

The effect of working capital management, fixed financial asset ratio, financial debt ratio on profitability in Indonesian consumer goods sector

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CHRONICLE

Article history:

Received: October 29, 2020

Received in revised format:

November 27 2020

Accepted: December 15, 2020

Available online:

December 15, 2020

Keywords:

Working capital

Fixed asset

Profitability

ABSTRACT

The purpose of this study is to analyze the impact of working capital management, fixed assets and debt ratio on company profitability. The study uses a sample of consumer goods sector companies listed on the Indonesia Stock Exchange from 2017 to 2019. The researchers use working capital management by the number of number of days account receivable (ARDays), the number of days Account Payable (APDays), the number of days inventory (INVDays), the Fixed Financial Asset Ratio (FA), and the Financial Debt Ratio (FD) with profitability by using gross profit (GP). Researchers used the secondary data obtained from the Indonesia Stock Exchange (IDX) on yearly basis and process the data statistics with multiple regression by SPSS 20. The population of this research includes 54 companies and the total sample covers 46 companies by passing the purposive sampling stage. The results of this study indicate that there was a significant relationship between working capital management, FA ratio and profitability while FD ratio had no effect on profitability.

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1. Introduction

The main purpose of why everyone does a job so that it can generate rewards is to meet daily needs. Money is the main tool of payment for obtaining goods or services. The very important needs are in the form of basic needs which are consumed every day, for example in the form of food and beverages, household needs, and other necessities. The consumer goods industry is a processing business that converts basic or semi-finished materials into finished goods that can generally be consumed by individuals or households, for example food and beverage, tobacco manufacturers, pharmaceuticals, houseware, etc. The consumer goods business sector continues to increase with the presence of new companies every year. In companies listed on the Indonesia Stock Exchange in the vulnerable period of 2017 to 2019, there was an increase in the number of companies, before 2017 where the total number of companies was 41 companies and until 2019 there were 20 companies to 61 companies engaged in the consumer goods sector. The phenomenon of a rapid increase in the number of companies makes it a challenge for companies with the same business sector or type of product to strengthen company performance so that they are able to survive and achieve company goals. With a strong and well-targeted business strategy, it is possible to create more effective and efficient company performance in terms of production and marketing. In the process of running the business, it is necessary to have good and appropriate fund management to manage the company's productivity in producing products and obtaining the expected

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profitability. The existence of short-long term expenditure activities requires companies to be able to regulate the use of funds. Working capital is a measuring tool that companies can use to ascertain whether the company can carry out operations by fulfilling short-term obligations that are due or operating expenses that will arise in the future. Net working capital is the result of calculating the existence of account receivable activities plus inventory and minus accounts payable. It can be concluded that the value of trade receivable, inventory and account payable has an impact on working capital calculations. According to Usama (2012) management of current assets and current liabilities not only avoids the risk of the company's inability to meet the company's daily needs but also avoids excessive investment in assets which can result in losses in the form of opportunity costs. Many evidences show that company's total assets are dominated by assets and good management is needed to generate profitability. Deloof (2003) states how to manage working capital has a significant impact in formulating company profitability. This shows that at a certain level the need for working capital can generate maximum profits. Large inventory levels and a smooth credit policy led to high sales volume levels. A high inventory eliminates the risk of running out of stock and a light credit policy by giving the customer the opportunity to pay after assessing the product quality of the company's customers to pay afterwards assessing the product quality (Usama, 2012). The optimal level of inventory will have a direct impact on inventory because it will use up working capital resources which are then invested in the business cycle or can increase inventory in response to high demand. By managing proper spending in the production and sales process, the company can control cash turnover, accounts payable turnover and inventory turnover to produce maximum profitability.

2. Previous Study

Several previous studies, namely Akoto et al. (2013) tested the effect of 13 manufacturing companies listed on the Ghana Stock Exchange for the period 2005-2009 with the results of research which stated that receivables turnover had no effect on profitability. In addition, debt turnover, current asset ratio, company size, have a significant positive relationship affecting profitability. Mousavi and Jari (2012) examined the relationship between working capital management (Net Liquidity Balance) and company performance with a total of 56 companies originating on the Tehran Stock Exchange (TSE) from 2002 to 2006 with available annual data. Testing is done by using the correlation method. These results indicate that there is a significant relationship between company performance and the working capital component (Net Liquidity Balance). However, it is different from the research conducted by Amarjit et al. (2011) which also studied the relationship between working capital management and profitability in 88 US companies listed on the New York Stock Exchange. Using data from 2005-2007, the authors found no significant relationship between the number of average payment days and profitability between average inventory days and strong profitability. The author also observes an insignificant relationship between company size and profitability observes a negative relationship between accounts receivable and profitability. Mulyono, Djumahir and Ratnawati (2018) examined state fertilizer companies based on 10 years of data (2005-2014) and stated that fertilizer companies could face with difficulties in maintaining business sustainability. Profitability fluctuates and tends to decrease every year. The results of this study indicate that state fertilizer companies could increase ROA by accelerating the number of sales days in stock and debt. Higher assets reduce profitability and increase debt withdrawal which in turn reduces profitability. State fertilizer companies must accelerate inventory turnover and pay their obligations to suppliers to minimize the risk of foreign exchange losses, given that 80% of raw materials are still imported. In addition, state fertilizer must maintain asset quality and minimize debt withdrawals to increase profitability. With the increased competition with competitors, especially in companies in the consumer goods sector, it requires companies to cope with the strength of management so that the company has a sustainable life. Seeing the important role of working capital in a company, it is deemed necessary to conduct research on the impact of working capital management, fixed asset ratio and debt ratio on the profitability of consumer goods sector companies listed on the Indonesia Stock Exchange (IDX).

3. Methods

The research method used is descriptive analytical method. The data used for this research comes from the financial statements of companies in the consumer goods sector listed on the Indonesia Stock Exchange in 2017-2019. The independent variables of this study are number of days account receivable, number of days Account Payable, number of days inventory, fixed financial asset ratio, financial debt ratio, while the dependent variable to be examined is profitability. This research uses multiple regression analysis method which previously will be tested assumptions as a regression analysis test requirement. The research sampling method used was purposive sampling method using the following criteria: (a) Companies in the consumer goods industry sector that have been listed on the Indonesia Stock Exchange from 2017-2019, (b) Companies that were not delisted in 2017- 2019, (c) Companies whose financial statements contain the required components. (d) Companies that do not experience losses during the research period.

4. Research Conceptual Framework

Munawir (2003) reveals the advantages of adequate working capital, namely (1) protecting the company against a working capital crisis due to a decrease in the value of current assets, (2) enabling it to pay all obligations on time (3) ensuring that the company

has credit standing, the bigger and possible for the company to be able to face financial difficulties that may occur, (4) allowing the company to have sufficient inventory, (5) enabling the company to provide more favorable credit terms to customers, (6) enabling the company to be able to operate more efficiently because there are no difficulties in obtaining the goods or services needed. The existence of Munawir's (2003) theory which explains the benefits that occur if WCM can be carried out adequately motivates researchers to conclude that the factors of how long it takes a company to pay off its obligations to suppliers, how long it takes the company to collect accounts receivable to turn it into cash and how long it will take for the company to be able to sell inventory and receive cash flow. This is the basis for researchers to use APDays, ARDays and INVDays as indicators of WCM on company profitability. According to Kieso et al. (2020), the characteristics of fixed assets are that these assets are used for company operations that produce merchandise and are not routinely sold, they are long-term and can be depreciated and assets have a physical form. Fixed assets are an important part of the merchandise production process which will provide economic benefits for the company in the future. In this study, fixed assets become an indicator of whether there is really an influence on company profitability. Table 1 below is a proxy definition of operational research variables used to test the relationship between each variable:

Table 1
Proxy Definition of Operational Research Variables

Variable	Proxy	Variable Measurement
Dependent Variable	Gross Profit (LnP)	Natural Logarithm of Gross Profit
Independent Variable	No. of Days AR (ARDays)	(Account Receivable / Sales) × 365 days
Independent Variable	No. of Days Inventory (INVDays)	(Inventory / COGS) × 365 days
Independent Variable	No. of Days AP (APDays)	(Account Payable / COGS) × 365 days
Independent Variable	Fixed Financial Asset Ratio (FA)	Fixed Financial Assets / Total Assets
Independent Variable	Financial Debt Ratio (FD)	Total Liabilities / Total Asset

Based on the formulation of the problem above, the main points of the problem study in this research can be identified as follows:

1. Does receivables management have a significant effect on the profitability of companies listed on the Indonesia Stock Exchange in 2017-2019?
2. Does debt management have a significant effect on the profitability of companies listed on the Indonesia Stock Exchange 2017-2019?
3. Does inventory management have a significant effect on the profitability of companies listed on the Indonesia Stock Exchange in 2017-2019?
4. Does the fixed financial asset ratio have a significant effect on the profitability of companies listed on the Indonesia Stock Exchange 2017-2019?
5. Does the financial debt ratio have a significant effect on the profitability of companies listed on the Indonesia Stock Exchange in 2017-2019?

5. Results and Discussions

The analysis used multiple regression analysis method. The multiple linear regression analysis model used is:

$$\text{LnP} = b_0 + b_1\text{ARDays} + b_2\text{APDays} + b_3\text{INVDays} + b_4\text{FA} + b_5\text{FD} + \varepsilon$$

We test the data with the Kormogolov Smirnov test to see whether the data distributed normally. The result obtained is 0.614, this value is above 0.05 which is the limit of the significance level. So, a decision can be made that the data tested is normally distributed. Table 2 shows the summary of the results.

Table 2
The results of One-Sample Kolmogorov-Smirnov Test

		Unstandardized Residual
N		138
Normal Parameters ^{a,b}	Mean	0E-7
	Std. Deviation	1.62448666
Most Extreme Differences	Absolute	.064
	Positive	.064
	Negative	-.058
Kolmogorov-Smirnov Z		.758
Asymp. Sig. (2-tailed)		.614

a. Test distribution is Normal.

b. Calculated from data.

This study also conducted a multicollinearity test. This multicollinearity test is useful for knowing whether the regression model finds a correlation between the independent variables. To detect the presence or absence of multicollinearity in the regression model is to analyze the correlation matrix of the independent variables. The results of the calculation of the tolerance value and the VIF value show the absence of multicollinearity in all variables (See Table 3).

Table 3

The results of VIF test

	Tolerance >0.10	VIF <10.00	Result
ARDays	.750	1.333	Multicollinearity does not occur
INVDays	.800	1.251	Multicollinearity does not occur
APDays	.653	1.531	Multicollinearity does not occur
FA	.704	1.420	Multicollinearity does not occur
FD	.818	1.223	Multicollinearity does not occur

Auto correlation testing was also carried out and the result of this test was that there was no auto correlation between variables/ The researcher then conducted research on the coefficient of determination which resulted in the value as below

Table 4

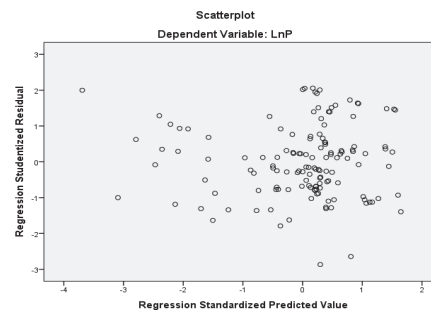
The summary of statistical tests for regression analysis

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Durbin-Watson
1	.449 ^a	.201	.171	1.65497	2.084

a. Predictors: (Constant), FD, ARDays, FA, INVDays, APDays

b. Dependent Variable: LnP

The coefficient of determination test is also carried out to see the relationship and ability of the independent variable to explain changes in the dependent variable. This analysis is used to determine the percentage of independent variables, namely ARDays, INVDays, APDays, FA, FD simultaneously on the dependent variable, namely the profitability variable (Y). The result obtained is R² value of 0.201 so that the coefficient of determination is $0.201 \times 100\%$, namely 20.1%. This figure shows that the ability of the independent variables, namely ARDays, INVDays, APDays, FA, FD can explain the dependent variable, namely profitability is 20.1%, while the remaining 79.90% of the profitability variable is influenced by other variables (See Fig. 1).

**Fig. 1.** The results of Scatter plot

The research also tested the heteroscedasticity on the data, and found that the analyzed data did not have heteroscedasticity symptoms.

1. The scatter data points are above and below or around the 0
2. The dots are not clustered just above or below
3. The distribution of data points should not form a wavy pattern that widens then narrows and widened
4. The distribution of data points is not patterned

Table 5

The summary of statistical tests for the regression analysis

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.449 ^a	.201	.171	1.65497

a. Predictors: (Constant), FD, ARDays, FA, INVDays, APDays

The t statistical test basically shows how far the ARDays, INVDays, APDays, FA and FD variables influence profitability. The hypothesis is formulated as follows:

- a. H₀: there is no effect of ARDays, INVDays, APDays, FA and FD on profitability partially.
- b. H₁: there is an effect of ARDays, INVDays, APDays, FA and FD on partial profitability

Acceptance or rejection of the hypothesis is carried out with the following criteria:

- a. If the significance value > 0.05, then H₀ is accepted and H₁ is rejected.
- b. If the significance value < 0.05, then H₀ is rejected and H₁ is accepted.

Table 6

The summary of the regression analysis

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	13.385	.686		19.499	.000
	ARDays	-.012	.003	-.328	-3.650	.000
	INVDays	-.005	.002	-.280	-3.218	.002
	APDays	.012	.005	.224	2.329	.021
	FA	2.184	.965	.210	2.263	.025
	FD	-.519	.519	-.086	-.999	.319

a. Dependent Variable: LnP

It can be seen here that ARDays, INVDays, APDays and FA significance values are smaller than the significance level below 0.05, thus it can be concluded that H₀ is rejected and H₁ is accepted, which means that there is an effect of ARDays, INVDays, APDays, and FA on partial profitability. For the FD variable, it can be seen that the value is greater than 0.05, so it can be concluded that H₀ is accepted and H₁ is rejected, which means that there is no effect of FD on profitability partially.

The last test conducted is the simultaneous F test which has the following hypothesis:

- a. H₀: there is no effect of ARDays, INVDays, APDays, FA and FD on overall profitability.
- b. H₁: there is an effect of ARDays, INVDays, APDays, FA and FD on overall profitability.

Acceptance or rejection of the hypothesis is carried out with the following criteria:

- a. If the significance value > 0.05, then H₀ is accepted and H₁ is rejected.
- b. If the significance value < 0.05, then H₀ is rejected and H₁ is accepted.

Table 7

The summary of the ANOVA test

	Model	Sum of Squares	df	Mean Square	F	Sig.
1	Regression	91.161	5	18.232	6.657	.000 ^b
	Residual	361.537	132	2.739		
	Total	452.698	137			

a. Dependent Variable: LnP

b. Predictors: (Constant), FD, ARDays, FA, INVDays, APDays

The significance level of testing the ARDays, INVDays, APDays, FA and FD variables is 0.000, which shows a value below 0.05, and it means that H₀ is rejected and H₁ is accepted. There is an effect of ARDays, INVDays, APDays, FA and FD on overall profitability. This study has aimed to identify the influence of working capital management on profitability in consumer goods companies listed on the Indonesia Stock Exchange within the period of 2017–2019. The researchers use working capital management by number of number of days account receivable (ARDays), number of days Account Payable (APDays), number of days inventory (INVDays), Fixed Financial Asset Ratio (FA), and Financial Debt Ratio (FD) with profitability by using gross profit (GP). The study has revealed that, there is the influence of ARDays, INVDays, APDays, FA and FD on overall profitability. And partially only ARDays, INVDays, APDays, and FAs have an effect on profitability. This consistent with the perception that working capital management will influenced profitability due to the effectiveness and efficiency management in managing the gap in conversion cycle Therefore, managers can create profits for their companies by handling the cash cycle correctly and keeping each different component (accounts receivables, accounts payables, inventory, financial asset and financial debt) at an

optimum level. The study has also shown that there is an influence between the variables ARDays, INVDays, APDays, FA and FD on profitability, it can be seen that the coefficient of determination shows a not close relationship. Only 20.1% of profitability can be explained by the variables ARDays, INVDays, APDays, FA and FD and the remaining 70.90% is explained by other variables. We expected managers or decision makers to understand and analyze the stability between account payable-account receivables and cash flows in controlling maximum profitability. If inventory is sufficiently stacked due to a decrease in sales, it will be risky for the company since there will be some damaged goods and expired products. It is required that the company should have a good inventory management and accurate sales strategy to generate maximum profit levels. We also recommend that management should manage their financial asset and debt to the most efficient level for the company. In relation to the research object, this study had limitations because it concentrated only on businesses engaged in the consumer goods market. Future research is expected to concentrate not only on working capital management elements, but also on the company's external components, such as the state of the economy, the rate of inflation and the foreign currency exchange rate. To decide what impacts the actions of the company when choosing to purchase raw materials, these components should be tested.

This study had limitations in relation to the research object since it only focused on companies engaged in the consumer goods sector. Future research is expected to focus not only on the components of working capital management but also external components of the company such as the condition of the economy, the rate of inflation and the exchange rate of foreign currency. In order to evaluate what influences the actions of the company when deciding to purchase raw materials both from outside and within the country (export/import), the price of the commodity and also the company's profit level, these components should be investigated.

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