



## Effects of Long Term Debt to Total Assets, Short Term Debt to Total Assets, Total Asset Turnover, and Inventory Turnover on Profitability of Manufacturing Companies in Consumer Goods Subsector Listed on IDX

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### Abstract

This research aims to determine the effects of solvability and activity on profitability of manufacturing companies in consumer goods subsector in Indonesia. The dependent variable used was ROA, while the independent variables included, LTDTA, STDTA, TATO and ITO. The population consisted of 53 manufacturing companies in consumer goods subsector listed on Indonesia Stock Exchange. Samples were selected using purposive sampling. Out of 53 companies, 2 companies have been delisted from 2014 to 2018, 14 new companies were listed on the Indonesia Stock Exchange after 2014 and 1 companies have not published financial reports. Hence, the samples used in this research were only 36 companies. The method used was linear regression. The result showed that LTDTA has a significant negative effect on ROA, on the contrary STDTA, TATO and ITO do not have significant effect on ROA.

**Keywords:** Return on Assets; Long Term Debt to Total Assets; Short Term Debt to Total Assets; Total Assets Turnover; Inventory Turnover

## 1.0 INTRODUCTION

Indonesian economy has been growing up well as many collaborations between Indonesia and other countries have been conducted, it includes the collaborations between Indonesia and Japan, Indonesia and Italy, Indonesia and Algeria, and other countries. The development of business has forced the companies to always come with newer ideas to compete in both global and domestic markets. The rise in emergence of competing companies with their competitive advantages makes the business dynamics to change continuously.

Generally, companies aim to make profit out of their productions either in the form of goods or services. The profit generated will determine the companies' survival. They use their profit to develop and maintain their sustainability. Profit is also used as the success measurement of the companies' management in running the business.

The competition has become tighter, especially for companies in the same industry. It forces the companies to always manage things well and precise, innovate new products, and grow their business to sustain the market. Nevertheless, all these activities require capital, either from liabilities or equity. Therefore, every company should always have proper financial statements to keep evaluating their financial state. The companies can measure their financial health by calculating profitability ratios which are important measurements for companies' performance.

Profitability ratios will determine the balance in the income and the companies' ability to earn profit in different operational levels. Hence, these ratios reflect their overall effectiveness and management success. There are several measurement tools that can be utilized in measuring profitability, such as Return on Assets (ROA), Return on Equity (ROE), Gross Profit Margin (GPM), Net Profit Margin (NPM), and Operating Profit Margin (OPM). This research will use ROA as the measurement of profitability. ROA portrays the ability of companies' assets in

generating profit. This ratio will also determine the extent of managers' success in fulfilling their duties. ROA will also compare between the profit earned and funds used in running the business.

This research will also use Long Term Debt to Total Assets (LTDTA) which shows the amount of long term debt that companies invest in their assets in generating profit (Warsono, Amalia, & Rahajeng, 2009). Higher long term debts requires companies to earn positive income and stable cash flows. This ratio is helpful for the management in examining their debt structure and making decisions related to their debt capacity.

Short Term Debt to Total Assets (STDTA) shows the amount of short term debt utilized by companies in their assets in generating profit (Warsono et al., 2009). The increase in this ratio means there is a rise in companies' financial performance, either Return on Assets or Return on Equity. The rise in short term debt will relatively low interest rate will lead to increment in the profit.

Total Assets Turnover (TATO) measures companies' ability in generating sales profit based on their total assets. Pongrangga, Dzulkrirom, & Saifi (2015) stated that higher numbers in TATO reflect faster asset turnover in generating sales profit. Sales volume can be increased with the same number of total assets if the companies increase their total asset turnover.

Inventory Turnover (ITO) is the time needed for a company to turn its inventories into cash. Inventories are part of current assets which are actively obtained, processed, and sold to the customers. For a company to speed the process in earning its sales cash inflow, it will need a good inventory turnover. The rise in inventory turnover reflects the high turnover for funds invested in the inventories. The slow level of inventory turnover shows the longer time the inventories are hold in the company which will incur more inventory costs and affect the company's overall profit (Fitri, 2013).

The study done by Gill, Biger, & Mathur (2011) found a positive relationship between Short Term Debt to Total Assets and profitability and between Long Term Debt to Total Assets and profitability in manufacturing sector. The research conducted by Yusnita & Fitriadi (2019) also found that Short Term Debt to Total Assets and Long Term Debt to Total Assets have positive influence on profitability. In contrary, the research done by Mitria (2019) concluded that Short Term Debt to Total Assets does not have any influence on profitability and Long Term Debt to Total Assets have significant negative relationship on profitability.

Willi & Chandra (2019) stated that Total Assets Turnover shows positive and significant effect on profitability. However, the research done by Hendawati (2017) shows that total assets turnover does not have any influence on ROE. Kridasusila & Rachmawati (2016) and Setiawan (2015) showed significant influence on Return on Assets, while Widiyanti & Bakar (2014) concluded a positive and significant relationship between Inventory Turnover and profitability. In contrary, Sari & Budiasih (2014) found in their study that Inventory Turnover does not have any influence on profitability.

The aim of this research is to determine the influence of LTDTA, STDTA, TATO, and ITO on profitability of manufacturing companies in consumer goods subsector in Indonesia.

## 2.0 LITERATURE REVIEW

The aim of financial management is to maximize the firm value. A financial manager has to be capable in making decisions to generate maximum profit with limited risk. In rising shareholders' wealth, a financial manager has to be able to value the company's capital structure and comprehend its relationship with risk, return, and value. Capital structure is a financial measurement between short term debt, long term debt, and personal equity in carrying company's activities. Capital structure is crucial for a company to manage as it can have direct influence on the company's financial position.

The studies on capital structure were conducted to explain the relationship between capital structure and firm value. Based on Horne (1999), the common question is always: by increasing company's debt without adding the owner's equity and any other financial policies, will it change the firm value (Chandra, 2016)? Some theories on capital structure can be seen as follows.

### **Modigliani and Miller Theory (MM) (1963) / MM with Tax**

The no-tax Modigliani and Miller theory (MM) has been deemed to be unrealistic in 1963, hence, Modigliani and Miller has revised the assumptions made by including tax element in their analysis. With the existence of company tax, MM started to consider the reliability of Net Income Approach whereby changes in capital structure will affect the firm value. Durand's Net Income Approach assumes that firm value will rise with the increase in debt which will lower the weighted average cost of capital (WACC). Based on MM Approach (with tax), firm value will also increase as the debt rises, however, WACC will be decreased as the result of tax saving due to higher tax deductible expense.

**Trade Off Model**

Trade Off Model explains the bankruptcy risk a company could face which will result in more costs as the company experience financial distress. These costs may consist of the cost to sell company's assets below their market prices, the cost of liquidating the company, or the cost incurred due to management's worries in carrying the company's day-to-day operation. These bankruptcy costs will rise as the company increase the debt level.

**Pecking Order Theory**

In Pecking Order Theory, an optimal capital structure is viewed from a different perspective. Based on Myers, there is no optimal capital structure for a company, there are only alternatives between internal and external sources of funds (Wibowo, 2013). Internal financing is preferable by the manager compare to external financing such as debts.

**Profitability**

Based on Kasmir (2012), Return on Investment and Return on Assets are ratios that reflect the return earned by the assets in a company. Return on Investment (ROI) is also a measurement of management effectiveness in managing their investment. Return on Assets (ROA) is a ratio used to measure the level of return that company's assets as investments will generate. Net income is the income after deducted with interest and tax, while total assets is are the capital obtained through debts and / or equity.

**Long Term Debt to Total Assets**

Long Term Debts are the obligations that have to be fulfilled by a company in more than 1 year maturity. With a long maturity, this kind of debt will also incur higher long term risks for the company. Husnan dan Pudjiastuti (2006) stated that the costs of long term debts are higher than the short ones due to the penalty that a company may get in case of early payments (before maturities). Long Term Debt to Total Assets is a ratio used to measure the proportion of long term debt compare to a company's assets. It is calculated by dividing total long term debts to total assets.

Based on the study done by Mitria (2019), Long Term Debt to Total Assets has a negative significant influence on Return on Assets of companies listed on Indonesia Stock Exchange in Makassar. Priyanto & Darmawan (2017) also found negative significant relationship between Long Term Debt to Total Assets and profitability of manufacturing companies listed on Indonesia Stock Exchange from 2012 to 2014. Consistently, Jati & Sudaryanto (2016) also concluded a negative significant effect of Long Term Debt to Total Assets on profitability. However, Yusnita & Fitriadi (2019) stated that Long Term Debt to Total Assets has positive significant influence on the profitability of micro, small, and medium enterprises in Tasikmalaya city. Gill et al. (2011) also found positive relationship between Long Term Debt to Total Assets and profitability of American companies listed on New York Stock Exchange from 2005 to 2007. Based on these researches, a hypothesis is proposed as follows.

H1 : Long Term Debt to Total Assets has negative influence on profitability of manufacturing companies in consumer goods subsector listed on Indonesia Stock Exchange from 2014 to 2018.

**Short Term Debt to Total Assets**

Short term debts are obligations that a company has to fulfill within a year of maturity. They also include long term debts with less-than-one-year left maturities. Short term debts incur lower costs than long term debts (Husnan dan Pudjiastuti, 2006). Therefore, the interest rate is lower and has lesser effect on the profitability. Increasing in the use of short term debts will give a company more opportunities in generating higher level of income than the cost incurred, hence, the net income will rise at the end. Short Term Debt to Total Assets reflects the size of short term debt used in acquiring company's assets to generate income (Warsono et al., 2009).

The study done by Gill et al. (2011) found a positive relationship between Short Term Debt to Total Assets and profitability of American companies listed on New York Stock Exchange from 2005 to 2007. Similar result was obtained by Yusnita & Fitriadi (2019) on the micro, small, and medium enterprises in Tasikmalaya city whereby positive significant relationship was found between Short Term Debt to Total Assets and profitability. Consistently, Jati & Sudaryanto (2016) also concluded positive significant effect of Short Term Debt to Total Assets on ROA. Meanwhile, Mitria (2019) stated that Short Term Debt to Total Assets has no influence of profitability. Based on these studies, a hypothesis is proposed as follows.

H2: Short Term Debt to Total Assets has positive influence on profitability of manufacturing companies in consumer goods subsector listed on Indonesia Stock Exchange from 2014 to 2018.

### Total Assets Turnover

Total Assets Turnover is a comparison between sales and total assets of a company. This ratio portrays the turnover speed of total assets in a period of time. Despite the importance of Total Assets Turnover for both creditors and company's owners, it is a crucial tool for company's management since it shows the efficiency level of the use of all assets in the company. Based on Kasmir (2016), Total Assets Turnover is a ratio used to measure the turnover of overall assets owned by a company and the total sales obtained for every rupiah of assets.

Putry & Erawati (2013) stated that Total Assets Turnover has a positive and significant effect on Return on Assets (ROA) of companies listed on Indonesia Stock Exchange from 2009 to 2011. The study done by Hayati et al (2017) shows that Total Assets Turnover has significant influence on ROA of food and beverages companies listed on Indonesia Stock Exchange from 2012 to 2014. The research conducted by Willi & Chandra (2019) also concluded similar result whereby Total Assets Turnover has significant effect on ROA of manufacturing companies listed on Indonesia Stock Exchange from 2010 to 2017. However, Hendawati (2017) presented a different result from her study whereby Total Assets Turnover of non-banking government-owned companies in 2005 to 2010 does not have any influence on ROA. In accordance to this research, Setiawan (2015) also found that Total Assets Turnover does not have significant effect on ROA of food and beverages companies listed on Indonesian Stock Exchange from 2010 to 2013. Based on these studies, the hypothesis below is proposed.

H3 : Total Assets Turnover has positive influence on profitability of manufacturing companies in consumer goods subsector listed on Indonesia Stock Exchange from 2014 to 2018.

### Inventory Turnover

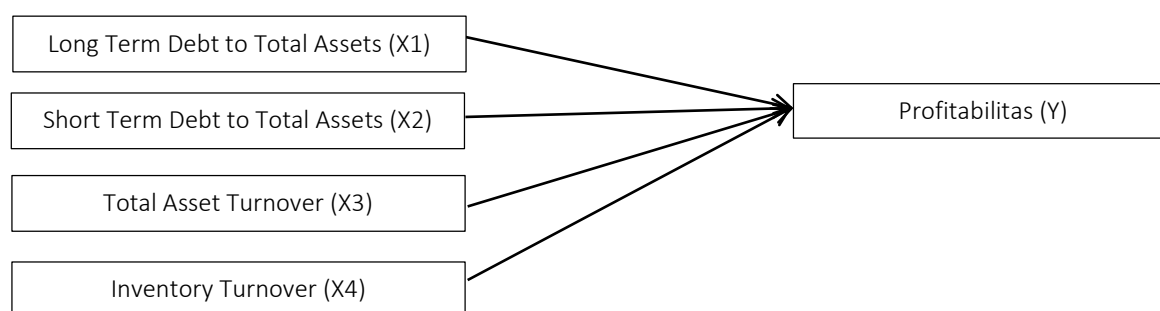
Inventory Turnover (ITO) is an activity ratio which measures a company's speed in turning their inventories into cash within a year. Based on Kasmir (2012), Inventory Turnover is a ratio used to measure the number of times the funds invested in the inventories are rolled over in a period of time. Inventories are part of current assets which are actively obtained, processed, and finally sold to consumers.

Based on the research conducted by Widiyanti & Bakar (2014), Inventory Turnover is deemed to have positive and significant effect on Return on Assets (ROA) of property and real estate companies listed on Indonesia Stock Exchange (IDX) from 2008 to 2012. Consistently, Setiawan (2015) also showed a positive and significant relationship between Inventory Turnover and ROA of food and beverage companies listed on IDX from 2010 to 2013. Kridasusila & Rachmawati (2016) also resulted in the same relationship between both variables. However, the research done by Irman & Iswara (2019) concluded that Inventory Turnover does not have a significant effect on ROA. Based on these previous studies, a hypothesis is proposed as follow.

H4 : Inventory Turnover has positive influence on profitability of manufacturing companies in consumer goods subsector listed on Indonesia Stock Exchange from 2014 to 2018.

### Conceptual Framework

The conceptual framework of this study is shown in Figure 1.



Source: Processed Data

Figure 1. Conceptual Framework

## 3.0 METHODOLOGY

### Time and Place of Research

This research was conducted on manufacturing companies in consumer goods subsector listed on Indonesia Stock Exchange (IDX) whereby the data was obtained from IDX official website at [www.idx.co.id](http://www.idx.co.id). The data collection was done in August 2019 to January 2020.

**Population and Sample**

The population in this research consists of the manufacturing companies in consumer goods subsector listed on Indonesia Stock Exchange from 2014 to 2018 which amounted 53 companies in total. The data from several years were taken to create a consistency of research result over years. The samples were taken using purposive sampling method. There were 3 criteria used in choosing the samples. First, the companies have not been delisted in 2014 to 2018 period. Second, the companies should be listed on IDX before 2014. Third, companies need to publish complete financial reports. Out of 53 companies, there were 2 companies delisted in this period, 14 companies were listed after 2014, and 1 company has not released its financial report. Hence, the total sample in this study were 36 companies.

**Data Collection Method**

The data used in this research was secondary data which was obtained from various sources such as [www.idx.co.id](http://www.idx.co.id) and [idnfinancials.com](http://idnfinancials.com). All the data about the variables, both dependent variable (ROA) and independent variables (LTDTA, STDTA, TATO, and ITO), were obtained from financial statement of the companies in 2014 to 2018.

**Operational Variable**

The variables used in this research are discussed as follows:

**Long Term Debt to Total Assets (LTDTA) (X1)**

Based on (Jati & Sudaryanto, 2016), Long Term Debt to Total Assets is a ratio used to measure the proportion of long term debt against company's assets. Long Term Debt to Total Assets was calculated using the following formula:

$$\text{Long Term Debt to Total Assets} = \text{Total of Long Term Debts} / \text{Total Assets}$$

**Short Term Debt to Total Assets (STDTA) (X2)**

Warsono et al., (2009) stated that Short Term Debt to Total Assets reflects the amount of short term debts used to invest in the assets to generate profit. In this research, Short Term Debt to Total Assets was calculated using the following formula:

$$\text{Short Term Debt to Total Assets} = \text{Total Hutang Jangka Pendek} / \text{Total Aktiva}$$

**Total Assets Turnover (TATO) (X3)**

Total Assets Turnover is a comparison between sales and total assets in a company (Willi & Chandra, 2019). This ratio portrays the speed of the turnover of a company's asset in a period of time. TATO was calculated using the following formula:

$$\text{Total Asset Turnover} = \text{Penjualan} / \text{Total Aktiva}$$

**Inventory Turnover (ITO) (X4)**

According to Widiyanti & Bakar (2014), Inventory Turnover is an activity ratio which measures company's speed in turning inventories into cash. Inventory Turnover was calculated using the following formula:

$$\text{Inventory Turnover} = \text{Harga Pokok Penjualan} / \text{Rata-rata Persediaan}$$

**Return on Asset (ROA) (Y)**

Based on Yusnita & Fitriadi (2019), Return on Assets is a profitability ratio which reflects the company's ability in generating income through its assets. In this research, ROA was calculated using the following formula:

$$\text{Return On Asset} = \text{Laba Bersih Setelah Pajak} / \text{Total Aktiva}$$

**Data Analysis Method**

The data analysis method used in this research was descriptive analysis, multiple linear regression, classical assumption test, and hypothesis test.

**Classical Assumption Test**

One of the requirements to conduct multiple linear equation is fulfilling the classical assumption test. The aim of this test is to determine whether or not the result of regression estimation is free from bias which will cause the regression result to be invalid and unacceptable as a base for hypothesis testing and conclusion. The first classical assumption test conducted was normality test which aims to examine the existence of residuals or defect variables

with normal distribution in the regression model. F Test and t test assumes that residual value follows the normal distribution. If the assumption is violated, statistical test will become invalid for small number of samples. There are two ways to detect whether or not residual has normal distribution, these are graphic analysis and statistical test. In this research, the normality test was conducted using Kolmogorov-Smirnov Test (Ghozali, 2013). The guidelines used to draw the conclusion were as follow: (1) When sig value (2-tailed) > 0,05, the data is normally distributed. (2) When sig value (2-tailed) < 0,05, the data is not normally distributed. In case of abnormal distribution, the data will tested using SmartPLS program.

The second test was multicollinearity test which aims to examine the existence of correlation among independent variables in the regression model. It was conducted by examining the tolerance value and the value of variance inflation factor (VIF). When the tolerance value > 0,10 and VIF value < 10, it can be concluded that there is no existence of multicollinearity (Ghozali, 2013).

The third test was autocorrelation test which was used to examine the existence of correlation between a variable's current value and its past value. If such correlation exists, it means there is autocorrelation problem. A good regression model should be free from autocorrelation (Ghozali, 2011). It can be seen from the Durbin-Watson (DW) value.

The fourth test was heteroscedasticity test which aims to determine the existence of differences in variance of residual in one observation to the other. If the residual variance is consistent between these observations, homoscedasticity exists. A good regression model should be free from heteroscedasticity, in other words, it should be a model with homoscedasticity. There are several ways to conduct heteroscedasticity test such as Scatter Plot Test, Park Test, Glejser Test, and White Test. This research used Scatter Plot Test whereby observation was conducted on the scatterplot between predicted value of dependent variable (ZPRED) and its residual (SRESID). When there is no clear trend or the dots are scattered randomly above and below 0 in Y axis, heteroscedasticity does not exist (Ghozali, 2013).

### Multiple Linear Regression

According to Sugiono (2016), this analysis is used to predict the fluctuation of dependent variable when two or more independent variables as the predictor factor are manipulated (by lowering or increasing their values). The analysis data method used was Statistical Package for Social Science (SPSS) Program. However, in case of abnormality in the data analysis method (despite the normal data), Smart PLS Program should be used instead. The regression analysis model is as follows:

$$Y = a + \beta_1X_1 + \beta_2X_2 + \beta_3X_3 + \beta_4X_4 + e$$

Where :	Y	= Profitability
	a	= Constanta
	$\beta$	= Regression coefficient of each independent variable
	X1	= Long Term Debt to Assets Ratio
	X2	= Short Term Debt to Assets Ratio
	X3	= Total Assets Turnover
	X4	= Inventory Turnover
	e	= Standard Error

## 3.0 RESULTS AND DISCUSSION

### Multicollinearity Test

Table 1 shows that the VIF values of all independent variables are less than 10. Hence, it can be concluded that multicollinearity does not exist among independent variables in this research.

**Table 1. Multicollinearity Test Result**

	VIF	Descriptions
LTDTA	1.133	There is no multicollinearity
STDTA	1.155	There is no multicollinearity
TATO	1.292	There is no multicollinearity
ITO	1.097	There is no multicollinearity

Source: Smart PLS Processed Data (2019)

### Determinant Coefficient Test (R<sup>2</sup>)

In Table 2, the R square value of 0,201 reflects the influence of other independent variables (LTDTA, STDTA, TATO, and ITO) on ROA by 20,1%. It also means that ROA can be affected by 79,9% by other variables which are not included in this research.

**Table 2. Determinant Coefficient Test Result (R<sup>2</sup>)**

	R Square
ROA	0,201

Source: Smart PLS Processed Data

### Hypothesis Test (T Test) and Discussion of Hypothesis Result

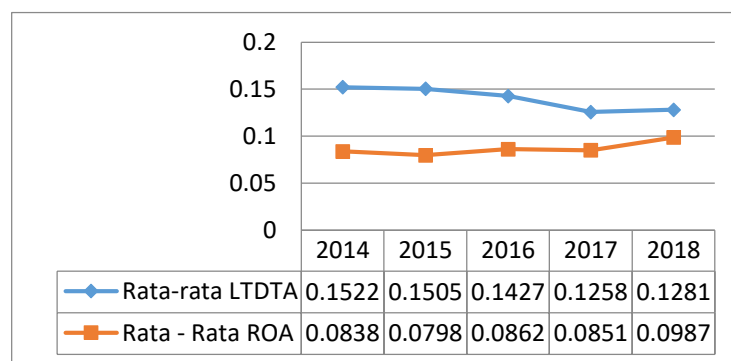
Table 3 shows the result of hypothesis test.

**Tabel 3. Hypothesis Test Result**

	Original Sample (O)	T Statistics ( O/STDEV )	T Tabel	P Values	Result
LTDTA -> ROA	-0.295	5.520	1.973	0.000	Accepted
STDTA -> ROA	0.069	0.568	1.973	0.570	Rejected
TATO -> ROA	0.230	1.859	1.973	0.064	Rejected
ITO -> ROA	0.098	1.805	1.973	0.072	Rejected

Source: Smart PLS Processed Data

Firstly, the test result of the first hypothesis (H<sub>1</sub>) shows that T-statistics 5,520 > t-table 1,973 and significance of 0,000 < 0,05, therefore, the first hypothesis (H<sub>1</sub>) is accepted and H<sub>0</sub> is rejected.



Source: Processed Data

**Figure 2. Average of Long Term Debt to Total Assets (LTDTA) Ratio & Return on Asset (ROA) of Consumer Goods Subsector Companies**

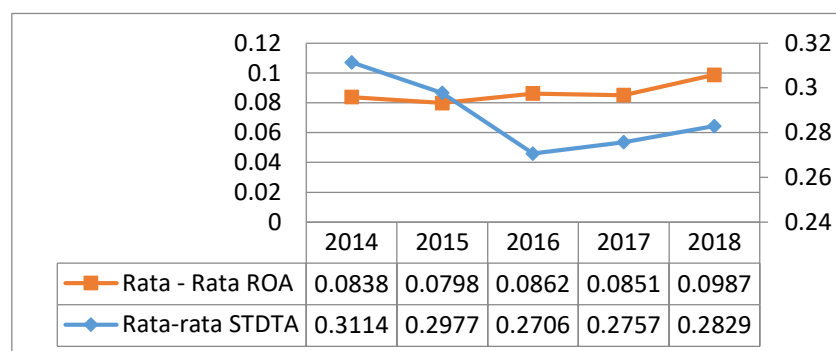
Figure 2 shows the average values of LTDTA which experienced a decline from 2014 to 2017 and ROA which fluctuated during the same period and increased in 2018. Declining LTDTA reflects the decrease in long term debts to fund company's assets. This research found that Long Term Debt to Total Assets has negative influence on Return on Assets. Hence, higher LTDTA will lead to lower ROA. Conversely, lower LTDTA will increase the value of ROA. High level of ROA will make it possible for company to lower their debt level as the source of funds. This is because higher profitability reflects company's tendency to utilize internal source of funds and avoidance in dependence on funds from external parties, hence, decrease their capital structure value. Internal source of funds usually incur lower costs than external one, namely debts. This is consistent with Pecking Order Theory which explains that company with higher profitability tends to have lower debts since they do not need such external source of funds. Higher level of profitability makes it possible for company to possess sufficient internal funds in fulfilling their costs and investment needs.

The LTDTA of PT. Ultrajaya Milk Industry & Trading Co. Tbk and PT. Darya Varia Laboratoria Tbk from 2014 to 2016 and PT. Multi Bintang Indonesia Tbk from 2016 to 2017 has been decreasing while their ROA values were increasing at the same time. Meanwhile, the LTDTA of PT. Kimia Farma Tbk, PT. Tempo Scan Pacific Tbk, and PT. Wismilak Inti Makmur Tbk has been rising from 2015 to 2018 and their ROA values were declining at the same

time. Hence, the higher the long term debts, the higher the needs for a company to have positive income and stable cash flow. Additionally, trade off theory also explains that cost of debt will hinder the company in utilizing excessive debt as they will face huge losses due to bankruptcy cost and declining profitability.

The research result is consistent with the study conducted by Jati & Sudaryanto (2016) who stated that there is significant influence of LTDTA on ROA. However, it contradicts with the study done by Yusnita & Fitriadi (2019) whereby LTDTA does not have any influence on profitability. The differences in the results were due to the different research period and objects of each researcher.

Secondly, based on the test result of second hypothesis ( $H_2$ ), it was shown that T-statistics  $0,568 < t\text{-table } 1,973$  and significance of  $0,570 > 0,05$ . Therefore, the second hypothesis ( $H_2$ ) is rejected and  $H_0$  is accepted.



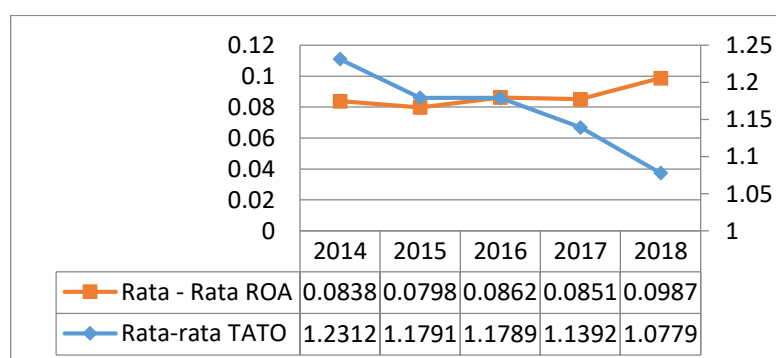
Source: Processed Data

Figure 3. Average of Short Term Debt to Total Assets (STDTA) & Return on Assets (ROA) of Consumer Goods Subsector

Figure 3 shows the declining average of STDTA in 2014-2016 and increasing average in 2017-2018 with fluctuated ROA from 2014 to 2017 and increasing ROA in 2018. The average of STDTA and ROA tend to change similarly over years whereby ROA will decline as STDTA decreases and ROA will rise as STDTA increases. However, this research has found that STDTA does not have significant effect on ROA. According to assumptions by MM (1963) in the world with tax, debt will incur interest cost which will lead to tax deduction (Chandra, 2016). The higher the amount of debt taken, the lower the cost of tax and therefore, the higher the profit earned. Nevertheless, when the cost of tax is low, the interest rate of short term liabilities will also have lower effect on profitability. One of the examples of short term liabilities which has lower interest rate is accounts payable which is usually found in bigger amount in consumer goods companies such as ADES, UNVR, HMSP, ALTO, ICBP, MYOR, and ULTI. The accounts payable of these companies ranges from 30% to 65% out of their total short term liabilities during this research period. It shows that STDTA does not have significant influence on ROA. The fluctuation in STDTA will not affect the level of ROA in consumer goods companies.

This result is consistent with the study done by Mitria (2019) who found no relationship between STDTA and ROA. It is contradicting with the research conducted by Jati & Sudaryanto (2016) whereby STDTA has positive influence on profitability. These differences in the results were due to the different research period and objects of each researcher.

Thirdly, the hypothesis test result of the third hypothesis ( $H_3$ ) shows that T-statistics  $1,859 < t\text{-table } 1,973$  and significance of  $0,064 > 0,05$ . Hence, the third hypothesis ( $H_3$ ) is rejected and  $H_0$  is accepted.



Source: Processed Data

Figure 4. Average of Total Asset Turnover (TATO) & Return on Assets (ROA) of Consumer Goods Subsector

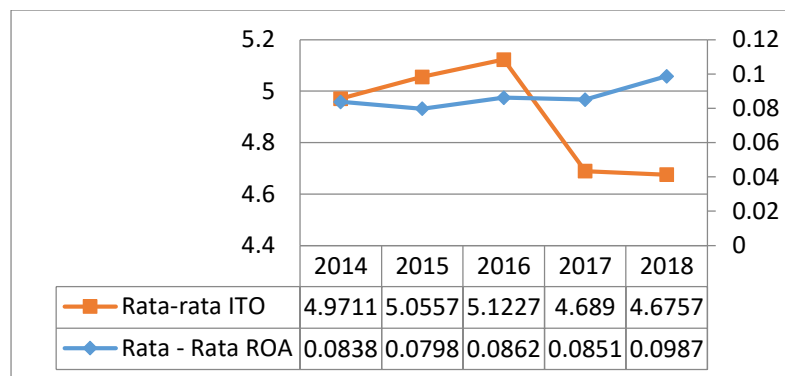


Figure 4 describes the declining average values of TATO from 2014 to 2018 with the fluctuating ROA from 2014 to 2017 and increment in 2018. Moeldjadi (2008:51) stated that as TATO is decreasing, company's performance will deteriorate. On the other hand, higher TATO means better companies' performance since the companies are more efficient in utilizing their overall assets to support sales. This research has found that TATO has no significant influence on ROA. The average TATO during the research period were dropping sharply whereby the number was at 1,231 in 2014, 1,179 in 2016, 1.178 in 2016, 1,139 in 2017, and 1,077 in 2018. Meanwhile, the ROA has been fluctuating significantly. It support the research result whereby no significant influence has been found between TATO and ROA. Therefore, the changes in TATO will not affect the value of ROA.

The drop of TATO from 2014 to 2018 by -12% indicates that the companies were not efficient enough in utilizing their assets to support sales and increase profits. It may be due to rising number of assets funded through debts which leads to companies' responsibilities in paying debt interest. The debt interest itself will decrease companies' overall profitability. The decline in TATO may also be caused by the bigger percentage of increase in assets compare to the percentage rise in sales. The total assets were rising by 57,91% from 2014 to 2018, while the sales were only increased by 28,16% for the same period of time. Additionally, it was still ineffective if ROA was taken into concern sine the increase in total assets was still lower than the rise in net income after tax which was 32,10%.

The result is consistent with the studies done by Hendawati (2017) dan Setiawan (2015) whereby TATO does not have significant relationship with profitability. However, it contradicts with the research by Willi & Chandra (2019) whereby TATO was found to be positively influence profitability. These differences in the results were due to the different research period and objects of each researcher.

Fourthly, according to the hypothesis test result on the fourth hypothesis ( $H_4$ ), the T-statistics  $1,805 < t$ -table  $1,973$  and significance of  $0,072 > 0,05$ , therefore, the fourth hypothesis ( $H_4$ ) is rejected and  $H_0$  is accepted.



Source: Processed Data

Figure 5. Average of Inventory Turnover (ITO) & Return on Assets (ROA) of Consumer Goods Subsector

Figure 5 shows that the average ITO tended to increase until 2017 where it dropped significantly. On the other hand, ROA was fluctuating during 2014-2017 and was increasing in 2018. From 2014 to 2018, the average ITO experienced a decrease by -5,94%. It means that the companies were not efficient enough in managing their inventories to support the sales and increase profits. The drop in ITO reflects the small amount of turnover in inventories and piled up stocks in the warehouse. This research has found that Inventory Turnover does not have significant effect on ROA whereby fluctuation in ITO will not affect the value of ROA. This result contradicts with the researchers who stated that the faster the inventory turnover, the better the company's performance since the inventories will not be piled up for too long in the warehouse and the costs to maintain these inventories will be lower. Inexistence of influence of ITO on ROA in consumer goods companies portray the ineffectiveness of the companies in managing their inventories. It is assumed that the inventories were funded through debts which created interest rate responsibilities and decreased the companies' profitability. Besides, since the companies needed longer time to finish off their inventories, they incurred higher costs to maintain them.

The research result is consistent with the study done by Irman & Iswara (2019) whereby significant relationship was not found between ITO and ROA. However, Setiawan (2015) found a different result whereby ITO affects ROA positively. These differences in the results were due to the different research period and objects of each researcher.

## 4.0 CONCLUSION

This research aims to analyze the influence of Long Term Debt to Total Assets (LTDTA), Short Term Debt to Total Assets (STDTA), Total Asset Turnover (TATO), and Inventory Turnover (ITO) on profitability of manufacturing companies in consumer goods subsector listed on Indonesia Stock Exchange from 2014 to 2018. Based on the data analysis and discussion of the research result, it was found that significant relationship exists between LTDTA and ROA. As assumed in MM Theory (1963) with tax, debts play a big role in it as whereby debts will create interest costs and lead to tax deduction. The higher the debts, the lower the tax deduction, and therefore, the higher the profit earned. Nevertheless, this research found negative relationship between LTDTA on ROA.

The use of debts as external source of funds does create advantage in terms of the interest rate cost to obtain tax deduction. However, it does not mean that companies can aggressively utilize debts since it also creates other costs and risks. Hence, these companies tend to utilize their internal funds which incur lower costs than those created by debts and reduce the dependence on external source of funds (Pecking Order Theory). Therefore, the lower the LTDTA of a company, the bigger the ROA value, and vice versa.

In terms of STDTA, TATO, and ITO, there were no significant relationships found between each of this variable and ROA. STDTA tend to incur lower interest rate cost which leads to lower tax deduction and lesser effect on profit. It shows that STDTA does not have significant effect on ROA. Therefore, the fluctuation in STDTA will not affect the value of ROA in these consumer goods companies.

With the drop in TATO, the companies were assumed to be less efficient in managing their assets to support sales and increase profit. It might due to the rise in assets funded by debts which created interest rate responsibilities for the companies and hence, decreased their profitability. The drop in TATO was also caused by the higher percentage in asset escalation compare to the rise in sales. Besides, the rise in total assets was still higher than the increase in the net income after tax. Hence, the changes in TATO will not affect the value of ROA.

The decline in ITO during period of 2014-2018 reflects the inefficiency of the companies in managing their inventories to support sales and increase profit. It also explains that the turnover of the inventories was low which made the inventories to be piled up in the warehouse. The inexistence of relationship between ITO and ROA in these consumer goods companies mean that the companies failed to manage their inventories effectively. It might be due to the existence of inventories funded through debts which incurred interest rate responsibilities for the companies and reduced the companies' profitability. Additionally, the longer the time needed for the companies to finish off their inventories, the bigger the costs they would incur to maintain the inventories.

Therefore, LTDTA was found to affect ROA negatively whereby decreasing in LTDTA will increase the ROA and vice versa. Meanwhile, STDTA, TATO, and ITO were found to have no influence on ROA of these companies. Hence, the fluctuations in these three independent variables will not affect the value of ROA.

Nevertheless, this research does have some limitations. Both future researchers who intend to use this research result as a reference and practitioners who intend to use this research result as a base for economic decision making should take these limitations into consideration. First, this research only used four independent variables which are Long Term Debt to Total Assets (LTDTA), Short Term Debt to Total Assets (STDTA), Total Asset Turnover (TATO), and Inventory Turnover (ITO). Second, this research was limited to the manufacturing companies in consumer goods subsector listed on IDX, hence, the result cannot be generalized for companies in other sectors. Third, this research did not study all the manufacturing companies in consumer goods subsector listed on IDX as purposive sampling method was used to obtain the samples. Fourth, the period of this research was only from 2014 to 2018. And fifth, the data was initially processed using SPSS. Due to data abnormality, SmartPLS program was utilized at the end.

Companies which aim to increase their quality of productive assets should be more careful in managing them since LTDTA was proven to have significant negative influence on ROA. Hence, companies are suggested to take this variable into concern and find ways to increase their performance. For investors who plan to invest in the consumer goods companies listed on IDX for profit purposes should consider LTDTA and ignore the other variables which do not have any influence on ROA. Lastly, for the future researchers who intend to study about the factors affecting ROA should add other variables such as growth ratios, quick ratio, or other variables related to external factors aside from STDTA, TATO, and ITO which were found to have no significant effect on ROA.

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