Jurnal Bisnis dan Kajian Strategi Manajemen
Volume 5 Nomor 2, 2021
ISSN : 2614-2147

INVENTORY TURNOVER AND ACCOUNT RECEIVABLE TURNOVER ON PROFITABILITY: AN EVIDENCE OF CHEMICAL COMPANIES LISTED IN IDX

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Abstract

The profitability of a company is one of the bases for assessing the condition of a company, for that we need an analytical tool to be able to assess it. And it can be seen from the higher the inventory turnover, the better for the company to generate profits. So does account receivable turnover. The faster the cash return, the easier the company will be to continue to carry out its operational activities. The type of research used in this research is exploratorily followed by quantitative descriptive to explain the relationship and effect of inventory turnover, account receivable turnover and profitability. The result of this research are account receivable turnover has a strong and positive level of relationship to profitability. However, it has no significant effect on profitability. So does inventory turnover to profitability. Simultaneously, account receivable turnover and inventory turnover have a strong and positive level of relationship to profitability. Likewise, it has a significant effect on profitability.

Key words: Inventory turnover, account receivable turnover, profitability

INTRODUCTION

The profitability of a company is one of the bases for assessing the condition of a company, for that we need an analytical tool to be able to assess it. Thus, every business entity will always try to increase its profitability, because the higher the level of profitability of a business entity, the survival of the business entity will be more secure. High profits can certainly be a benchmark for companies to stay afloat while having bright prospects in the future, but it is also important for companies to pay attention to internal factors related to company operations, in the form of activity ratios such as inventory turnover and receivables turnover. Analysis can be done through an analysis from the financial statement where it aims to predict the company's financial condition which results to be used as evaluation material that the company has achieved in the past and the present. Where if the results of the evaluation of the company's financial condition look good, it shows that the company's main goals have been achieved.

The company's financial condition can be seen from the higher the inventory turnover, the better for the company to generate profits. Several ratios that can be used to determine the condition of the company can be done by using profitability ratios and inventory turnover ratios. The inventory turnover, is a ratio that measures how long it takes for inventory to be sold out from warehouse and inventory by new inventory.
Accounts receivable turnover ratio is also something that needs to be considered by companies that want to increase their profits. Accounts receivable turnover is a ratio used to assess how long it takes to collect accounts receivable in one period. Given that recognition is

also a form of investment for a company, it is necessary to have good management of benefits so that the benefits and benefits that can be obtained by the company are also higher. Sales activity is a transaction that is based on the principle of trust with time has been determined. So the faster the cash return, the easier the company will be to continue to carry out its operational activities. With credit sales expected to increase total sales, profit increases with increased risk. In general, the higher this ratio the better for the company. There are found in several previous studies, including that conducted by Suminar (2014) which stated that accounts receivable turnover and inventory turnover have a significant positive effect on profitability. Andre, Sudjana and Sulasmiyati (2017) in their research show that cash turnover, accounts receivable turnover, and inventory turnover have a significant positive effect on profitability.

LITERATURE REVIEW

Inventory

In every company, carrying out its production activities, either it is a service company or a manufacturing company, must hold an inventory. Companies that do not have inventory will be faced with two risks, which are shortage of products at one time that makes customer demand unfulfilled, but excess inventory will make storage costs relatively large. Therefore, inventory must be managed properly because it affects production and sales activities. According to Rangkuti (2004), inventory is an assets which include goods owned by the company with the intention of being sold within a certain business period or inventory of goods that are still in progress or in the production process, or inventory of raw materials awaiting their use in a production process According to Hidayat (2018), inventory, namely all traded merchandise and stock that has not been sold out from the warehouse. Inventories are used to meet the smooth running of production and operating activities.

Inventory Turnover

Inventory turnover according to Harahap (2017), is a ratio that assesses how fast the inventory turnover occurs in a period on how quickly the inventory is sold out from the warehouse and replaced by new inventory. Inventory turnover is a company activity that is very important to be used and taken into account, because to be able to find out the cost efficiency which is useful in getting big profits or profits. The faster the sale occurs, the faster the inventory rotates. Increasingly low inventory turnover is a sign of excess inventory and slow inventory. Existing inventory can be declared good if it is sufficient to guarantee the company to carry out its operational activities. This means that an indication of the company to provide inventory in support of sales. On the balance sheet, inventory is recorded on a cost basis. This means that there is no margin element in the inventory value listed on the balance sheet. Meanwhile, sales that occur are recorded on the basis of cost plus margin. Therefore, the sales value used will use a basis that does not contain an element of profit, namely the cost of goods sold. As for how to measure the efficiency of inventory use, the inventory turnover formula can be used as follows:

$$\text{INVTO} = \frac{cost\ of\ goods\ sold}{average\ inventories}$$

Accounts Receivable

Accounts receivable arises from the sale of goods or services owned by the company. In the normal course of a company, trade receivables are usually charged in less than one year, so trade receivables are grouped into current assets. According to Warren, et al (2015)

receivables include all money claimed against other entities, including individuals, companies, and other organizations. These receivables usually constitute a significant part of total current assets. Receivables are customer obligations arising from credit sales made by the company (Manullang, 2005).

Accounts Receivable Turnover

A company's ability to handle credit sales and its policies it is the understanding of accounts receivable. As is known, most companies sell on credit. With credit sales expected to increase total sales, profit increases with increased risk. Credit sales create business opportunities (account receivable). The risk occurs when the buyer is unable to pay or delays payment (Prihadi, 2008). Receivable turnover is a ratio used to measure how long it takes for receivables to be collected or the number of times the funds embedded in accounts receivable rotate in one period (Kasmir, 2011). Efficiency measurement related to credit sales policy can use the accounts receivable turnover ratio formula as follows:

$$\text{ARTO} = \frac{sales}{accounts\ receivable}$$

Profitability

Profitability is the company's ability to earn profits in relation to sales, total assets and own capital (Agus Sartono, 2010). According to Kasmir (2011), profitability is a ratio that can be used to assess a company's ability to gain profit. This ratio is also a measure of the effectiveness of company management, this can be seen from the profit generated from sales and income from company investment. This study will use two proxies to measure profitability, namely by using Return on Assets (ROA). ROA is used to measure the effectiveness of a company in generating profits by utilizing its assets. This ratio is the most important ratio among the existing profitability ratios.

$$\text{ROA} = \frac{net\ income\ after\ tax}{total\ asset}$$

Inventory Turnover and Profitability (ROA)

Inventory turnover shows how efficient a company is in managing and selling its inventory. What is concerned is the cost of goods sold and the average inventory owned by the company. With a high level of inventory turnover, the risk of losses due to falling prices tends to be small. And the company will save on the cost of storing and maintaining these supplies. For companies that sell goods, their profitability is very influential on the level of their inventory turnover (Surya et al., 2017). This shows the relationship between inventory turnover and ROA.

Account Receivable Turnover and Profitability (ROA)

Accounts receivable turnover shows the company's performance in managing receivables so that they turn into cash. The amount of receivables is usually accompanied by uncollectible accounts receivable and this needs to be considered. For this reason, before the company decides to make a credit sale, many things need to be considered, such as the terms of sales and payment, possible losses on accounts receivable, and costs that will arise in overcoming receivables (Nurfika and Almadany, 2018). Accounts receivable turnover is effective and efficient to maintain company profitability. This shows a relationship between accounts receivable turnover and ROA.

Inventory Turnover, Account Receivable Turnover and Profitability (ROA)

The level of inventory shows the company's ability to meet market demand. It is an important part of working capital. In managing inventory, it must be considered how fast the sales are to the market. Inventory turnover shows the effectiveness of inventory management (Desliana and Irawan, 2018). If the inventory turnover is too high, it means that the company has a small inventory and can cause inventory shortages.
Receivables are also an important part of working capital and are highly dependent on credit sales (Sari et al., 2020). A high accounts receivable turnover indicates uncollectible receivables tend to be small and thus the cost of receivables is small. It helps the company to increase profitability. Inventory turnover and accounts receivable turnover affect the number of sales. And when the turnover increases, profitability also increases.
the company.

METHODOLOGY

This type of research used in this research is exploratorily followed by quantitative descriptive. The purpose of exploratory research is to explain the relationship and influence between the variables studied. The population in this study were chemical subsector companies listed on the IDX for the period 2016-2019. The sampling technique used is purposive sampling which determines the sample by considering several things that are used as criteria. The criteria for sampling: (a) Chemical companies listed on the IDX in 2016-2019 and were not delisted between those years. (b) Chemical companies that publish financial reports for the period 2016-2019. (c) A company whose annual and financial reports provide all the data needed to assess the variables, namely inventory, account receivables, total assets, sales, and net income.

Based on the criteria for determining the sample, the following is a list of companies that meet the criteria to be sampled in this study:

No	Company's Code	Company's Name
1	BRPT	Barito Pasific Tbk
2	BUDI	Budi Starch & Sweetener Tbk
3	DPNS	Duta Pertiwi Nusantara Tbk
4	EKAD	Ekadharma International Tbk
5	ETWA	Eterindo Wahanatama Tbk
6	INCI	Intan Wijaya International Tbk.
7	SRSN	Indo Acitama Tbk
8	TPIA	Chandra Asri Petrochemical Tbk.
9	UNIC	Unggul Indah Cahaya Tbk

The operational definition is needed so that the measurement of variables or data collection is consistent between one data sources or respondent. The research variables consist of the dependent variable profitability (Y) using the ratio of return on asset and the independent variable namely inventory turnover (X1) and account receivable (X2). The operational definition explanation in this study are:

1. Inventory Turnover

Inventory Turnover Ratio is the ratio used to measure the number of times the funds invested

in this inventory rotate in a period. If the ratio obtained is high, this indicates the company is working efficiently and the liquid inventory is getting better (Moeljadi, 2010).

Inventory Turnover Ratio = Sales / Average Inventory

2. Account Receivable Turnover

Accounts Receivable Turnover Ratio is a ratio used to measure how long it takes to collect accounts receivable during a period or how many times the funds invested in these receivables rotate in one period. The higher the ratio indicates that the working capital invested in receivables is lower (compared to the ratio of the previous year) and, of course, this condition for the company is getting better (Kasmir, 2015).

Accounts receivable turnover ratio = Sales / Average of accounts receivable

3. Profitability (Return on Asset)

Return on asset is the ability of a company to generate net profit from managing capital invested in all assets (Riyanto, 2011). The high value of ROA reflects good management towards generating profits from all assets.

ROA = Net Income / Total Assets

RESULT AND DICUSSIONS

Effect of Account Receivable Turnover on Return on Asset

Table 1. Correlation Coefficient

Model	*R*	*R Square*	*Adjusted R Square*	*Std. Error of the Estimate*
1	.343	.117	.091	.05589

a. Predictors: (Constant), ARTO
b. Dependent Variable: ROA

The table above shows that the correlation coefficient (r) is 0.343, which means that Account Receivable Turnover has a positive and strong level of relationship to Return On Assets. And when the receivables increase, the Return On Assets will also increase. Meanwhile, the coefficient of determination (r-square) was found to be 0.117 or 11.7%. This means that Account Receivable Turnover contributes 11.7% to Return On Assets, and the rest is influenced by other variables.

Table 2. Hypothesis Test

		Unstandardized Coefficients		*Standardize Coefficients*			*Collinearity Statistics*	
Model		*B*	*Std. Error*	*Beta*	*t*	*Sig.*	*Tolerance*	*VIF*
1	(Constant)	.006	.025		.255	.800		
	ARTO	.005	.003	.311	1.929	.062	.978	1.023

a. Dependent Variable: ROA

The value of the hypothesis test shows that the value (sig) is 0.062 > 0.05, which means that Account Receivable Turnover has no significant effect on Return On Assets. Simple linear regression for Return On Asset = 0.006 + 0.005 (Account Receivable Turn Over). A constant value of 0.006 means that if the Account Receivable Turnover's value is 0 then the Return On Asset already has a value of 0.066. And if the Account Receivable Turnover's value increases by 1 unit, the Return On Asset will also increase by 0.066, which means that Account

Receivable Turnover contributes positively to the increase in Return On Assets.

Effect of Inventory Turnover on Return on Assets

Model Summary[b]

Model	*R*	*R Square*	*Adjusted R Square*	*Std. Error of the Estimate*
1	.256	.066	.038	.05751

a. Predictors: (Constant), INVTO
b. Dependent Variable: ROA

The table above shows that the correlation coefficient (r) is 0.256, which means that Inventory Turnover has a positive and strong level of relationship to Return On Assets. Meanwhile, the coefficient of determination (r-square) was found to be 0.066 or 6.6%. This means that Inventory Turnover contributed 6.6% to Return On Assets, and the rest is influenced by other variables.

Coefficients[a]

		Unstandardized Coefficients		*Standardized Coefficients*			*Collinearity Statistics*	
Model		*B*	*Std. Error*	*Beta*	*t*	*Sig.*	*Tolerance*	*VIF*
1	(Constant)	.006	.025		.255	.800		
	INVTO	-.001	.001	-.209	-1.299	.203	.978	1.023

The hypothesis test value shows that the value (sig) is 0.203> 0.05, which means that Inventory Turnover has no significant effect on Return On Assets. Simple linear regression for Return On Asset = 0.006-0.001 (Inventory Turnover). A constant value of 0.006 means that if the Inventory Turnover's value is 0 then the Return On Asset already has a value of 0.006. And if the Inventory Turnover's value increases by 1 unit, the Return On Asset will decrease by 0.006, meaning that Account Receivable Turnover contributes negatively to the increase in Return On Assets.

Effect of Account Receivable Turnover and Inventory Turnover on Return On Asset

Table 1. Correlation Coefficient

Model	*R*	*R Square*	*Adjusted R Square*	*Std. Error of the Estimate*
1	.400[a]	.160	.109	.05534

a. Predictors: (Constant), INVTO, ARTO
b. Dependent Variable: ROA

The table above shows that the correlation coefficient (r) is 0.400, which means that Account Receivable Turnover and Inventory Turnover have a positive and strong level of relationship to Return On Assets. Meanwhile, the coefficient of determination (r-square) was found to be 0.160 or 16%. This means that Account Receivable Turnover and Inventory Turnover contributed 16% to Return On Assets, and the rest was influence by other variables.

Jurnal Bisnis dan Kajian Strategi Manajemen
Volume 5 Nomor 2, 2021
ISSN : 2614-2147

Coefficients

Model		*Unstandardized Coefficients*		*Standardized Coefficients*			*Collinearity Statistics*	
		B	*Std. Error*	*Beta*	*t*	*Sig.*	*Tolerance*	*VIF*
1	(Constant)	.006	.025		.255	.800		
	DAR	.005	.003	.311	1.929	.062	.978	1.023
	INVTO	-.001	.001	-.209	-1.299	.203	.978	1.023

a. Dependent Variable: ROA

ANOVA[a]

Model		*Sum of Squares*	*df*	*Mean Square*	*F*	*Sig.*
1	Regression	.019	2	.010	3.148	.056
	Residual	.101	33	.003		
	Total	.120	35			

a. Dependent Variable: ROA
b. Predictors: (Constant), INVTO, ARTO

The value of the hypothesis test shows that the value (sig) is 0.056> 0.05. It means that Account Receivable Turnover and Inventory Turnover have no significant effect on Return On Assets. Simple linear regression for Return On Asset = 0.006 + 0.005 (Account Receivable Turnover) -0.001 (Inventory Turnover). The 0.006 value of constant value means that if the value of the Account Receivable Turnover and Inventory Turnover is 0 then the Return On Asset already has a value of 0.006. If the Account Receivable Turnover's value increases by 1 unit, the Return On Asset will also increase by 0.006. It means that Account Receivable Turnover contributes positively to the increase in Return On Assets. And if the Inventory Turnover's value increases by 1 unit, the Return On Asset will decrease by 0.006, meaning that Account Receivable Turnover contributes negatively to the increase in Return On Assets.

CONCLUSION AND RECOMMENDATIONS

The empirical studies showed that the company had a weak rate of Account Receivable Turnover and Inventory Turnover. On average, the company is stated to have a good level of Return on Assets. Account Receivable Turnover has a strong and positive level of relationship to Return On Assets. However, it has no significant effect on Return On Assets. Account Receivable Turnover contributed 11.7% to Return On Assets. And linear regression shows the results that every addition of 1 unit of Account Receivable Turnover will increase the addition of Return On Asset by 0.006. Inventory Turnover has a strong and positive level of relationship to Return On Assets. However, it does not affect the Return On Assets. Inventory Turnover contributed 6.6% to Return On Assets. And the linear regression shows the results that every addition of 1 unit of Account Receivable Turnover will increase the reduction in Return On Assets by 0.006. Account Receivable Turnover and Inventory Turnover have a strong and positive level of relationship to Return On Assets. Likewise, it has a significant effect on Return On Assets. Account Receivable Turnover and Inventory Turnover contribute 16% to Return On Assets. And linear regression shows the results that

every addition of 1 unit of Account Receivable Turn Over will increase the addition of Return On Assets by 0.006. Meanwhile, each additional 1 unit of Inventory Turnover will reduce the Return On Assets by 0.66.

It is suggested that the results of this study can be a consideration for investors to assess or estimate the possible rate of Return On Assets obtained based on the role of the Account Receivable Turnover and Inventory Turnover variables. And also as a reference in determining decisions. I hope that further researchers can test other variables that might affect the company's Return On Assets

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