ROLE OF WORKING CAPITAL MANAGEMENT, CAPITAL INTENSITY IN AFFECTING THE PROFITABILITY OF MANUFACTURING COMPANY

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Abstract:
The phenomenon that occurs is that the food and beverage sub-sector in Indonesia is currently one of the mainstays of supporting the growth of manufacturing and the national economy. All activities carried out by the company always require funds, both to finance daily operational activities and to finance long-term infestations. The research objective is to analyze and test the effect of working capital management and capital intensity on the profitability of manufacturing companies. The population in this study is the Consumer Goods Industry Sector which is listed on the Indonesia Stock Exchange. The method used in this study is multiple linear regression analysis. The research results of working capital management affect profitability, capital intensity has a significant negative effect on profitability and working capital management and intensity capital together has an impact on profitability.

JEL: D24; G31; L60; L66

Keywords: profitability, capital intensity, working capital

1. Introduction

Manufacturing companies are the largest companies listed on the IDX, causing intense competition between companies. Manufacturing companies are generally established not

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only for short-term goals but also for long-term purposes whose products can meet consumer needs while earning income in the form of profits from the sale of their products (Marwan, 2013). In general, the activities and operations of a manufacturing company begin with the production process from purchasing raw materials, processing materials to becoming ready-to-sell products. The sales results of these products determine the company’s success rate. The success of a company is marked by increasing profits from high sales results. One of the goals of establishing a company is to achieve high sales results with increasing profits. The amount of profit earned regularly is an important factor for assessing the profitability of a company (Setiawan, 2015).

The phenomenon that occurs is that the food and beverage sub-sector in Indonesia is still one of the mainstays of supporting the growth of manufacturing and the national economy this year. According to Airlangga Hartarto (Minister of Industry), said the role of the food and beverage sector can be seen from its consistent and significant contribution to the gross domestic product of the non-oil and gas industry and increased investment realization. The Ministry of Industry noted that the food and beverage industry’s contribution to the non-oil and gas industry’s gross domestic product reached 34.95% in the third quarter of 2017. This result made the food and beverage sector the largest contributor compared to other subsectors. Also, this achievement has increased by 4% compared to the same period in 2016. While its contribution in the third quarter of 2017 was 6.21% or an increase of 3.85% compared to the same period in the previous year. The growth of the food and beverage industry which has experienced a significant increase shows that the food and beverage industry not only has good prospects, but this is also an indication that the competition between food and beverage products is very tight. This makes food and beverage product producers required to be able to develop and create innovations that can maintain their existing market and win the competition (www.bi.go.id).

Profitability is the company’s ability to earn profits in sales, total assets, and equity (Sartono, 2010). Profitability shows the company’s ability to earn profits or a measure of the effectiveness of company management. The ability to earn a profit can be measured from its capital or all funds invested in the company (Wiagustini, 2010). The company wants the company’s profit to increase, which means that the company can increase its profitability, assuming the company’s total assets do not increase. The use of profitability ratios can be done by using comparisons between the various components in the financial statements, especially the balance sheet financial statements, and the income statement. Measurements can be made for several operating periods. Profitability ratios are used to see the company’s development over a certain period, either decrease or increase, as well as to find the causes of these changes (Kasmir, 2012).

Profitability in this research is proxied by return on assets (ROA). Return on assets is used to see the extent to which the investment that has been invested can provide returns as expected based on the assets owned (Brigham and Houston, 2010). The return on assets analysis measures the company’s ability to generate profits by using the total assets (wealth) owned by the company after adjusting for the costs to fund these assets.
Brigham (2010) states that working capital is a company's investment in short-term assets, such as cash, marketable securities, accounts receivable, and inventories. Meanwhile, according to Riyanto (2001), working capital is the value of assets or assets that can be immediately turned into cash and used by companies for daily needs, for example, to pay employee salaries, purchase raw materials, pay transportation costs, pay debts and so on.

The company carries out various activities to achieve the goals that have been set. All activities carried out by the company always require funds, both to finance daily operational activities and to finance long-term investments. Funds that are used to carry out daily operational activities are called working capital. Working capital is needed by every company to finance its operations every day, where the working capital that has been issued is expected to return to the company in a short time through the sale of its products. The working capital that comes from the sale of these products will soon be issued again to finance further operational activities (Sawir, 2005).

Management of working capital in a company is needed to determine the optimal amount of working capital that the company needs. Working capital management is an activity that includes all management functions of the company's current assets and short-term liabilities (Esra and Apriwenu, 2002). The target to be achieved from working capital management is to maximize firm value by managing current assets so that the level of marginal investment management is equal to or greater than the cost of capital used to finance these assets, minimizing, in the long run, the cost of capital used to finance. assets and controls the flow of funds in current assets. Several previous studies discuss the effect of working capital management on company profitability.

In the working capital management variable, there is a research gap because there are several differences regarding the results of previous studies that have been conducted. The results of Abdullah’s (2017) Shofia Suparti (2017) and Saerang (2016) researches show that the effect of working capital management has a significant positive effect on profitability. In contrast to Reimeinda (2016) and Murni (2016), it is shown that the effect of working capital management does not significantly influence the profitability of the research.

Capital Intensity is the ratio between Sales and Total Assets. This ratio shows the level of efficiency in the use of assets by the company. This ratio is a barrier to entry for new companies. A new company that will enter the oligopoly market must have a high level of efficiency, otherwise, the company will not be able to enter the new market. Companies that have a high level of efficiency will certainly find it easier to earn profits. This ratio reflects the company's ability to use its assets to generate sales. The higher this ratio means the more efficient use of these assets. However, the company's policy must also look at the ratio of industrial capital intensity. If the capital intensity ratio is too high, it does not mean that this ratio is good, but the asset value is too low, so it must be replaced. Optimal use of assets will increase company profits. Thus, there is a positive effect of capital intensity on profitability (Sularto, 2007).
Several previous studies discuss the effect of working capital intensity on company profitability. In the capital intensity variable, there is a research gap because there are several differences regarding the results of previous studies that have been conducted. The research results of Darmawati (2013), Winarno (2013), and Hidayati (2013) show that the effect of capital intensity has a significant positive effect on profitability. In contrast to Hapsari’s (2011) research, it shows that the effect of capital intensity does not affect profitability. With the existence of phenomena and differences in the results of research conducted by previous researchers, this study will try to re-examine the effect of working capital management and capital intensity on the profitability of manufacturing companies on the IDX in 2016-2018.

2. Literature Review

2.1 Profitability
Sartono (2010) states that "Profitability is the company’s ability to earn profits about sales, total assets, and equity." Kusumawati (2005) states that: "Profitability is the company’s ability to generate profits in the future and is an indicator of the success of the company’s operations". Based on the opinion of the experts above, it can be concluded that the profitability ratio is a ratio to measure the level of management effectiveness (management) of a company which is indicated by the amount of profit generated from sales and investment. The point is the use of this ratio shows the efficiency of the company.

2.2 Working Capital
Fred Weston Eugene F. Brigham (2012) in Yudhistira (2008) states that: "Working capital is a company’s investment in short-term assets, namely cash, short-term securities, accounts receivable and inventories." According to Riyanto (2010), "Working capital is a company’s investment in short-term assets, namely cash, short-term securities, accounts receivable, inventories. Gross working capital is the total current assets of the company, and networking capital is current assets minus current debt. Based on the opinion of the experts above, it can be concluded that working capital is the total current assets owned by the company or can be intended as funds that must be available to finance the operations of daily activities. Working capital is very important in supporting the smooth operation of operations so that the company can run smoothly”.

2.3 Capital Intensity
Steyn (2012) defines capital intensity as follows: “Capital intensity refers to the amount of capital a business requires to generate one unit of revenue.” It, therefore, indicates the amount of plant, property, equipment, and other tangible assets required to produce a unit of sales. Noor et al., (2010) as the ratio between fixed assets such as equipment, machinery, and various properties to total assets. This ratio describes how much the company’s assets are invested in fixed assets. In line with the statement of Hanum and Zulaikha (2013), capital intensity is measured by looking at how much-fixed assets are used by the
company compared to the number of assets owned by the company. According to Sartono (2010), capital intensity is the ratio of fixed assets, such as factory equipment, machinery, and various properties, to total assets. This ratio illustrates how much the company’s assets are invested in the form of fixed assets (fixed assets). Turnover of total assets (total asset turnover) if reversed will be capital intensive.

3. Method

3.1 Types and Sources of Data
Secondary data used in this study are financial and non-financial information contained on manufacturing company websites obtained from IDX Fact 2016-2018. The data source of this research is obtained from (a) Indonesia stock exchange (IDX) Fact 2016-2018 (b) Manufacturing company website.

3.2 Population and Sample
The population in this study is the Consumer Goods Industry Sector which is listed on the Indonesia Stock Exchange in 2016-2018. The sampling technique was carried out by purposive sampling to get a representative sample according to the specified criteria, namely (1) manufacturing companies listed on the Indonesia Stock Exchange (IDX), (2) companies that have annual reports from 2016-2018, (3) has an official manufacturing company website, (4) Has net sales of more than Rp. 5 billion / year (5) has the largest asset and market share in Indonesia. Based on the above criteria, we can find a sample of 10 manufacturing companies with 3 years of observation so that 33 observational data are obtained.

3.3 Data Analysis Method
Regression analysis is used in this study to test the strength of the relationship between the dependent variable (profitability) and the independent variable (working capital management and capital intensity) and to show the direction of the relationship between the dependent variable and the independent variable.

3.4 Hypothesis Testing
The t-test is used to show whether each independent variable has a significant effect on the dependent variable. Hypothesis testing is done by using the t-test, by comparing the t-count value of the regression analysis with the t-table value at the real level $\alpha = 0.05$. 
The results of multiple linear regression analyses are used to determine whether there is an effect of working capital management variables and capital intensity on profitability in food and beverage consumer goods manufacturing companies listed on the IDX. The results of the calculation of multiple linear regression analysis were carried out with the help of the statistical package for social science (SPSS) 15.0 for windows, based on the data from the results of the study, the complete results of the multiple linear regression analysis that have been done can be seen in Table 1 below.

Based on Table 1, the constant value (constant-coefficient) of 0.215 states that if the independent variables (working capital management and capital intensity) are considered 0 (zero), then the profitability of food and beverage consumer goods companies listed on the Indonesia Stock Exchange will increase, equal to 0.215. The regression coefficient value for working capital management is 0.039, with a positive coefficient indicating that there is a unidirectional relationship between the profitability variable and the working capital management variable, which means that if the value of working capital management increases by 1%, the profitability value will increase by 0.039. This means that the higher the working capital management of the company, the higher the company’s profitability and vice versa. With the assumption that the other independent variables are constant. The value of the capital intensity regression coefficient of -0.008 with a negative direction indicates that there is a relationship between the profitability variable and the capital intensity variable, which means that if the
company size is 1%, the profitability value will decrease by 0.008. Assuming the other independent variables are constant (no effect).

The t-test is used to determine the effect of each independent variable, namely working capital management and capital intensity on the dependent variable, namely profitability in manufacturing companies listed on the IDX in 2016-2018.

Table 2: t test

<table>
<thead>
<tr>
<th>Description</th>
<th>Standardized coefficients</th>
<th>t-test</th>
<th>Sig</th>
</tr>
</thead>
<tbody>
<tr>
<td>(Constant)</td>
<td></td>
<td>2.024</td>
<td>0.053</td>
</tr>
<tr>
<td>Management Working Capital</td>
<td>0.408</td>
<td>2.613</td>
<td>0.014</td>
</tr>
<tr>
<td>Intensitas Modal</td>
<td>-0.402</td>
<td>-2.577</td>
<td>0.016</td>
</tr>
</tbody>
</table>

The amount of t value for the working capital management variable is 2.613 with a significant level of 0.014, smaller than 0.05 (alpha). So, it can be concluded that working capital management affects profitability. This shows that high working capital management will increase the company’s profitability. The value of the t value for the capital intensity variable is -2.577 with a significant level of 0.016, smaller than 0.05 (alpha). The results empirically state that capital intensity has a significant negative effect on profitability. So that H3 which states that capital intensity has a positive effect on profitability is rejected. This shows that the higher the capital intensity, the lower the profitability.

5. Discussion

5.1 The Effect of Working Capital Management on Profitability
The results of testing the working capital management hypothesis show that the t count is 2.613 with a significant level of 0.014 which is smaller than 0.05 (alpha). It can be concluded that working capital management has a positive and significant effect on profitability. Thus, this study accepts the working capital management hypothesis (H1). The results of this study prove that the higher the level of working capital management, the more effective it is to use it in obtaining a certain sales volume so that the company's profitability will increase. Funds that are used to carry out daily operational activities are called working capital, working capital is needed by each company to finance daily operational activities, where the working capital that has been spent is expected to be able to return to the company in a short time through the sale of its products. The working capital that comes from the sale of these products will soon be issued again to finance further operational activities. Thus, working capital management in a company is needed to determine the optimal amount of working capital that the company needs. Therefore, managers or company leaders must supervise working capital so that work resources can be used effectively in the future. The results of this study are in line with research conducted by Abdullah (2017) Shofia Suparti (2017) and Saerang (2016) showing that the influence of working capital management has a significant positive effect on...
The results of this study are not in line with the results of research conducted by Reimeinda (2016) and Murni (2016) which show that the effect of working capital management does not have a significant effect on profitability.

5.2 Effect of Capital Intensity on Profitability
The results of testing the capital intensity hypothesis show that t count -2.577 with a significant level of 0.016 is smaller than 0.05. This shows that the capital intensity variable has a significant effect on profitability in a negative direction. Thus, this study rejects the capital intensity hypothesis (H2). The results of this study indicate that the capital intensity ratio has a significant negative effect on company profitability. Significantly affects in a negative direction, testing can be caused by an increase in the ratio of capital intensity that is not balanced with an increase in profitability. Any increase in sales may not be invested in one of its assets. So that the increase in the capital intensity ratio does not affect the increase in profitability. The intensity or frequency of the high amount of capital in the company cannot provide an increase in the company’s ability to generate profits in its assets.

Capital intensity is to measure the level of efficiency in the use of all company assets in producing a certain level of sales in this study using the capital intensity ratio, which is to compare total assets to total sales. This is in line with the results of research by Hapsari (2011) showing that the effect of capital intensity does not affect profitability. The results of testing this variable are contrary to the research conducted by Darmawati (2013), Winarno (2013), and Hidayati (2013) which shows that the effect of capital intensity has a significant positive effect on profitability.

5.3 The Effect of Working Capital Management and Capital Intensity on Profitability
Hypothesis 3 test shows a significant number of 0.003 smaller than 0.005. The F statistical test for the independence variable produces the calculated F value of 7.059. So the third hypothesis is that the management of working capital and capital intensity jointly (simultaneously) affect profitability. The coefficient of determination of 0.586 or 58.6% indicates that working capital management and capital intensity can explain the profitability variable by 58.6%, while the remaining 41.4% is explained by variables other than the variables proposed in this study. Thus, the two variables consisting of working capital management and capital intensity together influence increasing profitability.

6. Conclusion
The results of the research on the effect of working capital management and capital intensity on profitability in consumer goods manufacturing companies can be concluded as follows: (1) working capital management affects profitability, so that the higher the level of working capital management, the more effective it will be used in obtaining certain sales volumes so that the company’s profitability will increase even more. (2) capital intensity has a significant negative effect on profitability, which states that capital
intensity has a positive and significant effect on profitability is rejected. This shows that the higher the level of the company's capital intensity, the lower the level of profitability. Working capital management and capital intensity together have an impact on profitability. The company must also optimize the working capital management to be taken so that the company’s goal of obtaining high profitability can be achieved. The level of capital intensity in the company can also affect profitability.

Conflict of interest
The authors declare no conflicts of interest

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References


Sukarno (2012). Kekuasaan Kehakiman Indonesia, Makasar: Arus Timur


