

Analysis of the Effect of Working Capital Management and Leverage on Profitability of Automotive and Component Companies on the Indonesia Stock Exchange

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Abstract

Industry or industrial business is a business unit (unit) that contains people who have responsibility for the business and carry out economic activities to produce goods or services. One of the fields in the industry is the manufacturing industry. The data is processed based on the financial statements of 12 companies which are included in the Automotive and component subsectors by calculating the Return on Assets. Working capital is needed in carrying out business activities. Every industry certainly requires working capital in carrying out daily operational activities. To support every activity contained in industry, of course, proper working capital is needed both in quality and quantity. The data analysis model used in this research is quantitative, namely using the multiple linear regression analysis methods. In regression analysis, in addition to measuring the strength of the relationship between two or more variables, it also shows the direction of the relationship between the dependent variable and the independent variable. to accept H2. This means that the average collection period partially has a negative and significant effect on profitability. This is due to the company's ability to accelerate the collection of receivables

Keywords

working capital management; leverage; company profitability



I. Introduction

Industry or industrial business is a business unit (unit) that contains people who have responsibility for the business and carry out economic activities to produce goods or services. One of the fields in the industry is the manufacturing industry. The manufacturing industry is a business unit with economic activity in the form of replacing an unfinished (basic) object with a finished or semi-finished product or you could say replacing something that has less value with something that has increased value. The manufacturing industry is an industry that is considered to be more productive and efficient in creating the most foreign exchange sources, the largest contributor to taxes and customs duties, increasing the added value of raw materials, and increasing the number of workers. The outbreak of this virus has an impact of a nation and Globally (Ningrum et al, 2020). The presence of Covid-19 as a pandemic certainly has an economic, social and psychological impact on society (Saleh and Mujahiddin, 2020). Covid 19 pandemic caused all efforts not to be as maximal as expected (Sihombing and Nasib, 2020).

This trend is expected to continue to decline after the Covid-19 pandemic because many factories will close and there is a tendency to weaken demand from consumers. One of the sub-sectors that has a major contribution to the economy is the automotive and components sub-sector. The automotive industry is one of the mainstay sectors that has a

significant contribution to the national economy. Quoted from a press release on the Ministry of Industry website, the automotive and component sector contributed 10.16% of Gross Domestic Product (GDP) in 2017 and was able to absorb around 350,000 direct workers and 1.2 million indirect workers. The Automotive Industry has contributed significantly to the national economy. As seen from GDP data, the Transportation Equipment Industry contributes about 1.35% of the national GDP in 2020 or contributes about 7.57% of the GDP of the non-oil and gas processing industry.

The data is processed based on the financial statements of 12 companies which are included in the automotive and component subsector by calculating the Return on Assets. From Figure 1.2, it can be seen that the movement of the Return on Assets trend from 2017 to 2021 has decreased, except for MASA which in 2020 experienced a significant increase in Return on Assets of 7.11%. The following table describes the movement of ROA each year, from 2017 to 2021. Every company will carry out various activities to achieve the goals that have been set. Every activity carried out by the company's party requires funds, both for the company's operational activities, and for long-term investment costs. Funds used to carry out daily operational activities are called working capital. Irham Fahmi (2018) states that working capital is a company's investment in short-term assets (cash, securities, inventories, and receivables). Another opinion expressed by Munawir (2014) is that working capital is the excess value of the assets owned by the company over all of its debts. Working capital should be utilized or managed effectively and efficiently to become one of the company's strengths in generating profits.

Working capital management has become the responsibility of every manager or leader in the company. According to Kasmir (2016), profitability is a ratio to assess the company's ability to seek profit. Profitability provides an overview of how effectively the company operates to provide profits for the company. The motivation of this research is to encourage the curiosity of researchers to better understand the differences in the effect of working capital management on company profitability. This motivation is based on the results of previous research regarding the effect of working capital management on profitability which is not always consistent.

A previous study by Aryawan and Indriani, (2020) under the title " Working capital management and profitability: evidence from Indonesian manufacturing companies", concluded that the Cash Conversion Cycle (CCC) had a negative and significant effect on profitability. Meanwhile, George's research (2021) under the title " Profitability Analysis Of Working Capital Management", concludes on the contrary that the Cash Conversion Cycle (CCC) has a positive and significant effect on profitability. In the research of Jakpar, Tinggi, Johari, and Myint (2017) with the title " Working Capital Management and Profitability: Evidence from Manufacturing Sector in Malaysia" concluded that the Inventory Conversion Period (ICP) has a positive influence on profitability.

In the research of Alvarez et al, (2020) under the title " Working Capital Management and Profitability: Evidence from an Emergent Economy" concluded that leverage has a negative and significant effect on profitability. Meanwhile, in the research of Kusuma and Bachtiar (2018), it is concluded that the Leverage/Debt Ratio has a positive and significant effect on profitability. Wahyuliza and Dewita (2018), with the title "The Effect of Liquidity, Solvency and Working Capital Turnover on Profitability in Manufacturing Companies Listed on the Indonesia Stock Exchange", concluded that liquidity has a negative and significant effect on profitability. Meanwhile, Geoge (2021) concludes that liquidity has a positive and significant effect on profitability.

In this study, researchers used signaling theory as a grand theory. According to Brigham and Houston (2014), signaling theory is a company management behavior to

provide an overview for investors regarding management's views on the company's prospects in the future. Signaling theory assumes that there is information asymmetry between managers and investors or potential investors. Company managers are seen as having information about the company that is not owned by the public, so this theory emphasizes the importance of companies having to present information to the public. Signaling theory has a strong relationship with the availability of information. Information in financial statements can be a reference and consideration in making decisions for investors, financial statements are the most important part of a company's fundamental analysis.

Working capital is needed in carrying out business activities. Every industry certainly requires working capital in carrying out daily operational activities. In order to support every activity contained in industry, of course, proper working capital is needed, both in quality and quantity. With adequate and good working capital, the industry is less likely to experience difficulties in situations of economic crisis or financial problems, so that the industry is able to operate properly and optimally so that industry goals can be achieved. According to Jumingan (2017), "Working capital is the excess of current assets over short-term debt. This excess is also called net working capital (net working capital). This advantage is the number of current assets that come from long-term debt and own capital.

According to Munawir (2014), the availability of adequate working capital can be used immediately in the company's operations depending on the type or nature of the current assets in the company, such as cash (securities), receivables, and inventories. To meet the need for working capital, companies must have financing tools in the form of current assets such as cash, securities, receivables, and inventories, all of which are elements of working capital. In providing working capital, it should be close to the ideal amount, which means that the amount of working capital available must be in accordance with the required amount to allow the company to operate as economically as possible and the company does not experience difficulties in dealing with the dangers that may arise due to a crisis or facing financial turmoil. Differences in the amount of working capital will have different effects on the profits earned by the company, this is as stated by J. Hampton and L. Wagner (1989) " Different levels of current assets Hill have varied effects on profits." This can happen because the amount of working capital used in the company will be related to the costs incurred, with the use of working capital, the greater the costs incurred.

II. Research Method

Research design or research design is a plan and structure of an investigation that is structured in such a way that researchers can get answers to their research questions. In this study, the study used one *dependent variable*, namely profitability (ROA), and six independent variables (*independent variables*), namely *Cash Conversion Cycle (CCC)*, *Average Collection Period (ACP)*, *Inventory Conversion Period (ICP)*, *Debt Ratio/ Leverage*, *Liquidity*, *Inventory turnover (ITO)*.

The formula used to calculate the *cash conversion cycle* according to Brigham and Huston (2011) is as follows:

$$CCC = DIO + DSO - DPO$$

Where.

$$DIO = \frac{\text{Average of Inventory}}{COGS} \times 365 \text{ days}$$

$$DSO = \frac{\text{Average of Account receivable}}{\text{sales}} \times 365 \text{ days}$$

$$DPO = \frac{\text{Average of Account payable}}{COGS} \times 365 \text{ days}$$

In this study, the authors use the definition of liquidity presented by Hanafi and Abdul Halim (2009), namely, liquidity is a ratio used to measure the company's short-term liquidity ability by looking at the company's current assets relative to its current debt (debt, in this case, is the company's liability). . The population of this study is the automotive and component sub-sector manufacturing companies listed on the Indonesia Stock Exchange for the 2021 period with a total of 13 companies. While the samples used in this study were manufacturing companies in the automotive sub-sector and components selected by *proportion sampling* to obtain samples that matched the research criteria.

The data analysis model used in this research is quantitative, namely using the multiple linear regression analysis methods. In regression analysis, in addition to measuring the strength of the relationship between two or more variables, it also shows the direction of the relationship between the dependent variable and the independent variable. The dependent variable is assumed to be random/stochastic, which means it has a probabilistic distribution. The independent/independent variable is assumed to have a fixed value (in repeated sampling) Ghozali, (2012).

III. Result and Discussion

The data used in this study is secondary data obtained from the financial statements of automotive and component companies listed on the Indonesia Stock Exchange (IDX) from 2017 – to 2021. The data source comes from the website <http://www.idx.co.id>, which in the form of financial statements issued and listed on the Indonesia Stock Exchange (IDX). This population is all manufacturing companies in the automotive and component sectors on the Indonesia Stock Exchange for the period 2017 – 2021. Sampling uses purposive sampling.

The following is a list of names of manufacturing companies that are used as samples in this study:

Table 1. Sample List of Automotive and Component Sector Companies Listed on the IDX for the period 2017 to 2021

Code	Company name	Registered year
ASII	Astra International Tbk	04/04/1990
AUTO	Astra Otoparts Tbk	15/06/1998
BOLT	Garuda Metalindo Tbk	07/07/2015
BRAM	Indo Kordsa Tbk	05/09/1990
GDYR	Goodyear Indonesia Tbk	01/12/1980
GJTL	Gajah Tunggal Tbk	08/05/1990
IMAS	Indomobil Sukses Internasional Tbk	15/09/1993
INDS	Indospring Tbk	10/08/1990
LPIN	Multi Prima Sejahtera Tbk	05/02/1990
TIME	Multistrada Arah Sarana Tbk	09/06/2005
PRAS	Prima Alloy Steel Universal Tbk	12/07/1990
SMSM	Congratulations Perfect Tbk	09/09/1996

Source: Indonesia Stock Exchange

From the data above, it is known that the value of Adjusted R² is 0.842878 or 84.2878%. So it has a contribution of 84.2878% in the *CCC*, *ACP*, *ICP*, *DER*, *CAR*, *ITO* variables while the remaining 15.7122% is a contribution from other variables including macro variables, effectiveness ratios.

Based on the results of partial hypothesis testing, the *CCC* (*Cash Conversion Cycle*) variable has a T_{count} of 2.786570 which is greater than T_{table} of 1.67412, thus *CCC* affects *ROA*. With a probability value of 0.0080 or below the significance level of 5%. It can be stated that H₀ is rejected, then the *CCC* variable has a significant influence on the profitability of automotive and component companies. The results of the regression analysis, it shows that the *CCC* regression coefficient is 0.000832. This reflects that *CCC* conversion has a positive relationship with profitability. This means that for every one-time increase in the cash conversion cycle, profitability will increase by 0.000832-unit *ROA*. The thing that causes *CCC* to have a positive and significant effect on *ROA* in this study is a large number of inventories and receivables while accounts payable are smaller in the study period. By improving the cash conversion cycle, companies can achieve a competitive advantage by using their capital efficiently and effectively. This is expected to increase the company's profitability. The results of this study are not in line with research conducted by Ivanov and Novak (2021) and research by Aryawan and Indriyani (2020) but are in line with research conducted by Alvarez, et al (2020) and research by Elangkumaran and Nimalathasan (2020).

Based on the results of partial hypothesis testing, the *ACP* (*Average Collection Period*) variable has a T_{arithmetic} value of -4.222577 which is greater than T_{table} 1.67412, this means that *ACP* influences *ROA*. With a probability of 0.0001 or below the significance of 5%, it can be stated that if H₀ is rejected, then the *ACP* variable has a significant influence on the profitability of automotive and component companies. The results of the regression analysis show that the *ACP* regression coefficient is -0.001959. This reflects that *ACP* has a negative relationship with profitability. This means that for every one-day decrease in the average receivable collection period, profitability will increase by 0.001959-unit *ROA*. These results indicate that the shorter the *ACP*, the faster the company will gain profitability. If the time needed to collect accounts receivable is getting shorter, there will be a lot of cash available so that cash can be used for further working capital. On the other hand, the time required to collect accounts receivable is longer, so the available cash will be less so that the available cash cannot be used for further working capital.

This research is in line with research conducted by Anwar (2018) and George (2021).

Based on the results of partial hypothesis testing, the *ICP* (*Inventory Conversion Period*) variable has a T_{arithmetic} value of 1.358890 which is smaller than the T_{table}, so *ICP* does not affect *ROA*. With a probability of 0.1814 or being above a significance of 5%, it can be stated that if H₀ is accepted, then the *ICP* variable does not affect the profitability of automotive and component companies. This is caused by inventories that tend to be stable during the study period. This research is not in line with research conducted by Aryawan and Indriyani, (2020) and research by Mulyono et al (2018).

Based on the results of partial hypothesis testing, the *DER* (*Debt to Equity Ratio*) variable has a T_{arithmetic} value of -0.999340 which is smaller than the T_{table}, so *DER* does not affect *ROA*. With a probability of 0.3234 or above a significance of 5%, it can be stated that if H₀ is accepted, then the *DER* variable does not affect the profitability of automotive and component companies. This is because the company still has good working capital, so the effect of debt is not visible in this study. This research is not in line with the research conducted by Putra and Badjra (2015) and the research conducted by Alvarez et al, (2020)

The results of the F test or simultaneous testing of independent variables, namely *cash conversion cycle* (X1), *average collection period* (X2), *inventory collection period* (X3), *debt to equity ratio* (X4), *liquidity in this case current asset ratio* (X5), *inventory turnover* (X6) there is a simultaneous and significant effect on the dependent variable, namely *profitability* (Y) in the automotive company. Based on the results of the F test, it is known that the significant value of F is 0.000 less than 0.05, so H_a is accepted.

From these results, it can be concluded that the independent variables are *cash conversion cycle*, *average collection period*, and *inventory collection period*, *debt to equity ratio*, *liquidity in this case current asset ratio*, *inventory turnover* simultaneously or jointly have a significant effect on profitability, so it can be concluded that it is concluded that H_a is accepted. In accordance with the theory of the F, the test is "testing of the regression coefficient simultaneously this test is carried out to find out all the independent variables contained in the model simultaneously on the dependent variable, Sugiyono (2012).

IV. Conclusion

Cash Conversion Cycle (CCC) partially has a positive and significant effect on the profitability on return on assets (ROA), so it can be concluded to reject H_1 . This means that the *cash conversion cycle* partially has a positive and significant effect on profitability. This is due to good management of accounts receivable, and inventory. *Average Collection Period* (ACP) partially has a negative and significant effect on the profitability on return on assets (ROA), so it can be concluded to accept H_2 . This means that the *average collection period* partially has a negative and significant effect on profitability. This is due to the company's ability to accelerate the collection of receivables.

Inventory Collection Period (ICP) partially does not affect profitability on return on assets (ROA), so it can be concluded to reject H_3 . This means that the *inventory collection period* partially does not affect profitability. *Debt to Equity Ratio* (DER) partially does not affect the profitability on return on assets (ROA), so it can be concluded to reject H_4 . This means that the *Debt to Equity Ratio* partially does not affect profitability. This is because working capital is still good. *Current Asset Ratio* (CAR) partially does not affect the profitability on return on assets (ROA), so it can be concluded to reject H_5 . This means that the *Current Asset Ratio* partially does not affect profitability. The reason that can be seen from the financial statements is the existence of current items which are not direct costs.

Inventory Turnover (ITO) partially has an effect on the profitability on return on assets (ROA), so it can be concluded to accept H_6 . This means that *Inventory Turnover* partially has a significant and significant effect on profitability. This is because automotive and component companies already have good inventory control.

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