

## **THE EFFECT OF WORKING CAPITAL MANAGEMENT ON COMPANY FINANCIAL PERFORMANCE**

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### **ABSTRACT**

*The purpose of this study is to determine the effect of the company's efforts to manage working capital in improving the company financial performance. One way to operate the company's working capital properly, is by implementing the cash conversion cycle. Cash conversion cycle is a cycle of cash flow in the company which is measured by using the ratios of the Average Collection Period, Inventory Turnover, and Average Payment Period, and indirectly has an influence on the profitability of the company. The research subjects are retail companies listed on Indonesia Stock Exchange (IDX) between 2017-2020. Using double regression analysis with the EViews application, the result was obtained that the Average Collection Period (ACP) has a positive but not significant effect on financial performance. Different results were obtained from the variables of Average Payment Period (APP) and Inventory Collection Period (ICP), in which each of them has a significant and negative effect on financial performance of the company.*

**Keywords:** Working capital, Average Collection Period, Average Payment Period, Inventory Collection Period, financial performance

## **1. INTRODUCTION**

Competition in business is increasingly challenging business people to adapt to various changes such as new regulations, changes in consumer behavior, and non-traditional competition. Especially during COVID-19 pandemic changed how all of the industries operating today and causing all the business plans that have been made by companies in many industries inappropriate. Companies must carry out transformations to keep their business running.

The transformation that is needed today is the use of digital innovation, where the products and services provided by the company using more sophisticated technology which is more accessible, and even more affordable not only in the company's business but also at various levels of organizations, sectors, and industries which will ultimately have an impact on company performance.

The usage of digital technology, such as ERP (Enterprise Resources Planning), can cover all operational processes within the company which is integrated each other and contribute to increasing of efficiency, speed, accuracy, and ease in controlling and recording operational activities within the company.

The subject of this research is the retail industry because the operational processes in the retail industry involve many types of goods and the inventory turnover cycle is relatively short, so the use of reliable digital technology will greatly help improve company efficiency, which in turn improves company performance.

According to Shah & Shin (2007) [1], information technology has an indirect impact on company profitability which is mediated by inventory performance in the retail, wholesale, and manufacturing sectors. According to Koumanakos (2008) [2], the company's ability to manage inventory has a negative relationship to financial performance. Financial performance is a measure of how well a company uses its assets to generate profits as a result of its policies and operations (Brigham, 2004) [3].

Koumanakos' research (2008) [2] concluded that the number of days inventory invested in the company can reduce the company financial performance due to reduced inventory turnover. Along with improving company performance, company management must wisely manage company operational investment funds such as working capital.

Morshed (2020) [4] argues that paying attention to the signs in working capital can increase the company's profitability, where the management of working capital is related to operational activities and daily transactions which include cash, accounts receivable, accounts payable, and inventory. Working capital is often referred to as current assets which are short-term investments that interact with other asset components sustainably. Based on that, company is obliged to provide liquidity of working capital to ensure the continuity of its operation. One way to operate the company's working capital properly, is to implement the Cash Conversion Cycle. The results of research by Telly & Ansori (2017) [5] proved that the Cash Conversion Cycle can cause inefficiency in operational management which can have an impact to financial performance of the company. The amount of the Cash Conversion Cycle is influenced by the company's inventory management, because generally companies buy raw materials on credit and sell their products on credit as well.

Cash Conversion Cycle is a cycle of cash flow in the company which is measured by using the ratios of the Average Collection Period, Inventory Turnover, and Average Payment Period, and indirectly has an influence on the profitability of the company. According to Alipour (2011) [6], the increasing Average Collection Period is a sign of increasing company investment in the inventory. The results of his research indicate that in the company, there is a significant relationship between profitability and working capital management. Al-Mwalla (2012) [7] argues that there is a significant negative relationship between the Average Payment Period and profitability.

According to Ahmed & Safdar (2018) [8], the number of days inventory outstanding has a significant effect on the level of company profitability which is generally negative. The longer the inventory is kept in the company, the lower the level of the company's profitability.

Based on those previous researchers, working capital is an interesting topic in financial discussions as well as for a more detailed analysis of financial performance of the company. This research is the development of Harris (2005) [9], who argues that the company's main goal can be achieved if the company can ensure a balance between both current liabilities, current assets and/or working capital.

This study examines the effect of working capital as proxied by the Average Collection Period, Average Payment Period, and Inventory Collection Period on financial performance as reflected by the company's profitability. The purposes of this research are to find out: (1) The effect of the Average Collection Period on the profitability of the company; (2) The

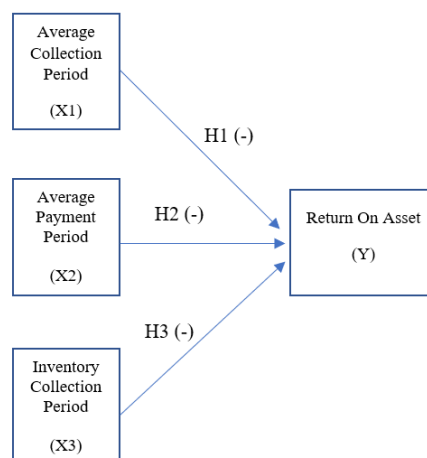
effect of the Average Payment Period on the profitability of the company; and (3) The effect of the Inventory Collection Period on the profitability of the company.

## Research Hypotheses

According to Capkun et al (2009) [10]. companies that have inventory performance, (for example; by reducing the ratio of inventory to sales) are able to increase the profitability of operating activities which is an increase in the profitability of financial performance. Inventory control is needed in an effort to improve company performance, because with the availability of sufficient inventory, the company's production process can run smoothly.

Gołaś (2020) [11] conducted a study on the food industry sub-sector and the results showed that there is a statistically significant causative relationship between firm's working capital and financial performance. Based on the developed regression model, it is evident that the increase in inventory days has a negative effect on the return of operating assets. The analysis carried out in this paper also proves the usefulness of accounting for the inventory mix, wherein the day increase in the inventory ratio for products between raw materials and work in process has the greatest (and negative) impact on profitability.

Syarief & Prihatining (2013) [12] in their research found a strong negative relationship on the elements related to working capital management such as receivables turnover with Cash Conversion Cycle, the ratio of financial debt with profitability of the company.



**Figure 1.** Research Framework

Figure 1 shows the working capital proxies by Average Collection Period (ACP), Average Payment Period (APP), and Inventory Collection Period (ICP) which has a significant effect on financial performance proxy by Return On Asset (ROA).

In general, the presence of efficiency can improve the company's performance, but it is expected that different research results will be obtained in terms of the effect of working capital efficiency on the company financial performance.

Account receivables can affect profitability, because the company usually generates sales on credit. The position of receivables and the estimated time of collection can be assessed by calculating the receivables turnover (Munawir, 2004) [13]. If the management is not careful,

the period of collecting those receivables will gradually get longer, due to the longer time for receiving the customer payments so that it can result in higher bad-debts. Average Collection Period (ACP) is the average time given to customers to pay for goods after sales or the average time it takes to convert a company's receivables into cash. Therefore, the research hypothesis could be formulated as follow:

**H<sub>1</sub>:** There is a significant and negative effect of the ACP on ROA.

Accounts payable is a part of working capital. Trade payables occur due to the purchases on credit generated by the company to other companies (Brigham & Houston, 2007) [14]. The average debt-repayment period is a value that shows the number of days needed to pay short-term or maturing bills (Subramarnyam and Wild, 2010) [15]. The company will seek for a supplier that can provide a long payment period, because the capital that will be used to pay those debts, can be used by the company to finance the its operations. Thus, the longer or higher the Average Payment Period (APP) can increase the company's profitability. Therefore, the research hypothesis could be formulated as follow:

**H<sub>2</sub>:** There is a significant and negative effect of the APP on ROA.

Good inventory management can be seen from the daily inventory turnover. Inventory Collection Period (ICP) is the average length of inventory possession. The higher the average period of inventory of goods that have not been sold indicates the longer time for the goods to be sold and this will cause high inventory costs. Inefficient amount of inventory causing unnecessarily high cost to the company, which are costs of storage, insurance-premium costs, tax, product-obsolescence costs and accidentally physical damage of the inventory (Subramarnyam and Wild, 2010) [15]. With the emergence of costs that are large enough to cover these costs, this will finally reduce the company's profitability. Therefore, the research hypothesis could be formulated as follow:

**H<sub>3</sub>:** There is a significant and negative effect of the ICP on ROA.

## **Our Contribution**

Mayston et al. (1982) [16] stated the importance of management of working capital, for the following reasons:

- (1) The company invests a large portion of its funds in current assets needed in the company's operations,
- (2) If the company is able to manage current assets properly, it can be said that the company's operations are running well
- (3) The company's sales growth requires current assets because sales activities are directly related to the company's current asset activities.

The purpose of this study is to determine the effect of the company's efforts to manage working capital on improving the company financial performance that can be used by company management, investors, and future researchers.

## **Methodology**

The research data was taken from the financial statements of the retail industry listed on IDX from 2017-2020 by using the purposive sample method, with the criteria of being in the retail industry, that has complete financial data related to the variables observed in this study (Table 1).

**Table 1.** The Operationalization of Variables

<i>Variable</i>	<i>Proxy</i>	<i>Scale</i>
Working Capital Management	(1) Average Collection Period $ACP = A/R : (Sales * 365)$	Ratio
	(2) Average Payment Period $APP = A/P : (Cost\ of\ Sales * 365)$	Ratio
	(3) Inventory Collection Period $ICP = Inventory : (Cost\ of\ Sales * 365)$	Ratio
Financial Performance	Return on Assets $ROA = NI : Total\ Assets$	Ratio

Source: Brigham & Houston (2007) [14]

## 2. RESULTS & DISCUSSIONS

### The Results of Analysis of Working Capital and Company Financial Performance

The results of data processing such as mean, median, maximum, minimum, etc. can be seen in the descriptive statistics (Table 2) which reflect the suitability of the data. Based on the Jarque-Bera test, it can be seen that the ROA and APP variables are not normally distributed, while the ACP and ICP variables are normally distributed. This study uses panel data because the ROA and APP variables are not normally distributed, which are innate characteristics so that they can be ignored because they will not interfere with the results of the analysis.

**Table 2.** Descriptive Statistics

	<i>ROA</i>	<i>ACP</i>	<i>APP</i>	<i>ICP</i>
Mean	18.3003	18.3399	22.8759	15.8083
Median	10.6200	19.3590	20.6230	15.5420
Max	47.3500	21.0230	28.4640	19.5940
Min	2.75000	13.1300	15.3520	10.0090
Std. Dev.	14.8491	2.10750	4.1949	2.6127
Skewness	0.54158	-0.47436	0.24169	-0.6306
Kurtosis	1.65713	2.18674	1.55729	2.8442
Jarque-Bera	7.44137	3.90366	5.78766	4.0371
Prob	0.02422	0.14201	0.05536	0.1329
Sum	1098.020	1100.391	1372.56	948.4960
Sum Sq.Dev	13009.26	262.052	1037.88	402.7296
Obs	60	60	60	60

Source: Data Analysis using *EViews* version 9.0

**Table 3. Unit Root Test**

Panel unit root test : summary												
Exogenous variables : Individual effects												
Automatic selection of maximum lags												
	ACP				APP				ICP			
Method	Stat	P**	Cross- sect	Obs	Stat	P**	Cross- sect	Obs	Stat	P**	Cross- sect	Obs
Null:Unit root (assumes common unit root process)												
Levin, Lin & Chu t*	-8.44360	0.0000	15	45	-14.3137	0.0000	15	45	-58.6518	0.0000	15	45
Null:Unit root (assumes Individual unit root process)												
ADF- Fisher Chi- sqr	53.1594	0.0000	15	45	116.656	0.0000	15	45	87.4475	0.0000	15	45
Panel unit root test : summary												
Exogenous variables : Individual effects												
Automatic selection of maximum lags												
Series : ROA												
Method	Statistic				Probability**				Cross Sections		Observasi	
Null:Unit root (assumes common unit root process)												
Levin, Lin & Chu t*	-94.8021				0.0000				15		45	
Null:Unit root (assumes Individual unit root process)												

Source: Data Analysis using *EViews* version 9.0

The Unit Root Test can be used instead of the normality test when the data is not normally distributed. Table 3 shows that all variables in the study were found to be stationary at their levels. This can be seen in the results of the unit root test, the ROA variable is stationary, while the ACP, APP, and ICP variables also show similar results.

**Table 4. Regression Analysis**

Fixed Effects (within) Regression				
Period 2017-2020				
Number of Observations = 60				
R-Squared	0.4355526	F-statistics	1.90621	
		Prob (F-Stats)	0.04534	
<b>Var</b>	<b>Coeff.</b>	<b>Std. Error</b>	<b>t-Statistics</b>	<b>Prob</b>
C	81.1270	33.2630	2.4390	0.0190
ACP	1.2162	0.7289	1.6685	0.1007
APP	-3.7718	1.1916	-3.1654	0.0029
ICP	-1.8009	0.8974	-2.0067	0.0502

Source: Data Analysis using *EViews* version 9.0

Based on the results of Hausman test, the regression equation in this study uses the Fixed Effect Model (FEM), because the probability of the random cross-section test is less than 0.05.

Table 4 shows the result of a double regression test with a total of 60 observations and the results show the effect of working capital variables (as proxied by ACP, APP, and ICP variable) on the company financial performance (as proxied by ROA variable).

The result of the coefficient-of-determination test is 0.4355526, which means the effect of the main variables in working capital management on financial performance is 43.565%. The

multiple linear regression equation regarding the effect of working capital management on financial performance in the retail industry during 2017 – 2020, can be developed as follow:

$$ROA = 81.1270 + 1.2162 ACP - 3.7718 APP - 1.8009 ICP + e$$

Based on the research results (Table 4) with  $\alpha = 10\%$ , we obtained several things as follows:

- (1) ACP has a positive but not significant effect on financial performance.
- (2) APP has a negative and significant effect on financial performance.
- (3) ICP has a negative and significant effect on financial performance.

## Discussions

The regression equation model used is the Fixed Effect Model. Due to the structure and operating pattern of the sample data studied, it shows that there are significant differences in the structure of the companies even though they are in the same industry. So, there are other variables outside the research variables which are general factors that affect the company financial performance. This statement can be seen in the R-square value of 43.56%, while the remaining 56.44% are other variables outside the variables in this study.

The industry used in this study is categorized as a retail industry where the products are differentiated which causes the company to have pricing power so that the profit level of each company in the industry is different.

ACP is the average time it takes from selling a product on credit until payment is received and becomes useful to the company. In ACP, the main goal of the company is to collect receivables as quickly as possible without having to reduce the level of sales because the receivable collection technique is too intensive.

Meanwhile, the APP is the time required by the company to pay its debts and expenses. The main goal of the company in the APP, is to make payment of obligations in the slowest possible time without damaging the credit-rating that can affect the company's reputation and name.

The effect of variables related to working capital in the study such as the ACP, APP, and ICP explains that the higher the company's investment level on inventory is, the lower the company's profitability will be.

**Table 5.** The Results of Hypotheses Testing

Hypothesis	Sign	Conclusion
H <sub>1</sub>	+	Rejected
H <sub>2</sub>	-	Accepted
H <sub>3</sub>	-	Accepted

Source: Data Analysis using *EViews* version 9.0

Table 5 indicates that Hypothesis 1 was rejected, whereas Hypotheses 2 and 3 were accepted. The interpretation of the regression results shows that financial performance will increase along with the increase in sales, although this will have an impact on increasing the company's accounts receivable. On the contrary, the high account payable of a company shows that the amount of inventory purchased by the company has an impact on the build-up

of inventory in the warehouse or inventory obsolescence, which in turn will increase selling costs. Along with the increase in selling costs, it causes a decrease in the company financial performance.

### **3. CONCLUSIONS**

Good working capital management will have an impact on increasing the company's profitability, this is because the working capital factors are smooth and the company has adequate capital for its operational activities. The research subjects were carried out in the retail industry listed on the IDX during the period of 2017-2020. The results of this study are as follows:

- (1) The variable of ACP has an insignificant and positive impact on the company financial performance as proxied by the variable of Return on Assets. Thus, there is no evidence that the increase in financial performance is caused by an increase in sales, that impacts on the increase of the company's accounts receivables.
- (2) If the variable of APP decrease, the financial performance increases, thus it will reduce the company's profitability, because the amount of inventory purchased by the company has an impact on the build-up of inventory in the warehouse or inventory obsolescence, which in turn will increase selling costs.
- (3) The variable of Inventory Collection Period has a significant and negative impact on the financial performance, because the lower the inventory value is, the shorter the product storage time will be. Thus, the cash turnover of the company becomes more efficient, which in turn will improve the company financial performance.

This research is covering the impact of working capital on the company financial performance. Further study on other fields related to the operational management such as quality of goods, inventory control, and type of investment, is still interesting to be conducted. Meanwhile, for investor and company management, this study suggests them to manage their working capital management optimally.

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