the various profitability ratios relates a company's revenue (profit) to sales, assets, or capital. There are three commonly used profitability ratios: net profit margin, return on assets and return on

equity. The more profitable the company is, the better it means (Scott et al., 2017). This research focuses on return on assets (net income on total assets). This study uses only one proxy for profitability, ROA, which is considered sufficient to represent the measurement of profitability. ROA is the most important measurement among the existing profitability ratios (Harahap et al., 2017). According to Sanjaya et al., (2015), one of the best measurements to measure company performance is ROA because return on assets can be determined by various company policies and is influenced by environmental factors. ROA shows a company's ability to use all of its assets to generate after-tax profits. The higher the ROA, the more efficient the use of company assets (Sudana (2011), . Or in other words, the same number of assets can create greater profits or the other way around (Muslih, 2019).

Working Capital

According to Harjito and Martono (2011), deciding how much working capital to invest in current assets in financing the company's operations can directly impact profitability. Working capital turnover can be used to measure the effectiveness of working capital. The working capital turnover rate is a ratio that measures or evaluates how efficiently a business uses its working capital over a certain period of time (Kasmir, 2019). Based on the results of research conducted by Putrawan et al. (2015) and Jana (2018), which show the results that working capital affects profitability, Reynata et al. (2019) and Handayani and Hadi (2019) have the result that working capital has a negative effect. In contrast to the results obtained by the four studies, the results obtained by Sari et al. (2019) and Putri et al. (2015), the working capital ratio does not affect profitability.

H_1 : Working capital has an influence on profitability.

Firm Size

Firm size is an indicator which can be categorized into large or small companies based on total assets, total income, market capitalization, and so on (Widiastari & Yasa, 2018). Total assets can represent the size of the company. When measuring firm size, the relative asset value is more stable than market capitalization and income (Sudarmadji & Sularto, 2007). The results from previous studies of Maqfirah and Fadhlia (2019) stated that company size influenced profitability, while Meidiyustiani (2016) found significant results but in a negative direction. In comparison, research from Sari et al. (2019) and Putri et al. (2015) found different results where firm size does not affect profitability.

H_2 : Firm size has an influence on profitability.

Solvency

The solvency ratio is a metric for determining a company's capacity to satisfy long-term obligations (Hanafi & Halim, 2012). The debt to equity ratio is used to explain the comparison between the number of funds provided by creditors and the number of money coming from the business owner to determine the company's ability to pay the long-term debt (Hery, 2016). Putrawan et al. (2015), Ramadita and Suzan (2019), and Bintara (2020) stated that solvency affected profitability, and Ramadita and Suzan (2019)found the same results but in a negative direction. Different results were found by Putri et al. (2015), where solvency does not affect profitability.

H_3 : Solvability has an influence on profitability.

Liquidity

Liquidity is the ability of a company to meet all financial obligations that must be paid or due (Hani, 2015). In this study for the liquidity ratio, researchers used the current ratio proxy. With this ratio, we can measure the company's ability to pay off short-term debt using all available current assets (Hery, 2016). The results of study by Nainggolan and Abdullah (2019), Putri et al. (2015), Ehiedu (2014), and Meidiyustiani (2016) prove that liquidity affects profitability. Putrawan et al. (2015) had the same result but in a negative direction. Different results were found by Sari et al. (2019); liquidity does not affect profitability.

H_4 : Liquidity has an influence on profitability.

RESEARCH METHOD

This study uses quantitative methods, data collected in the form of quantitative or other types of data that can be quantified and processed quantitatively using statistical methods (Yusuf, 2017). This study is causal research that aims to examine the causal relationship between the independent variable and the dependent variable.

Population and Sample

The population in this study are companies engaged in the consumer goods industry, both primary and non-primary. For sample selection, the researcher used the purposive sampling method. According to Meidiyustiani (2016), the purposive sampling method is a sampling technique carried out by selecting a sample from a population-based on available information and in accordance with ongoing research, which can include representatives from that population. The criteria used in the selection of research samples are:

Table 1
Research Sampling

No.	Sample Criteria	Total
1	IDX-listed consumer goods industry	219
2	Companies that provide 2017-2019 financial statements	110
3	Companies that do not make a profit from 2017 to 2019	27
	Research Company	83
	Total Research Object 83 x 3	249
4	Research Objects with incomplete data	-
5	Delisting company	-
	Total Research Data	249

The type of data used in this study is secondary data in the form of financial statements of companies listed on the IDX for 2017-2019. The data is obtained from www.idx.co.id for 2018 and 2019. For 2017, it is downloaded on the website of each company.

This research used a multiple linear regression analysis models, in which Y is reliant on two or more explanatory variables as the dependent variable, or regression (Gujarati & Porter, 2009). This study's regression was tested using the classic assumption test to determine feasibility. The heteroscedasticity test determines whether there is an inequality of variance in

the regression model from the residual of one observation to another observation. The result is that every variable WCT, SIZE, DER, and CR has values of 0.753, 0.203, 0.631, and 0.320, respectively. Each variable was subjected to a multicollinearity test; tolerance and VIF values were calculated for WCT, SIZE, DER, and CR with values of 0.980 and 1.021, 0.973 and 1.027, 0.916 1.091, and 0.912 respectively correspondingly 1.096 and 1.096. As a result, the regression model utilized in this study is devoid of bias heteroscedasticity and multicollinearity symptoms. A multiple linear regression test was used to test the effect of the independent variable on the dependent variable. The regression equation used is as follows:

$$ROA = α + β1WCT + β2SIZE + β3DER + β4CR + e$$

ROA = Profitability (Return on asset)
WCT = Working Capital (Working capital turnover)
SIZE = Firm Size (Ln of Total Assets)
DER = Solvency (Debt to equity)
CR = Liquidity (Current ratio)
α = Regression Equation Constants
β1 − 4 = Regression Coefficient
e = Standard Error

Variable Measurement

Working Capital

According to Kasmir (2019), working capital is the capital used to fund the company's operations. The formula to calculate Working Capital as follow:

Working Capital Turnover

$$= \frac{\text{Net Sales}}{((\text{current asset prior year} - \text{current liability prior year}) + \text{current asset current year} - \text{current liability current year}))/2}$$

Firm Size

Large companies have great opportunities to obtain financing from various sources, making it easier to get credit from creditors because large companies have more opportunities to compete or survive in the industry (Putri et al., 2015). The formula to calculate Firm Size as follow:

$$Firm\ Size\ =\ Ln(Total\ Assets)$$

Solvency

According to Kariyoto (2017), solvency is a ratio that describes a company's ability to meet its long-term obligations. The formula to calculate solvency as follow:

$$Debt\ to\ Equity\ Ratio = \frac{Total\ liabilities}{Total\ equity}$$

Liquidity

The liquidity ratio is a ratio that measures the company's ability to pay off its short-term debt ((Michael and J, 2015). The formula to calculate Liquidity as follow:

$$Current\ Ratio = \frac{Current\ Asset}{Current\ liabilities}$$

Profitability

According to Hery (2016), the profitability ratio is used to measure the company's ability to generate net income from its business activities.

$$Return\ on\ Asset = \frac{Net\ Income}{Total\ Asset}$$

Data Analysis

H_0 is rejected, and Ha is accepted if the result is a significant value (p-value) of 0.05 and 0,10, indicating that the independent variable has a significant effect on the dependent variable. H_0 is accepted, and Ha is rejected if the result is a significant value (p-value) of 0.05 and 01,0, indicating that the independent variable has no significant effect on the dependent variable.

RESULT AND ANALYSIS

Descriptive Statistical Test Results Analysis

Descriptive statistical test results are shown in Table 2. Table 2 shows the average, maximum, minimum, and standard deviation values of the five variables used. The standard deviation is used to see the distances between average and actual sample data figures.

Table 2
Descriptive Statistical Test Results

Variable	N	Minimum	Maximum	Mean	Std. Dev.
WCT	249	-220.35	1177.30	23.5014	122.37388
SIZE	249	13.62	29.41	19.9475	3.08375
DER	249	-2.21	4.29	.8998	.87227
CR	249	.00	38.59	2.9597	3.51347
ROA	249	.00	.94	.0889	.11810

The minimum value of working capital proxied using WCT of 220.35 is found at Pioneerindo Gourmet International Tbk. in 2018, and the maximum value of 1177.30 is at Sampoerna Agro Tbk. The average weight of working capital turnover from 2017 to 2019 is

23.5014, and this shows the average ability of the consumer goods industry to utilize working capital in company operations.

In the company's size, the minimum value of 13.62 was found at Akasha Wira International Tbk. in 2019, and the maximum value of 29.41 is at Ace Hardware Indonesia Tbk. year 2019. With an average value of 19.9475, most of the research samples, which are companies in the consumer goods industry, are classified as large; this is because the average value is close to the maximum value.

Solvency, as proxied by debt-to-equity ratio, has a minimum value of -2.21 found in Primarindo Asia Infrastructure Tbk. in 2018. The maximum value of 4.29 is at Midi Utama Indonesia Tbk. 2017. The average weight of 0.8998 shows that the average sample company in the consumer goods industry is low because a DER ratio of less than 1 indicates that the company has obligations or liabilities that are smaller than equity.

The minimum value of liquidity proxied using the current ratio of 0.002 was found at Japfa Comfeed Indonesia Tbk. in 2017. The maximum value of 38.59 is at Metro Realty Tbk. in 2018 and 2019. Then the average value of the current ratio from 2017 to 2019 is 2.9597. This shows that the average company in the consumer goods industry is quite good because companies can use their existing assets or current assets to meet current liabilities or current liabilities.

Profitability proxied by return on assets gets an average value (mean) of 0.0889 and a standard deviation of 0.1181. The average profitability value of 0.0889 illustrates that the average consumer goods company in Indonesia listed on the IDX in 2017-2019 can generate a profit of 8.89% compared to the total assets owned.

Hypothesis Test Results Analysis

As shown in Table 3, the result of the T-test can be calculated using the following formula:

$$ROA = 0.332 - 0.000082 \ (WCT) - 0.012 \ (SIZE) - 0.017 \ (DER) + 0.002 \ (CR) + \varepsilon$$

The constant intercept value of 0.332 confirms that if the value of all independent variables is 0. then the ROA value will be equal to the constant intercept or 0.332.

Table 3
T – Test (Partial)

Model	Unstandardized Coefficients		Standardized Coefficients	t	Sig.
	B	Std. Error	Beta		
(Constant)	.332	.048		6.858	.000
WCT	-0.000082	.000	-.085	-1.401	.163
SIZE	-.012	.002	-.304	-4.959	.000
DER	-.017	.009	-.123	-1.945	.053
CR	.002	.002	.061	.969	.333

The effect of working capital on profitability

Table 4.5 shows that the working capital variable has a p-value of 0.163 > 0.05, so it can be concluded that working capital, in this case, does not affect profitability, so H_1 is rejected. The results of this hypothesis test are in line with the research by Bintara (2020), which indicates that an increase or change in working capital does not affect the ability of assets to generate profits. Funds in working capital can be used to expand the business, but do not

increase the return on assets where the increase in profitability is not in line with the increase in assets because working capital is not used effectively. This is because working capital is not being used effectively, so any increase in the working capital turnover variable will not increase profitability. Working capital turnover reflects not just an increase or decline in profitability but also other elements that affect profitability, such as sales growth, profit changes, and total asset turnover. This can be shown in data processing, which reveals that information on working capital turnover does not always correspond to an increase or decrease in profitability in the sample companies.

The effect of firm size on profitability

The results of the analysis as outlined in Table 3 regarding firm size indicate that the firm size variable has a p-value of 0.000 <0.05. It can be concluded that the size of the company has an influence on profitability, so H_2 is accepted. The coefficient value shows a negative value of -0.012. The negative value happens because the increase in the company's size (total assets) is greater than the increase in net income or EBT, so the return on assets decreases when the company's size increases. These results align with Maqfirah and Fadhlia (2019) research that firm size affects profitability. The negative impact means that when the company's assets have increased, the profit, in this case, the return on assets will decrease because the company's assets are not used for the company's operational activities. Companies with many assets describe the condition of the company, when the total assets are larger, the investment capital and the company's size are enormous. More money will go into the company and thus increase the operating efficiency of the company.

The effect of solvency on profitability

The results from Table 3 show that the solvency variable with the debt to equity ratio proxy has a p-value of 0.053 < 0.1. Although this variable is not significant at the 5% significance level, the obligation to equity ratio has a significant effect at the 10% significance level, so H_3 is accepted. The value of coefficient 2 of -0.017 indicates a negative influence between solvency variables on profitability of 0.017. This suggests that as the debt-to-equity ratio falls, firm profitability rises, and likewise. The results of this hypothesis test are in line with the research of Bintara (2020) and M.Thoyib et al. (2018), who found that solvency affected profitability. The low solvency value affects the ROA, resulting in high profitability. That means the cost of debt issued by the company can still be handled by capital, so there is no need to incur high costs to pay debt interest so that the value of return on assets will increase.

The effect of liquidity on profitability

Table 3 shows the p-value of 0.333 > 0.05, so it can be concluded that H_4 is rejected. Thus, the current ratio does not affect the profitability of companies in the consumer goods industry in 2017-2019. The findings of this hypothesis test support Panigrahi and Joshi (2019) research about the effect of liquidity on profitability. They got the result that firm liquidity does not impact profitability; this can happen if the company's current assets are not utilized to their full potential to generate revenues. The company disburses cash to pay its current liabilities, not on optimal management of company operations to develop the business so that there is no influence on the company's high or low profits or profitability (Pramesti et al., 2016).

CONCLUSION

Working capital does not affect profitability. This means that the value of the company's working capital does not support an increase in profitability. Firm size influences profitability,

which indicates that the larger the company (total assets), the higher the total profitability. However, the partial test found a negative direction, meaning that the percentage increase in total assets is inversely proportional to the increase in profitability as proxied by return on assets. Solvency influences profitability, which means changes in solvency will affect changes in profitability. However, because the results are negative and it is found that the solvency of the company under study has a lower debt value than equity, low solvency can increase profitability because of the low cost of debt that the company must bear. Profitability is unaffected by liquidity, which shows that increasing the liquidity variable will not affect profitability. The ability of a corporation to pay off short-term debt has little effect on the rate of return on assets acquired.

Further research can use other variables such as sales growth, profit changes, total asset turnover, and working capital management (cash conversion cycle) or other alternative variables that can affect profitability. The variables in further research can use other proxies that are following the financial ratios studied so they can explain profitability well and more accurately. Further research can also use the research period with the year after the COVID-19 pandemic occurred so that research results are more relevant and closer to the actual situation. As well as being able to expand the scope of research, it is not only limited to consumer goods sector companies. This is expected to get better research results if research is carried out between industrial sectors.

For companies, considering the high return on assets (ROA) is good for the company. It is expected that the company would be able to maintain and improve debt management and the size of the company (total assets) because these two variables have an impact on expanding corporate profitability. Management must manage the funds entrusted to it properly by meeting the company's funding needs by combining loan and equity funding sources. The company must manage its size (total assets) by developing its assets effectively and efficiently for expansion purposes, such as constructing new offices in several places. Even though the rate of Return on Assets generated during the expansion is low due to the increase in assets, it is a long-term investment, resulting in a profit return.

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