

# THE EFFECT OF CASH CONVERSION CYCLE FACTORS ON PROFITABILITY (Study on Manufacturing Sector Companies Listed on Indonesia Stock Exchange)

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## ABSTRACT

*This study aims to obtain empirical evidence about the effect of the cash conversion cycle factors on profitability in manufacturing sector companies listed on the Indonesia Stock Exchange (IDX). Factors of Cash Conversion Cycle is measured by the Inventory Conversion Period, Receivables Conversion Period, and Payables Deferral Period. The dependent variable used in this study is profitability which was analyzed by Return on Assets (ROA). The observation period was carried out for five years, with observation from 2015-2019. The samples were 48 manufacturing companies. The sample was selected using the purposive sampling method, and data analysis was carried out in a time-series manner. The statistical analysis method employed in this study is multiple linear regression analysis. The results showed that the Inventory Conversion Period and Payables Deferral Period has a significant negative effect on profitability. Meanwhile, the Receivables Conversion Period has no significant effect on profitability.*

**Keywords:** *Cash Conversion Cycle, Inventory Conversion Period, Receivables Conversion Period, Payables Deferral Period.*

## ABSTRAK

*Penelitian ini bertujuan untuk memperoleh bukti empiris tentang pengaruh faktor-faktor siklus konversi kas terhadap profitabilitas pada Perusahaan Sektor Manufaktur yang terdaftar di Bursa Efek Indonesia. Siklus Konversi Kas diukur dengan Inventory conversion period, Receivables conversion period, dan Payables deferral period. Variabel dependen yang digunakan dalam penelitian ini adalah profitabilitas yang dianalisis dengan Return on Assets (ROA). Periode pengamatan dilakukan selama 5 tahun dengan tahun pengamatan dari tahun 2015-2019. Sampel yang didapat sebanyak 48 perusahaan manufaktur. Sampel dipilih dengan menggunakan metode purposive sampling dan analisis data dilakukan secara time-series. Metode analisis statistik dalam penelitian ini adalah analisis regresi linier berganda. Hasil penelitian menunjukkan bahwa Inventory conversion period dan Payables deferral period berpengaruh negatif signifikan terhadap profitabilitas. Sedangkan Receivables conversion period tidak berpengaruh signifikan terhadap profitabilitas.*

**Kata Kunci:** *Siklus Konversi Kas, Periode konversi persediaan, Periode konversi piutang, Periode Penangguhan utang.*

## INTRODUCTION

Manufacturing sector companies are an important sector of the Indonesian economy. The Minister of Industry, Airlangga Hartanto, believes that the manufacturing sector is the backbone for national economic growth. In addition, it is a mainstay sector in spurring equity towards inclusive development and community welfare. The manufacturing sector contributed 17.58% to Indonesia's Gross Domestic Product (GDP) in 2019 or the highest compared to other business sectors followed by the trade sector at 13.01%, the agricultural sector contributed 12.72% to economic growth, and construction and mining sectors by 10.75% and 7.26%, respectively. The manufacturing sector's contribution to Indonesia's GDP remains consistently the highest among other sectors from 2015-2019. This figure shows that the industrial sector consistently provides the most significant contribution to the national economy (Kementrian Perindustrian, 2020a).

In 2019 the textile industry showed good performance with a growth of 15.35%. Other non-oil and gas industrial sectors that also grew optimally in 2019 were the paper and paper goods industry, printing, and recording media reproduction by 8.86%, which was in line with increasing foreign demand. Furthermore, the chemical, pharmaceutical, and traditional medicine industries were 8.38%, the growth of which was driven by an increase in the production of chemicals, chemical products, pharmaceutical products, chemical drugs, and traditional medicines. Then, the furniture industry reached 8.35%, which was influenced by the increase in foreign demand, thus encouraging export growth. Meanwhile, with stable growth of 7.78%, the food and beverage industry were supported by the rise in Crude Palm Oil (CPO) production. This achievement shows developments that continue to improve amidst the pressures of global economic conditions (Kementrian Perindustrian, 2020b).

Exports of the industrial sector in 2019 were recorded at USD 127.3 billion, or around 76% of Indonesia's total exports of USD 167.68 billion in 2019 (Central Bureau of Statistics,

2020b). Foreign exchange earnings from exports play an important role in Indonesia's trade balance and the Indonesian economy. The five sectors that contributed the most to the industrial sector's export value throughout 2019 were the food industry which contributed up to USD27.16 billion (21.46%). Furthermore, the contribution of base metal industry was USD17.37 billion (13.72%). Next, the chemical industry and chemical goods were recorded at USD12.65 billion (10%), the clothing industry at USD8.3 billion (6.56%), and the paper and paper goods industry which deposited USD7.27 billion (5, 74%). The export value of the industrial sector has increased steadily from year to year. The increasing value of exports in the manufacturing sector indicates that the manufacturing sector's demand has increased (Kementrian Perindustrian, 2020b).

The activities of the industrial sector consistently have a wide-ranging effect on the national economy. Additionally, the output value of the manufacturing sector has increased from year to year (Central Bureau of Statistics, 2020a). Manufacturing sector productivity is the value of the output, or output generated from the process of industrial activities consisting of goods produced, electricity sold, industrial services received from other parties, the difference in the value of the stock of semi-finished goods, and other receipts from non-industrial services (Central Bureau of Statistics, 2020a). The activities of the industrial sector consistently have a wide-ranging effect on the national economy. These impacts include increasing the added value of domestic raw materials, absorption of local labor, and taxes. There was a significant increase in the output value of the manufacturing sector from 2015 to 2018. When productivity increases, there will be more output in the economy. The food and beverage industry, textile industry, and chemical industry are some sub-sectors with the highest productivity values in the manufacturing sector.

With the high role of the manufacturing sector, President Joko Widodo has ambitions for Indonesia's future development to focus on

industry-based growth by utilizing the industrial revolution 4.0 as a direction to achieve Indonesia's economic targets (CNBC Indonesia, 2018). The Industrial Revolution 4.0 is a phenomenon that collaborates cyber technology and automation technology. The concept of its application is centered on automation which in the industrial world has a significant impact on the quality of work and production costs (Kementrian Komunikasi dan Informatika, 2020). For Indonesia, the Industrial Revolution 4.0 provides an opportunity for the Indonesian manufacturing sector to become the main driver in accelerating Indonesia's vision to become the 10th largest economy in the world. President Joko Widodo insists that in the future, the implementation of Industry 4.0 will open up opportunities for the growth of Indonesia's manufacturing sector. This opportunity would increase worker productivity, encourage net exports, and open up about 10 million additional jobs, which will become the basis of Indonesia's economic growth towards the 10th most significant economies in the world (Detik Finance, 2018).

The successful implementation of Industry 4.0 is expected to drive real GDP growth by 1-2 percent per year so that GDP growth per year will increase from the baseline of 5 percent to 6-7 percent in the 2018-2030 period, where the manufacturing sector contributes 21-26% percent of GDP in 2030. The GDP growth was driven by a significant increase in net exports, with Indonesia expected to reach a 5-10 percent net export-to-GDP ratio by 2030. In addition to the increase in productivity, the Indonesia 4.0 program promises to open up new fields 7-19 million jobs. To revitalize the manufacturing sector, the Indonesian government is committed to accelerating the implementation of Industry 4.0. Its initiative provides great potential to multiply labor productivity to increase global competitiveness and increase global export market share. Higher exports will create more jobs so that domestic consumption becomes stronger and Indonesia can become one of the top ten world economies (Kementrian Perindustrian, 2018).

To reach the significant potential of the manufacturing sector, companies need to achieve maximum profit. This profit will be the driving force, as future growth requires significant investment. A company is said to be successful if it has management, especially financial management, that can run and see opportunities in the future optimally. One of the essential functions of a financial manager is to make investment decisions. The Investment decision is crucial because, in order to generate profits, firms must invest in real assets that generate cash inflows (Brealy et al., 2011:1). Some assets are tangible assets such as plant and machinery; the other is intangible assets such as brand names and patents. The right investment decisions can give the company the highest profit (Brealy et al., 2011:1).

The company's short-term investment decisions, in particular, which include the company's operational activities, are called working capital. Working capital plays a role in financing the company's operating activities. In manufacturing companies, working capital plays an important role because companies in producing goods for sale require a constant supply of raw materials and supporting materials (Horne and Wachowicz, 2009:263). This means, the company must have inventory to keep running activities. Thus, companies need constant working capital to finance operating activities (Brigham and Ehrhardt, 2017:658). Working capital investment in manufacturing companies aims to ensure that the company has sufficient cash flow to continue normal operations. Thus, minimizing the risk of inability to pay short-term commitments.

In a company, if the working capital owned is not sufficient, the company will have difficulty paying its obligations and have enough inventory to sell to customers. On the other hand, if the working capital is sufficient, the company can carry out activities and fulfill obligations on time. It is important for companies, especially the manufacturing sector, to manage working capital used for company activities because it directly impacts the profitability and liabilities of a

company (Brigham and Ehrhardt, 2017: 667). Thus, errors in managing working capital will have a significant impact on the sustainability of the company.

Companies need to measure their working capital management to ensure sustainable growth in the future. This growth can only be achieved if the company is able to run its operating activities efficiently. In the sense that the company is able to carry out its activities with minimal costs. By minimizing the costs of working capital incurred, manufacturing companies have more opportunities to maximize their profitability, which in turn will become a path of growth in the future. Working capital has current assets and current liabilities, which means decisions that are related to inventories, accounts receivables and accounts payables.

Short-term investment decisions, namely working capital, include current assets and current liabilities (Brigham and Ehrhardt, 2017: 657). Thus, working capital is related to inventories, accounts receivables and accounts payable which is very important for manufacturing companies. This is because the main activities involved are purchasing materials, adding value, and then selling the finished product (Brigham and Ehrhardt, 2017:657). The company places an order with a supplier. The supplier ships the order and invoices the company. The company pays immediately or pending, in this case the unpaid amount is called account payables. The new shipments enter the company's inventory until they are needed. When the inventories are needed, the company will use those inventories in the manufacturing or assembly process, bringing the final product into finished goods ready to sell. When a customer purchases a product, the company charges the customer and usually offers the customer credit. If a customer receives credit and does not pay immediately, the outstanding balance is called accounts receivable.

Manufacturing companies need a measure to evaluate their working capital management. One of the concepts to measure working capital is the cash conversion cycle. A company's cash

conversion cycle refers to the length of time between payment for working capital and collection of cash from the sale of that working capital (Brigham & Houston, 2019:559). The cash conversion cycle, especially the cash conversion cycle factors, is an appropriate method for measuring working capital in manufacturing companies. This is because, all the processes of manufacturing company activities that have been described previously are best explained by the cash conversion cycle. With the cash conversion cycle, the company is able to see the optimal investment in working capital in every process of the company's activities. Starting from investing working capital in the company's inventory, receiving sales proceeds in the form of receivables, and paying the working capital when the payables are due.

The cash conversion cycle includes several components, which are the inventory conversion period, receivables conversion period, and payables deferral period. These components are important to analyze because appropriate planning, provides opportunities for companies to maximize profitability (Brigham & Houston, 2019:560). The inventory conversion period is used to determine the average time needed to convert raw materials into finished goods and sell them (Brigham & Houston, 2019:560). Inventory conversion time will affect the level of inventory required and the amount of working capital invested in inventory. The receivables conversion period is used to determine the average time required to convert the company's receivables into cash after a sale occurs (Brigham & Houston, 2019:560). The receivables conversion period needs to be considered because it affects investment in receivables and considers the risk of uncollectible receivables if the conversion of receivables is too long. The payables deferral period is used to determine the average time between purchasing raw materials and labor and the cash payment (Brigham & Houston, 2019:560). The payables deferral period needs to be considered because of how slow or how fast this period will affect the amount of working capital required in operations.

Companies carry out activities aimed at obtaining optimal profit. Good profits will be the basis of growth because they will provide capital for future investments. The company's ability to earn a profit is profitability. Profitability can be measured using profitability ratios that show a combination of the effects of liquidity, asset management, and debt on operating results (Brigham & Houston, 2019: 118). One way to measure profitability is by using a profitability ratio. One of the profitability ratios is the Return on Assets (ROA) which shows the company's ability to generate profits from the assets. ROA reflects how much the company has earned on all financial assets invested in the company. High level of ROA shows that the company is able to manage its assets optimally. Factors that affect the company's level of profitability must be considered so that the company can obtain the targeted profit.

Proper planning of the cash conversion cycle by keeping each payable, receivable, and inventory period at an optimal level will increase the company's profitability (Brigham & Houston, 2019: 562). Factors that affect the level of profitability of the company must be considered so that the company can obtain the targeted profit. Thus, the cash conversion factor must be considered because it affects the level of profitability of the company, so that the company can obtain the targeted profit. By achieving the expected profit target, manufacturing companies have more opportunities to continue to grow in the future and realize industry 4.0 targets.

## LITERATURE REVIEW

### Working Capital

According to Brigham and Houston (2019:554), there are two types of working capital, namely gross working capital, which is the total current assets, and net working capital, which is the difference between current assets and current liabilities. Meanwhile, according to Brealy (2011:134), working capital summarizes net investment in short-term assets related to companies, businesses, or projects. In addition, working capital is funds allocated to finance the

company's operations with a maximum period of one year for disbursing funds (Anwar, 2019:28).

The company must have working capital to finance all of its operational activities. This are because, according to Munawir (2014:116), the importance of working capital are to protect the company from harmful consequences in the form of a decrease in current assets, enables the company to pay off short-term obligations on time, and enables companies to operate more efficiently because there is no difficulty in obtaining the raw materials, services, and supplies needed at the time they are needed. Furthermore, working capital is very important because of its use as payment of company operating costs or expenses (Munawir 2014:125)

There are few concepts in defining working capital. According to Brigham and Houston (2019:554), net orking capital is defined as current assets subtracted by all current liabilities. Additionally, net operating working capital is defined as current assets minus current liabilities that are not subject to interest, and the cash conversion cycle as a concept of working capital

### Cash Conversion Cycle

One of the concepts of working capital is cash conversion cycle. According to Brigham and Houston (2019:560), the cash conversion cycle is how long a fund is tied up in working capital or how long it is between paying for working capital and collecting cash from the sale of that working capital. There are three components in the cash conversion cycle, namely: inventory conversion period, receivables conversion period, payables deferral period (Brigham and Houston, 2019:560).

1. Inventory conversion period is the average time it takes a company to convert raw materials into finished goods and then to sell the goods.

$$\begin{aligned} \text{Inventory Conversion Period} \\ = \frac{\text{Inventory}}{\text{Sales}} \times 365 \end{aligned}$$

(Brigham and Houston, 2019:562)

2. Receivables conversion period is the average length of time it takes to convert a company's receivables into cash following a sale.

$$\text{Receivables Conversion Period} = \frac{\text{Receivables}}{\text{Sales}} \times 365$$

(Brigham and Houston, 2019:562)

3. Payables deferral period is the company's average time between purchase of materials and labor and payments of cash for them.

$$\text{Payables Defferal Period} = \frac{\text{Payables}}{\text{Sales}} \times 365$$

(Brigham and Houston, 2019:562)

Cash conversion cycle combines the three defined periods as:

$$\text{CCC} = \text{Inventory conversion period} + \text{Receivables conversion period} - \text{Payables deferral period}$$

This study focuses on the factors of cash conversion cycle as each component would highlight the optimal investment needed in its respective area. According to Brigham and Houston (2019:562), appropriate planning of working capital in each inventory, receivables, and payables, the firm would improve its profits. This means that the examination of cash conversion cycle components would help company management in taking steps to achieve more profits.

### Components of the Cash Conversion Cycle

Inventories for manufacturing companies are finished goods, raw materials, and goods in process owned by the company to produce goods for sale or further processing (Brigham and Houston, 2019:570). There are few types of inventory such as raw materials that are inventories purchased by the company to be processed into semi-finished goods and finally finished goods. Additionally, work in process

inventory and supplies inventory (Brigham and Houston 2019:570).

Inventory has its associated costs that companies must consider. These are investment costs, namely investments in inventory, such as investments in receivables or other working capital, require investment costs. Additionally, there are storage costs and order costs. Furthermore, according to Brigham and Ehrhardt (2017:668) the amount of inventory is influenced by planned production volume, estimates of future price and supply fluctuations in materials, and its storage costs.

According to Brigham and Houston (2019:570), inventory, including inventory, raw materials, work in process, and finished goods, is an important part of almost all business operations. However, optimal inventory levels depend on sales, so sales must be estimated before target inventory can be set. In addition, inventory management becomes quite important because errors in setting inventory levels lead to lost sales or high holding costs. So that inventory must be managed according to the amount and time needed with minimum costs.

Receivables represents the amount a customer owes a company when the company extends credit to the purchaser of a product or service (Brigham and Houston 2019:1101). Receivables are managed based on the company's credit policy, these include the company's credit period, credit standards, collection policy, and discounts (Brigham and Houston 2019:571). Moreover, credit policy is a key determinant of sales, so it has to be managed properly (Brigham and Houston 2019:571).

Receivables management relates to controlling the number of receivables, duration of receivables, collection of receivables, and evaluation of credit ratings of companies receiving receivables Brigham and Ehrhardt (2017:669). The higher the accounts receivable, the greater the associated costs such as investment costs, unpaid accounts receivable costs, and increased cash discounts. But an increase in

receivables can increase profits from the expected increase in sales (Sukamulja, 2019:151).

This study focuses on working capital, so the payables discussed are mainly consisted of company's current liabilities, which is short-term debt. According to Munawir (2014:18), debt is all the company's financial claims to other parties that have not been fulfilled, where this debt is a source of funds or company capital originating from creditors. Short-term debt is an obligation with a repayment period of less than one year. Brigham and Ehrhardt (2017:674) mention that items in current liabilities in working capital are short-term debt consisting of trade payables, notes payable, tax payables and accruals (accrued expenses)

Accounts payable affect the company's cash. When accounts payable increases, the company will get cash worth the balance, thereby increasing the company's operating cash flow. On the other hand, when the company pays its business debt, cash will come out of the company to decrease cash for operating activities (Sukamulja, 2019:151). Thus, debt management is very important because the funds that have not been issued can be used for investment or other activities (Brigham & Houston, 2019:562).

### **Profitability**

According to Brigham and Erhardt (2017:114), profitability is the net result of several policies and decisions that show the combined effect of liquidity, asset management, and debt on operating results. In general, it can be said that the greater the profitability ratio, the more profitable the company, and vice versa (Anwar, 2019:176).

The ratio used in this study is the ratio of Return on Assets (ROA). According to Brigham and Houston (2019:119), ROA is a profitability ratio that measures the company's ability to generate net income based on the use of all assets owned by the company. The assets or assets in question are the company's total assets, which are obtained from own capital or from foreign capital, which the company has converted into company assets used for company activities. The formula

for calculating the ratio based on Brigham and Houston (2019:119) is:

$$\text{Return on Assets} = \frac{\text{Net Income}}{\text{Total Assets}}$$

### **Hypothesis**

1) Inventory conversion period is the average time it takes a company to convert raw materials into finished goods and then sell them (Brigham & Houston, 2019:559). The faster the inventory conversion period will save investment costs on inventory such as procurement, storage, and maintenance (Munawir, 2014). Thus, how slow or how fast the inventory is converted will affect the inventory level required and determine the amount of working capital invested in inventory. Kasozi (2017); Alvarez et al., (2021); Usman et al., (2017) concluded that inventory conversion period has a significant effect on profitability.

***H1: Inventory conversion period has a significant effect on profitability in manufacturing sector companies listed on the Indonesia Stock Exchange.***

Receivables conversion period is the average length of time required to convert a company's receivables into cash. The longer the duration of accounts receivable, the greater the associated costs such as investment costs, unpaid accounts receivable costs, and increased cash disbursements. On the other hand, the faster the receivables are collected, the lower the risk of loss of uncollectible receivables and the lower the working capital investment for sales with receivables (Sukamulja, 2019:151). Therefore, how slow or how fast the receivables conversion period will affect the required working capital investment. Akgün and Şamiloğlu, (2016); Muslimah, (2017); Sharma and Kumar (2011); Aguenau et al., (2016); concluded that receivables conversion period has a significant effect on profitability.

***H2: Receivables conversion period has a significant effect on profitability in manufacturing sector companies listed on the Indonesia Stock Exchange.***

When accounts payable increases, the company will receive cash worth the balance, thereby increasing working capital for the company's operations. On the other hand, when the company pays its business debts, cash will come out of the company, reducing the working capital for operations (Sukamulja, 2019:151). Managing the duration and level of debt is crucial for the company's payables deferral period. Because companies with lower levels of current assets may incur a shortage of funds and face difficulty in maintaining smooth business operations (Horne and Wachowicz, 2009:286). So, how fast or how slow the payables deferral period will affect the level of working capital investment required. Gonçalves et al., (2018); Arnaldi et al., (2021); Mbawuni et al., (2016); concluded that payables deferral period has a significant effect on profitability.

***H3: Payables deferral period has a significant effect on profitability in manufacturing sector companies listed on the Indonesia Stock Exchange.***

## **RESEARCH METHODOLOGY**

This study employed explanatory research method. Explanatory research aims to explain the position of the variables that were analyzed and the effect of one variable on another variable (Sugiyono, 2017:16). The type of data used in this study can be called Time-series data. This is because the data collected are on the same variable at regular intervals, Sekaran and Bougie (2016:180). The data source are company's annual financial reports, which were obtained from the Indonesian Stock Exchange Gallery, Faculty of Economics and Business, Universitas Brawijaya, the websites of each company, and the Indonesia Stock Exchange website ([www.idx.co.id](http://www.idx.co.id)), which are published in 2015-2019.

In this study, the population used is companies listed in the manufacturing sector on the Indonesia Stock Exchange, consisting of 197 companies. Sampling technique in this study employed purposive sampling method with criteria such as: manufacturing sector companies listed on the Indonesia Stock Exchange (IDX) in

2015-2019, that publish audited annual reports presented in rupiah, and made consecutive profits during the 2015-2019 period. Companies from population that met all criteria as sample are 48 companies manufacturing sector companies listed on the Indonesia Stock Exchange. The number of observations conducted in the study were 240 observations.

The data analysis method used for this study is with multiple linear regression. Multiple linear regression analysis is a research of the dependence of the dependent variable, based on the known value of the independent variable (Sekaran & Bougie, 2016:314). Multiple linear regression analysis shows how much the independent variables affect the dependent variable (Sekaran & Bougie, 2016:314). This study uses the regression equation as follows:  

$$Y = \alpha + \beta_1X_1 + \beta_2X_2 + \beta_3X_3 + \beta_nX_n + e$$

For the operational definitions and variable measurement. According to Sugiyono (2017:38), a variable is determined by the researcher to be studied so the information obtained would be relevant, and conclusions could be drawn. This study used two types of variables, namely the dependent variable and the independent variable.

According to Sugiyono (2017:39), the dependent variable is a variable influenced or is the result because of the independent variable. The dependent variable used in this study is the company's profitability. In this study, profitability is measured using Return on Total Assets (ROA). The formula used according to Brigham and Houston, (2019:119) is:

$$\text{Return on Assets} = \frac{\text{Net Income}}{\text{Total Assets}}$$

Independent variables are variables that affect the dependent variable, either positively or negatively. Therefore, with each unit increase in the independent variable, there is also an increase or decrease in the dependent variable (Sekaran & Bougie, 2016:74). The independent variables in



this study are the inventory conversion period, receivables conversion period, and payables deferral period. The measurement of each variable according to Brigham and Houston, (2019:559) are as follows:

1. Inventory conversion period (X1)

The average time it takes a company to convert raw materials into finished goods and then to sell the goods. The formula used is:

$$\text{Inventory Conversion Period} = \frac{\text{Inventory}}{\text{Sales}} \times 365$$

(Brigham and Houston, 2019:559)

2. Receivables conversion period (X2)

The average length of time it takes to convert a company's receivables into cash following a sale. The formula used is:

$$\text{Receivables Conversion Period} = \frac{\text{Receivables}}{\text{Sales}} \times 365$$

(Brigham and Houston, 2019:559)

3. Payables deferral period (X3)

Payables deferral period is the company's average time between purchase of materials and labor and payments of cash for them. The formula used is:

$$\text{Payables Deferral Period} = \frac{\text{Payables}}{\text{Sales}} \times 365$$

(Brigham and Houston, 2019:560)

The data processing steps for this research starts with the secondary data that had been collected was processed using descriptive statistics, and later processed through the Classical Assumption Test consisting of a Normality Test, Multicollinearity Test, Autocorrelation Test, and Heteroscedasticity Test. Additionally, Multiple Linear Regression Analysis, F-Test, Determination Coefficient Test, and Hypothesis Test (t-Test) is conducted.

## RESULTS AND DISCUSSION

**Table 1.**

### Descriptive Statistics Analysis Results

Variable	N	Lowest	Highest	Mean	Std. Deviation
Inventory Conversion Period	240	7	245	78	44.15
Receivables Conversion Period	240	12	156	66	27.52
Payables Deferral Period	240	26	332	112	65.05
Return on Assets	240	0.0002	0.1675	0.0591	0.0392

Source: Processed Data, 2021.

According to table 1., Inventory conversion period of manufacturing companies during 2015-2019, the lowest inventory conversion period was in ROTI, which was seven days in 2015-2017. Meanwhile, the company with the highest inventory conversion period was 245 days from ISSP in 2016. The average inventory conversion period for manufacturing companies in the 2015-2019 period is 78 days. From these results, it is known that 17 companies have an average inventory conversion period that is lower than the industry average for the 2015-2019 period. Meanwhile, 31 companies have an average inventory conversion period above the industry average for the 2015-2019 period. The standard deviation value in the industrial inventory conversion period for the 2015-2019 period is 44.15, and the average inventory conversion period is 78. The standard deviation value is lower than the average inventory conversion period. This value indicates that the variability of the inventory conversion period in manufacturing companies is relatively low. This

standard deviation means that the management of the inventory conversion period in manufacturing companies from 2015-2019 is relatively the same from one company to another.

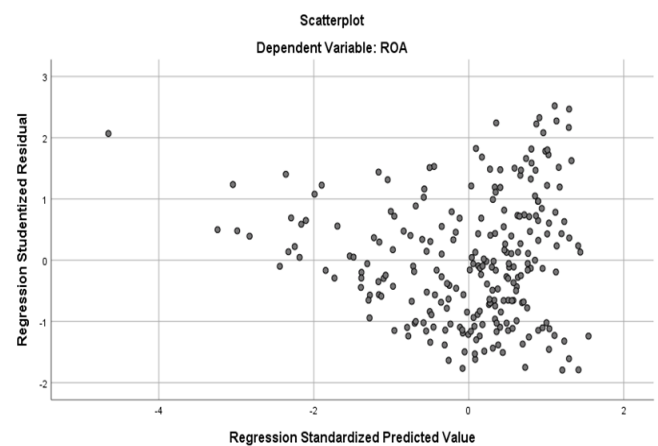
Based on table 1., receivables conversion period of manufacturing companies during 2015-2019, the lowest receivables conversion period was in WIIM, which was 12 days in 2015. Meanwhile, the company with the highest receivables conversion period was INAI in 2017. The average receivables conversion period for manufacturing companies in the 2015-2019 period is 66 days. From these results, it is known that 29 companies have an average receivables conversion period lower than the industry average for the 2015-2019 period. Meanwhile, 19 companies have an average receivables conversion period above the industry average for the 2015-2019 period. The standard deviation value in the receivables conversion period of the industry for the 2015-2019 period is 27.52, and the average receivables conversion period is 66. The standard deviation value is lower than the average receivables conversion period. This value indicates that the variability of the receivables conversion period in manufacturing companies is relatively low. This standard deviation means that the receivables conversion period in manufacturing companies from 2015-2019 is relatively the same from one company to another.

Based on table 1., payables deferral period of manufacturing companies during 2015-2019, the lowest payables deferral period was found in DPNS, which was 26 days in 2019. Meanwhile, the company with the highest payables deferral period is INAI in 2018. The average payables deferral period for manufacturing companies in the 2015-2019 period is 112 days. From these results, it is known that 31 companies have an average payables deferral period lower than the industry average for the 2015-2019 period. Meanwhile, 17 companies have an average payables deferral period above the industry average for the 2015-2019 period. The industry standard deviation value of the payables deferral period for the 2015-2019 period is 65.05, and the average payables deferral period is 112. The

standard deviation value is lower than the average payables deferral period. This value indicates that the variability of the payables deferral period in manufacturing companies is relatively low. It means that the management of the receivables conversion period in manufacturing companies from 2015-2019 is relatively the same from one company to another.

Afterwards, The Classical Assumption test are conducted. The test were Normality Test, Multicollinearity Test, Autocorrelation Test, and Heterocodascity Test using SPSS.

The Normality Test were conducted using Kolmogorov-Smirnov Test. Based on research result, the sig value for all variables is above 0.05. From those results, it can be concluded that the assumption of normality is fulfilled. Next, the multicollinearity test were conducted. From the test results, the Tolerance and VIF for indicates there is no multicollinearity between the independent variables. Thus, the assumption test for multicollinearity can be fulfilled. Fuethermore, the autocorrelation test were conducted. The test results shows that the Durbin Watson test value is 2.032, which is located between 1.816 and 2.184, so it can be concluded that the assumption of autocorrelation has been fulfilled. Latly, Heteroscedasticity Test are conducted through scatterplot test results. Based on figure 1, it can be seen that the scatterplot graph display spreads above and below the number 0 on the Y-axis. It does not form a specific pattern, so it can be concluded that there is no heteroscedasticity.



Source: Processed Data, 2021.

**Figure 1. Scatterplot Test Result**

The coefficient of determination test are conducted to describe the extent to which the independent variables in the study can influence the dependent variable and the influence of other variables outside the regression model in the study. The value of adjusted R square obtained of 0.323 means that the independent variables (inventory conversion period, receivables conversion period, and payables deferral period) explained 32.3%, while the remaining 67.7% are explained by other variables. Additionally, the F-test were conducted and the significance value obtained is 0.000, which is less than the 0.05 significance level. It shows that the regression model is appropriately used to explain the effect of inventory conversion period, receivables conversion period, and payables deferral period on profitability (ROA).

Finally, the Hypothesis testing is conducted using T-Test through T value from Multiple Linear Regression Results. The results are as follows:

**Table 2.**  
**Multiple Linear Regression Analysis**

Independent Variable	Unstandardized Coefficients		Standardized Coefficients	t	Sig.
	B	Std. Error			
(Constant)	0.100852	0.006476		15.574	0.000
Inventory conversion period	-0.00024	0.000050	-0.273	-4.839	0.000
Receivables conversion period	0.00013	0.000088	0.091	1.482	0.140
Payables deferral period	-0.00028	0.000039	-0.462	-7.173	0.000

Source: Processed Data, 2021

Based on Table 2., the regression equation was obtained as follows:

$$Y = 0.100852 - 0.00024X_1 + 0.00013X_2 - 0.00028X_3 + e$$

Based on Table 2., it can be interpreted that the regression coefficient  $\beta_1$  is -0.00024 with a value of 0.000 in significance. It can be concluded that the inventory conversion period has a significant effect on profitability. Furthermore, the regression coefficient of  $\beta_2$  is 0.00013 with a value of 0.140 in significance. It can be concluded that the receivables conversion period has no significant effect on profitability. Additionally, the regression coefficient of  $\beta_3$  is -0.00028 with a value of 0.000 in significance. It can be concluded that payables deferral period has a significant effect on profitability.

**Table 3.**

**Multiple Linear Regression Analysis Result**

Independent Variable	Information
Inventory Conversion Period	Significant
Receivables Conversion Period	Not Significant
Payables deferral Period	Significant

**The Influence of Inventory Conversion Period on Profitability**

The tests that have been carried out show that the inventory conversion period has a significant effect on profitability. In other words, the faster the inventory conversion period, the higher the profitability and vice versa. Based on the results, a faster inventory conversion period leads to higher the profitability. It is because the longer it takes the company to convert inventory, the longer it takes the company to process production and sales to customers. A more extended period of cash inflow because capital is

embedded in inventory can reduce the potential ability of the company to earn profits. Additionally, Long inventory conversion periods will increase storage costs. To store goods in the warehouse required storage costs. The longer the goods are stored in the warehouse, the higher the costs required for storage. This will cause a lot of costs that will reduce the company's capital.

Manufacturing companies are very dependent on inventory policy, so it will require planning the right inventory conversion period. The success of a manufacturing company depends on operating efficiency, where the company can produce its goods at minimal cost. Fast inventory conversion will reduce the costs required by the company from reduced storage costs, investment costs and the risk of fluctuations in goods prices. Thus, the company has more opportunities to grow.

Therefore, companies should pay more attention to policies related to company inventories. The results of this study are in line with previous research conducted by Sharma and Kumar (2011); Arnaldi et al., (2021); Angahar and Alematu, (2014); which showed that the inventory conversion period has a significantly negative effect on profitability.

### **The Influence of Receivables Conversion Period on Profitability**

The tests that have been carried out show that the receivables conversion period has no significant effect on profitability. In other words, the length of time it takes the company to collect receivables does not directly affect the company's profitability. It might be because manufacturing companies have a relatively stable receivables conversion period. Based on the data from 2015-2019, the average receivables conversion period is 66, 65, 67, 65, and 65 days for 2015, 2016, 2017, 2018, and 2019. The relatively stable average receivables conversion period shows that the risk of unpaid account receivables is quite low.

A stable receivable conversion period indicates that the manufacturing company in its

sales has implemented good receivables management. This means that the company has been able to control the amount of receivables, duration of receivables, collection of receivables and evaluation of the credit rating of companies that receive sales with receivables. Based on these results, it can be concluded that manufacturing companies have used sales with receivables at the appropriate level. This shows that the receivables will not cause an excessive burden on the company's capital. In addition, the manufacturing company has implemented credit standards and built good relationships with its customers where the company believes the customer will pay his receivables.

The results of this study are in accordance with previous research conducted by Arnaldi et al., (2021); Angahar and Alematu, (2014); Mbawuni et al., (2016) which showed that the receivables conversion period has no significant effect on profitability.

### **The Influence of Payables Deferral Period on Profitability**

The tests that have been carried out show that the payables deferral period has a significant effect on profitability. In other words, the faster the payables deferral period, the higher the profitability and vice versa.

Companies needs sufficient cash to continue its daily operations. Short-term debt is used by manufacturing companies to cover cash shortages, and ensure the company's liquidity when funds are needed. This is evident from the table of payables deferral period in appendix 6 with the average of one hundred twelve days for manufacturing companies to pay its short-term debt. This indicates that manufacturing companies use short-term debt as a source of capital. For example, when a company wants to buy raw materials for production, the company can use debt to continue the company's operational activities. However, debt is an instrument that is very sensitive to changes in the company's financial statements. Poor debt planning can cause problems for companies

because the benefits derived from using debt are smaller than the costs.

In this study it was found that the faster the company pays its current debt, the higher its profitability. This happens because it is related to credit policies where cash discounts will be given when paying current debts faster than when its due. These deductions can reduce the value of the debt that must be paid so as to save expenses. In addition, companies that need extra time to pay their debts are at risk of getting a credit rating downgrade and suppliers being able to withhold their goods.

The results of this study are in line with previous research conducted by Sharma and Kumar (2011), Kasozi (2017), Arnaldi et al., (2021); Usman et al., (2017); Mbawuni et al., (2016); Akgün and Şamiloğlu, (2016).

## CONCLUSION AND RECOMMENDATION

This research was conducted to determine whether the factors of cash conversion cycle, which are inventory conversion period, receivables conversion period, payables conversion period have an influence on profitability. Based on the analysis results conducted in this research, the variables of inventory conversion period, receivables conversion period, payables deferral period are interrelated and they affect profitability. It means that before deciding to invest in working capital, these variables must first be considered in managing working capital to maximize profit. Additionally, it can be concluded that changes in receivables conversion period would not increase or decrease company's profitability. Meanwhile, the faster inventory conversion period and payables deferral period, the more the company's profitability will increase.

Investors are suggested to make observations first on the company in order to minimize the risk of losses and maximize the returns that can be obtained. Investors can pay attention to the company's conversion period and the company's payables deferral period as an

indicator of profitability whether the company has the potential to be profitable in the future or not.

Company management must decrease the time period of inventory conversion to increase profitability by forecasting future sales and plan production accordingly. Additionally, company's payables period could be better managed by paying it as early as possible without interfering with operational finance as it would increase profitability. However, company management must also plan and control the receivables conversion period to minimize the risk of unpaid account receivables by managing the credit policy, number of receivables, and credit rating of customers.

For further research, it is expected to expand the object of research, such as adding other sectors and increasing the research period to explain further companies working capital management. In addition, further research can include other variables measuring working capital that can be used to measure company profitability.

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