The Effect of Working Capital Management on the Profitability of Food and Beverage Companies Listed on the Indonesia Stock Exchange for the 2020-2022 Period

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Abstraction. This study looked at the relationship between working capital management component and Return on Assets (ROA) profitability in food and beverage companies listed on the Indonesia Stock Exchange (IDX) using statistical methods. Financial report data for the years 2020–2022 were used to create a purposeful sample of 20 businesses. The independent variables that make up the research variables are cash turnover (CTO), receivable turnover (RTO), and inventory turnover (ITO), with return on assets (ROA) serving as the dependent variable. Using Microsoft Office Excel and the SPSS 26 software, multiple linear regression analysis is the study approach utilized. When research findings are partially evaluated, they reveal a relationship between firm ROA and CTO, but no relationship between RTO and ITO.

Keywords: Cash Turnovers, Receivable Turnover, Inventory Turnover, Profitability, Working Capital Management

1. Introduction

The food and beverage business are one of the fastest-growing industrial sectors. From 2020 to 2021, the food and beverage sector are expected to grow by 2.54% to IDR 775.1 trillion.[1] Subsequently, this industry was able to contribute as much as 37.77% of the GDP of the non-oil and gas processing industry in the first quarter of 2022.[2]

This growth is being driven, in part, by people's strong spending power for food and beverage

[1] Can accessed via: https://www.merdeka.com/trending/cara-penulisan-footnote-lengkap-besert-exemplar-pahami-aturannya-pula-kln.html (accessed September 17, 2022).

[2] Can accessed via: https://kemenperin.go.id/artikel/23393/Kontribution-Industri-Makanan-dan-Minuman-Tembus-37,77-Persen (accessed September 17, 2022).

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products. Nonetheless, there is fierce rivalry and price volatility for raw materials that face the food and beverage industry. Additionally, food and beverage companies have challenges from inventory kinds that cannot be kept in storage for extended periods of time. This makes inventory, sales, and purchasing procedures extremely important

Working capital management is an effort made by company to maintain a balanced level of current assets and current liabilities so that the value of the company can be maximized [6]. High corporate value is beneficial for the company's long-term and short-term funding sources. Therefore, companies are requiredto not only concentrate on how to generate profits but also how to maintain a healthy level of working capital [6]. Companies will avoid potential financial problems if they have good working capital management [4]. Excessive working capital will reduce the company's profitability becausethese funds are not used for other, more profitable interests, while a lack of working capital will endanger the company's solvency [5].

Previous research by [8] in food and beverage companies for the 2012–2016 data year shows that if tested simultaneously, CTO and RTO have an effect on company ROA. When tested partially, onlythe CTO has a significant effect on company ROA. Research by [11] in food and beverage companies listed in Nigeria concluded that there is no significant relationship between the receivables collection period policy and profitability, while there is a significant negative relationship between the inventory conversionperiod policy and profitability. According to a 2018 study [6] on pharmaceutical companies listed on the Indonesia Stock Exchange (IDX), the CTO, RTO, and ITO all simultaneously affect a company's return on assets (ROA). Only CTO and RTO had an impact on company ROA when examined in part. In contrast, partial testing reveals that only CTO and ITO have an impact on business ROA, but concurrently, CTO, RTO, and ITO have an impact on company ROA [7]. These findings apply to cement companies registered on the Indonesia Stock Exchange (IDX).

Furthermore, the partial test results on capital structure and CTO had no appreciable impact on the firm's return on assets (ROA), according to [10] analysis of manufacturing firms listed on the Indonesia Stock Exchange (IDX). According to [2] research, automobile companies listed on the Indonesia Stock Exchange are not significantly impacted by working capital turnover or company profitability, even though capital structure has a significant impact on profitability.

The use of various variables, samples, techniques, and research periods is the reason for the disparity in the findings of the several studies mentioned above. The present study is an extension of [8] investigation, titled The Impact of Cash Turnover and Receivable Turnover on the Profitability of Food and Beverage Sub-Sector Companies in 2012-2016. In this study, inventory turnover (ITO), an additional independent variable, is added to the same set of variables. Data from food and beverage companies for the years 2020–2022 is the focus of the study. Thus, " Working Capital Managements impact on food and beverage companies listed on the Indonesia stock exchange's profitability for the 2020-2022 period" presents an intriguing research topic for scholars.

2. Theory And Literature Review

2.1 Signal Theory

Signal theory is related to profitability. This theory encourages companies to provide information about their financial statements to investors to encourage them to invest. The signals conveyed

are in the form of positive andnegative signals. A positive signal indicates good growth for the company, while a negative signal indicates that the company will experience losses in the future [1]. Signal theory on profitability indicates that a high value on Return on Assets (ROA) will be seen as a good signal by investors because financialperformance is considered to be in good condition.

2.2 Agency Theory

Agency theory suggests a contractual relationship between a business owner or principal and a manager or agent.In companies, company management acts as an agent who is responsible for providing information about the condition of the company. Information in the form of financial data reports provided by the company to investors becomes a signal for making investment decisions. Investors as principals will receive signals from company management as agents through published financial reports.

2.3 Literature Review

According to research by [8], the company's return on assets (ROA) is significantly impacted by testing CTO and RTO concurrently. If company ROA is only partially examined, CTO has a significant impact, whereas RTO has a slight but noticeable impact. Yusuf & Sani's (2018) research revealed a significant negative relationship between profitability and the policy of the inventory conversion period, but no significant relationship between the policy of the receivables collection period and the company's ROA.

Research by [6] concludes that CTO, RTO, and ITO have a simultaneous effect on company ROA, but partial testing found that only CTO and RTO have a significant effect on company ROA. Research by [1] found CTO, RTO, and ITO have a significant effect simultaneously on company ROA, but if tested partially, it is found that only CTO and ITO have a significant effect on companyROA.

Research by Wulandari et al. (2020) concludes that the partial tests of capital structure and CTO each do not affectcompany profitability, but simultaneously testing shows that all independent variables have a significant effect oncompany ROA. Research by [1] concluded that Return on Assets (ROA) is significantly negatively affected by ITO, the average payment period, and the cash conversion cycle. Furthermore, Return on Assets (ROA) is positively and significantly affected by the average collection period. [5] revealed a negative correlation between the company's financial performance and the average collection period. There was a negative correlation found between the average age of inventory and financial performance. Return on Equity (ROE) was found to be negatively correlated with the average payment period. There was discovered to be a negative correlation between the cash conversion cycle and net operating profit margin variables. According to research by [4], businesses need to think about accounts payable, inventory management, and cash cycles. The accounts payable period (DPO) has a positive impact on return on assets (ROA) and the cash cycle (CCC) has a positive impact on gross operating profit (GOP), according to the research findings. While the inventory period (DIO) on GOP and ROA found a negative effect.

According to [2] research, there is a significant correlation between capital structure and profitability but not between working capital turnover and company profitability. According to [9] found no correlation between leverage and profitability, but working capital management and liquidity had a significant positive relationship, at least partially, with company profitability.

2.4 Hypothesis Development

2.4.1 Effect of *Cash Turnover* on Profitability

The high cash flow cycle in the company illustrates the efficient use of cash, on the other hand, a low cash flow turnover results in a large number of unproductive funds, which will then reduce the company's profitability.

In line with signaling theory and agency theory, high cash flow in financial statements indicates stable financial performance and will be responded to as a positive signal by investors. This theory is in line with previous research by [8], [6], and [7], which states that the CTO has an effect on the company's ROA. Therefore, the researcher proposes the first hypothesis, namely:

H1 = The profitability of food and beverage companies listed on the Indonesia Stock Exchange is impacted by cash turnover, or CTO.

2.4.2 Effect of *Receivable Turnover* on Profitability

If a company's receivable turnover moves faster, the company's financial condition will be better and the ratio ofuncollectible accounts will be lower. However, the slower the receivable turnover, the longer the receivables willturn into cash due to high uncollectible receivables, which then have an impact on the company's financial condition.

In line with signaling theory and agency theory, companies with fast receivables turnover will be responded to asa positive signal because these conditions indicate a good financial condition of the company. This theory is in line with previous research by [6], who concluded that RTO has an effect on company ROA. Therefore, researchers put forward a second hypothesis, namely:

H2 = The profitability of food and beverage companies listed on the Indonesia Stock Exchange is impacted by Receivable Turnover (RTO).

2.4.3 Effect of *Inventory Turnover* on Profitability

If the inventory turnover is higher, the better it will be for a company. This condition illustrates the company's ability to sell inventory items quickly and generate income. However, low inventory turnover causes inventory toaccumulate and become inefficient, which then affects the company's profitability.

In line with signaling theory and agency theory, high inventory turnover in published financial reports by companies will be responded to as a positive signal by investors. This condition indicates better financial performance. This theory is supported by the research of [11], [7], and [4], who concluded that ITO has an effect on company ROA. Therefore, researchers put forward a third hypothesis, namely:

H3 = Inventory Turnover (ITO) affects the profitability of food and beverage companies listed on the Indonesia Stock Exchange.

2.5 Research Framework

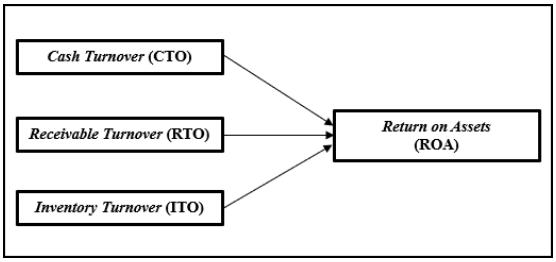

Figure 1 Research Framework

3. Research Methods

In order to statistically analyze the impact of the working capital management components—CTO, RTO, and ITO—on profitability with Return on Assets (ROA) in food and beverage companies listed on the Indonesia Stock Exchange (IDX) for the 2020–2022 period, a total of thirty companies are included in the study. This is done using a quantitative approach. Utilizing a purposive sampling technique, the sample was chosen based on a set of requirements, including food and beverage companies that are IDX-registered and that submit their annual financial reports in rupiah for the years 2020–2022. Over the course of the three-year study period, 20 companies in total satisfied the sample criteria, yielding 60 samples.

Research data in the form of financial reports was obtained through the official website of the Indonesia Stock Exchange and will be processed using Microsoft Office Excel and the SPSS 26 program. Data analysis includes descriptive statistical analysis, and classical assumptions will be tested, including normality, multicollinearity, autocorrelation, and heteroscedasticity tests. Furthermore, multiple linear regression tests, the T test, and the coefficient of determination.

3.1 Operational Variables and Their Measurements

3.1.1 Cash Turnover

The company's ability to manage its funds so as to generate sales. The following is the formula for calculating cash turnover:

$$Cash\ turnover = \frac{sales}{Average\ of\ Cash}$$

$$Average\ of\ Cash = \frac{Beg.Cash + End.Cash}{2}$$

3.1.2 Receivable Turnover

The company's ability to obtain receivables owned. The following is the formula for calculating receivableturnover:

$$Receivable\ turn\ over = \frac{sales}{Average\ of\ Receivable}$$

$$Average\ of\ Receivable = \frac{Beg.Receivable + End\ Receivable}{2}$$

3.1.3 Inventory Turnover

The company's ability to sell its inventory. The following is the formula for calculating inventory turnover:

$$Inventory\ turnover = \frac{Cost\ of\ Good\ Sold}{Average\ of\ Inventory}$$

$$Average\ of\ Inventory = \frac{Beg.Inventory + End.Inventory}{2}$$

3.1.4 Return on Assets (ROA)

Management of assets by the companies to gain profit. The following is the formula for calculating ROA:

$$A = \frac{Net\ Income}{Total\ Assets} X100\%$$

4. Results And Discussion

4.1 Descriptive statistics

Descriptive statistics are measuring tools to determine the minimum, maximum, average, and standard deviationvalues of all research variables. The results of the descriptive statistical test can be seen in Table 1 below.

Table 1. Descriptive Statistical Test Results

	N	Min	Max	Means	Std. Dev
CTO	60	.70	374.95	27.6503	59.614134
RTO	60	3.315	15.90	8.2108	3.102419
ITO	60	.91	15.05	6.2793	3.094795
ROA	60	00	.27	.0951	.059894
Valid N (listwise)	60				

The results of the above descriptive statistical test indicate distinct values for each variable, as shown in Table 1. With a standard deviation of 59.614134, the mean value for CTO was 27.65037. PT Delta Djakarta Tbk has a minimum CTO value of 0.709 in 2020, while PT Sariguna Primatirta Tbk has a maximum CTO value of 374.956 in 2022. With a standard deviation of 3.102419, RTO displays a mean value of 8.21083. PT Multi Bintang Indonesia Tbk has a minimum RTO value of 3.315 in 2020, while PT Garudafood Putra Putri Jaya Tbk has a maximum RTO value of 15.902 in 2022.

ITO shows a mean value of 6.27937 with a standard deviation of 3.094795. The minimum ITO value of 0.911 isPT Delta Djakarta Tbk in 2020, and the maximum ITO value of 15.055 is PT Nippon Indosari Corpindo Tbk in 2020. Profitability shows a mean value of 0.09510 with a standard deviation of 0.059894. The minimum ROA value of 0.003 is PT Sekar Bumi Tbk in 2020, and the maximum ROA value of 0.274 is PT Multi Bintang Indonesia Tbkin 2022.

4.2 Classic assumption test

A measuring tool that aims to assess the feasibility of data and ensure that the data is free from classic assumptiondeviations, then hypothesis testing can be carried out. The results of the classical assumption test can be seen in Table 2 below.

Table 2. Results of the Classical Assumption Test

No	Test	Tools	Sig	Ket
1	Normality	Kolmogorov-Smimov	0.20	Normal distributeddata
2	Multicollinearity	Tolerance / VIF	> 0.1 / < 10	Multicollinearity doesnot occur
3	Autocorrelation	Durbin Watson	DW > DU andDW < 4-DU	Autocorrelation doesnot occur
4	Heteroscedasticity	Scatter Plots	Spread	Heteroscedasticitydoes not occur

4.3 Hypothesis Test (T Test)

Hypothesis testing with the t test is a measuring tool to determine how the dependent variable is affected by eachindependent variable. The results of the t test can be seen in Table 3 below.

Table 3. Test Results

Model		t	Sig.
1	(Constant)	4.873	.000
	CTO	-2.044	.046
	RTO	.605	.547

ITO	-.731	.468

a. Dependent Variable: ROA

a. Effect of Cash Turnover on Profitability

Based on Table 3 above, the significance value for CTO is 0.046, which is 0.046 < 0.05. This means that the CTOinfluences the company's ROA, so the hypothesis is accepted. A high cash turnover indicates the efficient use of cash by the company to generate sales. Increased sales will have an impact on increasing company assets.

The results of this test are in line with previous research by [8] in food and beverage companies, which states that the CTO affects company profitability. This test is also supported by research by [6] in pharmaceutical companies that states that CTO affects profitability. The higher the company's CTO, the higher the sales it will generate, followed by an increase in the company's profits.

b. Effect of Receivable Turnover on Profitability

Based on Table 3 above, the significance value for RTO is 0.547, which is 0.547 > 0.05. This means that the RTOhas no effect on the company's ROA, then the hypothesis is rejected. Research data shows that the average RTO has fluctuated, but the average ROA has increased. This means that high or low receivable turnover does not affectthe company's assets. In addition, the research data also shows that sales decreased while receivables increased, and sales increased followed by an increase in receivables. Even though it is stated that it has no effect on profitability, companies need to manage it properly so that the risk of bad debts is small.

The results of this test are in line with previous tests by [8] and [7], which state that the company's ROA is not affected by RTO. The slow cycle of accounts receivable causesreceivables to take a long time to become cash again. However, the results of this test are different from previoustests by [6] in pharmaceutical companies, which concluded that RTO has an effect on company ROA.

c. Effect of Inventory Turnover on Profitability

Based on Table 3 above, the significance value for ITO is 0.468, which is 0.468 > 0.05. This means that ITO hasno effect on company ROA, so the hypothesis is rejected. Research data shows a low level of inventory turnover.This can be caused by the company's inability to manage its inventory efficiently, resulting in a buildup of inventory items. Types of inventories whose storage span is not too long or has an expiration date must be immediately processed and sold. If it is not immediately processed and sold, the company must bear the costs of the piling up inventory.

This research is in line with previous research by [6], which found that ITO has no effecton company ROA. The slow sale of inventory causes a lot of merchandise inventory to accumulate in warehouses.However, this research is different from previous research by [11] and [7], which concluded that ITO has an effect on the company's ROA.

4.4 Determination Coefficient Test

A measuring tool used to assess the proportion of all independent variables in the dependent

variable.

Table 5. Test Results R^2

Model	R	R^2	Adj. R	std. Err. of the Estimates
1	.329 [a]	.108	.06	.077681

a. Predictors: (Constant), CTO, RTO, ITO

Based on the test results above, the R^2 value is 0.108, which means that 10.8% of profitability is affected by cash turnover, receivable turnover, and inventory turnover. The remaining 89.2% is influenced by other factors that arenot included in the research model. The greater the value of R^2, the better the ability of the regression model.

5. Conclusion

Based on testing the hypothesis with the t test, it can be concluded that the first hypothesis shows that cash turnover(CTO) has an effect on company ROA. The second hypothesis shows that receivable turnover (RTO) has no effecton company ROA. This means that the level of receivable turnover does not affect the value of the company's assets. Even though it has no effect, the company still needs to manage it properly so that the risk of uncollectibleaccounts is small. Furthermore, the third hypothesis shows that inventory turnover (ITO) has no effect on company ROA. This is due to the low level of inventory turnover. The company is unable to manage its inventory properly,so a lot of inventory items accumulate in the warehouse and increase the costs borne by the company for this inventory.

5.1 Limitations

The research focuses only on food and beverage companies listed on the IDX. The research data analyzed was only for three years, starting in 2020–2022. The variables used are also limited to the three components of workingcapital, namely CTO, RTO, and ITO on the dependent variable profitability/Return on Assets (ROA).

5.2 Suggestion

The next research project is expected to expand the scope and period of the research. In addition, research variables can also be expanded, such as accounts payable, capital structure, and so on. The research findings state that receivable turnover and inventory turnover are not proven to affect profitability, so it is advisable to do a repeat test by increasing the number of samples or the study period.

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