

Effect of inventory turnover on the level of profitability

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Abstract This study aims to determine the effect of inventory turnover on profitability in automotive companies listed on Indonesia stock Exchange from 2015-2017. Profitability is measured by Return On Assets (ROA). The data used are the financial statements of each sample company, which are obtained through ICMD (Indonesia Capital Market Directory) The analytical method used in this study is a quantitative method, by testing classical assumptions, as well as statistical analysis, namely simple linear regression analysis. The sampling method used is purposive sampling. The variables of this study are inventory turnover as variable X, and Return On Assets as Y variables with a total sample per year of 18 companies. The results of this study are inventory turnover does not have a positive effect on Return On Assets.

1. Introduction

Profit is one of the main goals of the establishment of every business entity. Without profit, the company cannot fulfill other objectives, namely going concern and corporate social responsibility. Profit which is the company's main goal can be achieved by selling goods or services. The greater the sales volume of goods and services, the greater the profit generated by the company.

Going concern is influenced by many things, including the profitability of the company itself. "Profitability will show a combination of effects of liquidity, asset management, and debt on operating results" [1]. Profitability is the end result of a number of policies and decisions made by the company. The importance of profitability can be seen by considering the impact that comes from the inability of the company to get maximum profit to support its operational activities.

The business that is often carried out by companies to increase profitability is to increase inventory sales so that inventory turnover also increases. Inventory is one of the important asset posts because inventory is a post of current assets which is of considerable value. In trading companies, these inventories are merchandise, while those in the industrial inventory company can be in the form of raw material, work in process, or finished goods. Shortage or excess inventory is a bad symptom.

The higher the turnover of the inventory, the higher the cost which can be suppressed so that the greater the profitability of a company. Conversely, if the slower turnover of the inventory, the smaller the profit gain. To achieve a high level of inventory turnover is not as easy as one might imagine, many things must be considered by the company in the operations of the company itself. Among them are processing inventory regularly and efficiently, improving the quality of goods, and fulfilling what consumers want.

The higher level of inventory turnover causes the company to be faster in selling merchandise so that it will increase operating profit and ultimately will increase net income. Net income indicates the profitability of the company. Net profit reflects returns to equity

holders for the period concerned. High company profits do not necessarily indicate high profitability, but high profitability can be ascertained that the profit generated is high. For companies in general the problem of profitability is more important than profit because efficiency can only be known by comparing profits obtained with own capital and foreign capital used to generate profits. Thus the level of profitability plays an important role and rapid inventory turnover is expected to increase the profitability of the company. The profitability ratio used in this study is Return On Assets (ROA).

2. Literature Review

A company must store sufficient inventory to meet the needs of its customers. Failure to do so can result in loss of sales. On the other hand, storing too much inventory will add to expenses such as storage, insurance and property taxes. And excessive inventory will increase the risk of loss due to price reductions, damage and changes in customer purchasing patterns. Inventory is used to indicate [2]:

- merchandise stored for sale later in the company's business operations, and
- materials used in the production process or stored for that purpose.

Inventory (or inventory of merchandise) is generally intended for goods owned by trading companies, both in the form of wholesale and retail businesses, when the goods have been purchased and there are conditions ready for sale. The words raw material, work in process, and finished goods for sale are intended for inventory in manufacturing companies.[3]

the most common inventory valuation methods are:[3]

- a. Specific identification
- b. Average weight
- c. First in First Out
- d. Last in First Out

Different types of businesses have different inventory information needs. There are two inventory recording systems, namely:

- a. Perpetual Inventory System
- b. Periodic Inventory System

Inventory Turnover is the ratio between the cost of goods sold to the average inventory, showing how quickly the inventory can be sold [4]. Average inventory can be calculated using numbers and monthly, or yearly. To simplify, we determine the average inventory by dividing the amount of inventory at the end and beginning of the year by 2. As long as the amount of inventory held throughout the year is stable, this average will be accurate enough for our analysis. The amount of the inventory calculation results shows the speed of inventory into cash or accounts receivable.

Profitability is the relationship between revenues and costs generated by using the firm's asset both current and fixed asset in productive activities[5]. Profitability shows how the company's ability to use all of its resources to generate profits for a certain period. Large profits are not necessarily the size of the company working efficiently. New efficiency can be known if the profit is compared to the wealth or investment used to generate the profit. Profitability ratio is considered as the most valid tool in measuring the results of the company's operations because profitability ratios are a comparison tool on various investment alternatives that are in accordance with the level of risk.

3. Metodology

The population used in this study were automotive companies listed on the Stock Exchange, which were 19 companies in 2015, 19 companies in 2016 and 18 companies in 2017. Samples are a part of the population used to estimate population characteristics. Therefore, samples taken from the population must be truly representative or representative. If the sample is less representative, it results in a calculated value from the sample that is not sufficient to predict the actual population value. [6] The sampling technique is using purposive sampling techniques. The purpose of sampling (purposive sampling) is done by taking samples from the population based on certain criteria. Based on the characteristics of the above sampling, the study sample was obtained by 18 automotive companies during 2016-2017 with n-observation as many as 54.

In this study the type of data used is quantitative data and is secondary data whose information is obtained indirectly from the company. This secondary data is obtained in the form of financial report documentation that is routinely published every year by competent parties contained in the Indonesian Capital Market Directory (ICMD) 2018. In this study, data analysis methods were carried out by statistical analysis and using SPSS 19.0 software. In the use of regression analysis methods in hypothesis testing, first tested whether the model meets the classical assumptions or not.

4. Result and Discussion

In processing data using linear regression, several steps are taken to find the relationship between the independent variable and the dependent variable. The regression results can be seen in table 1 below.

Table 1. Evaluation Website eGovernment Medan City

Coefficients ^a					
Model		Unstandardized Coefficients		Standardized Coefficients	Sig.
		B	Std. Error	Beta	
1	(Constant)	2.768	1.232		.224
	Inventory turnover	.136	.163	.115	.408

a. Dependent Variable: ROA

Source SPSS V. 19

Based on the table above, the regression equation is obtained as follows:

$$Y = 2,768 + 0,136 (X) + e \quad (1)$$

Significance value = 0.408 indicates that the significance value for the individual t test is greater than 0.05. This is in accordance with the results of statistical tests that compare between t arithmetic with t table, namely inventory turnover does not have a significant effect on the level of profitability (as measured by Return on Assets) at the 95% confidence level. Inventory turnover variable has t count 0.835. By using the TINV function in Microsoft Excel, t table for the TINV value (0.05; 52) is 2.006647. This shows that t count < t table (0.835 < 2.006647) which means that H_0 is accepted, H_a is rejected, meaning that inventory turnover does not have a significant effect on the level of profitability.

It is based on the results of the analysis of the correlation coefficient between inventory turnover and profitability with R of 0.115 which means that the correlation or relationship between profitability variables with inventory turnover variables is a positive relationship or directly proportional to the level of weak relations. This shows if the inventory turnover value increases then profitability will experience a slight increase. Vice versa if the value of inventory turnover decreases, profitability will experience a slight decline.

Furthermore, the results of this study are reinforced by the results of hypothesis testing with t test where inventory turnover variable has a significance value of 0.408, this value is greater than the probability value of 0.05 and the value of t count is smaller than t table ($0.835 < 2.006647$) which means H_a is rejected and H_o is accepted. The results of this study support the results of research conducted [7], but the results of this study do not support the results of research conducted [8] who found that inventory turnover has a positive and significant effect on Return On Assets, while the results of this study show that inventory turnover has no significant effect on Return On Assets. This may be due to the different periods used in the study and the different objects examined in this study where Gunarto only used one research object, namely the KPRI Semarang financial report for the period 2014-2015, while this study using the object of research, namely the financial statements of 18 automotive companies listed on the Indonesia Stock Exchange in the period 2016-2017. In terms of theory, the results of this study do not support the inventory turnover theory which states that the state of high inventory turnover shows that the more efficient and effective the company manages its inventory, where it also shows a high sales volume in the company so that it can mean profits earned by the larger the company by assuming the minimization of costs incurred and the amount of profits obtained by the company will maximize the return on assets obtained by the company. The greater the return on assets (Return On Asset) obtained by the company is one indication that company profitability (one of them can be measured by Return On Asset) shows good conditions, while the results of this study indicate that inventory turnover does not have a positive and significant effect on Return On Asset. Besides the differences in the results of this study with previous research and existing theories occur because of the automotive company financial report data can be seen that the company has a high inventory turnover but the amount of inventory is low so that it needs to be reorder in small amounts that are.

5. Conclusion

Based on the results of data analysis and discussion that has been stated in chapter four, the conclusions that can be taken is that inventory turnover does not have a significant effect on the Return On Asset of automotive companies listed on the IDX. The results of the study concluded that inventory turnover information is not the main thing that needs to be considered and made a good benchmark by management in making a decision to determine the amount of Return On Assets (ROA). The results of this study are different from previous studies namely Gunarto which resulted in the conclusion that inventory turnover has a positive and significant effect on Return On Assets.

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