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The Impact of Inventory Turnover and Receivable Turnover Towards ROA (Case Study on Cosmetics and Households Good Company Listed on the Indonesia Stock Exchange in the Period of 2011 - 2017)

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ABSTRACT

This study aims to analyze the effect of inventory turnover and receivables turnover on ROA partially on cosmetics and household industry company listed in Indonesia Stock Exchange in the period 2011 - 2017. The research method used is descriptive and verification method with the unit of analysis examined by the financial statements of cosmetic and household industry company listed in Indonesia Stock Exchange. Sampling technique used is purposive sampling where the company need to pass the criteria, companies of cosmetics and household goods industry companies registered with IDX for the period 2011 – 2017, Publish financial statements which had been audited without ever being absent from 2011 – 2017, and financial reports data is in Rupiah. This research uses classic assumption test to have a good regression model consist of normality, multicollinearity, autocorrelation, heteroskedasticity test. Multiple linear regression analysis, Pearson coefficient of correlation, and R square analysis. The result showed that inventory turnover and receivable turnover has a positive effect on ROA partially in cosmetic and household industry company listed in Indonesia Stock Exchange in the period 2011 - 2017. The findings of this study suggest that the companies should maintain their inventory turnover and receivables turnover to have a good ROA.

Keywords: Financial Analysis, IDX, Inventory Turnover, Profitability, Receivable Turnover, ROA, SPSS

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INTRODUCTION

Indonesia's economy is now arguably still very lagging even though it is much better than it used to be. One of the things that makes the Indonesian economy is still relatively lacking is because of the amount of sovereign debt that has not been paid off as well until now. Some people may think that the source of Indonesian state funds is contributed a lot from Indonesia's natural wealth. However, in reality it is not like that, the source of Indonesia's current management funds comes mostly from tax payments. According to the data, in 2018, taxes accounted for 78% of the country's state budget and increased to 84% in the 2019 RAPBN. The largest tax contributor is the company or commonly called the tax paid by the agency. Considering that in general the profit generated by the company has a considerable amount with a tax rate of 25%. Therefore, it is important for companies to manage profitability and improve company performance.

One of the sectors which has been on the rise over the past few years is cosmetic industry companies because of the high demand for their products, this is due to the rampant influence of beauty influencers. The cosmetics industry, like haircare, makeup, skincare, and personal care product has become one of the most resilient industries over time (Widjanarko and Anggoro, 2021) This statement is evidenced by a survey by ZAP Beauty Index which states that 73% of respondents search first on the internet about products they think are interesting. However, the fact that the author found in the field is that cosmetic industry companies in Indonesia have poor profitability even some experience a decrease in profits in certain years. For example, PT Mandom experienced a decrease in profit in 2018.

One ratio that can measure a company's performance and profitability is ROA. ROA belongs to the profitability ratio group. Profitability ratio is the ratio used to assess an entity's ability to earn profits, in addition ROA also measures the effectiveness of management of a company where this ratio indicates profit from company operations (Kasmir, 2015). ROA provides an overview of the company's activities and demonstrates the managerial effectiveness of the company (Subramanyam and Wild, 2014).

One of the variables which affect ROA is inventory turnover. Inventory turnover is a ratio that also reflects a company's liquidity by measuring the level of management efficiency that the company does and also the sales of their inventory. If the results of this ratio calculation are high, then the company is believed to have a good performance in selling its merchandise (Needles, 2014).

According to The Theory of (Weil et al, 2014), increasing inventory turnover will increase ROA, meaning that if inventory turnover rises, then ROA will also rise and vice versa. However, from the financial data of PT Akasha Wira found that Return on assets fell as inventory turnover rose in 2014 and 2016. Return on assets rose at time as inventory turnaround fell in 2017.

Furthermore, according to Jamie (Pratt, 2016:), that accelerating the turnover of receivables increased ROA and ROE. Which meant, if the turnover of receivables went up, then the ROA would also go up the same thing also applied if it went down. While at PT Mandom it was found that Return on assets fell when receivable turnover rose in 2013, 2014, and 2016.

A company's financial statements provide information for its users, especially external users in assessing a company. This company assessment can be done by analyzing the ratios that can be calculated from the numbers listed on the financial statements.

LITERATURE REVIEW

Inventory Turnover

According to (Nobles, 2015), inventory turnover was the cost of goods sold against the average inventory, which indicated how quickly inventory was sold. Furthermore, according to (Muller, 2019), inventory turnover was the number of times inventory was replaced in a period. The formula was as follows according to (Harrison, 2017):

Inventory Turnover = COGS / Average Inventory

Accounts Receivable Turnover

According to (Keown, 2017), the turnover of receivables was how many times the receivables rotate each year. Meanwhile, according to (Needles et al, 2014), the turnover of receivables was the average number of times a company converts their receivables into cash in a given period. Here is an indicator of receivable turnover according to (Weygandt et al, 2018).

Accounts Receivable Turnover = Sales / Average receivables

Return on Assets (ROA)

According to (Gitman, 2015): ROA measured the overall effectiveness of management in generating profits using existing assets." ROA measure profit per dollar assets (Ross et al, 2017). The formula in calculating return on assets was according to Gitman is:

ROA = Profit before income tax / Total assets

RESEARCH METHOD

The research method is a way to obtain data to achieve certain goals (Narimawati, 2010). This research was an associative study which aimed to determine the influence or relationship between two or more variables. The methods used in this research were descriptive methods and verification methods. The data used was secondary data which was then processed and could be drawn conclusions from the results. Below is list of population firms:

No	STOCK CODE	ISSUER NAME
1.	ADES	PT Akasha Wira International Tbk.
2.	KINO	PT Kino Indonesia Tbk.
3.	MBTO	PT Martina Berto Tbk.
4.	MRAT	PT Mustika Ratu Tbk.
5.	TCID	PT Mandom Indonesia Tbk.
6.	UNVR	PT Unilever Indonesia Tbk.

The sample the authors selected for the research was the annual financial statements of 5 companies from 2011 to 2017 selected using purposive sampling. The criteria used in determining a company's sample for this research were:

1) Companies of cosmetics and household goods industry companies registered with IDX for the period 2011 - 2017.
2) Publish financial statements which had been audited without ever being absent from 2011 - 2017.
3) Financial reports contained financial data in Rupiah.

Thus, there were 5 companies that met the purposive sampling criteria with a sample of 35 financial statements from the 7-year period, namely the period 2011 - 2017. Here was a table of companies that would be sampled.

No	Company Name	Criteria		
		1	2	3
1	ADES	✔	✔	✔
2	MBTO	✔	✔	✔
3	MRAT	✔	✔	✔
4	TCID	✔	✔	✔
5	UNVR	✔	✔	✔

Data Testing Method
This research used SPSS software to process statistical data in accordance with the purpose of this research.

Classic Assumption Test
According to Imam (Ghozali, 2016) the classical assumption test was used to form a good regression model, and was free from data deviations.

1) Normality Test
The normality test aimed to test whether in regression models, confounding or residual variables had a normal distribution.

2) Multicollinearity Test
The multicollinearity test aimed to test whether regression models found correlations between free variables.

3) Autocorrelation Test
The autocorrelation test aimed to test whether in a linear regression model there was a correlation between a nuisance error in the t period and a nuisance error in the t-1 period (previously).

4) Heteroskedasticity Test
The heteroskedasticity test aimed to test whether in regression models there was a variance inequality from residual one observation to another.

B. Multiple Linear Regression Analysis
Multiple linear regression analysis was used by researchers with a view to finding out the extent of the relationship of inventory turnover and receivable turnover to ROA. The equation of this multiple linear regression is as follows:

$$\mathbf{Y = \alpha + \beta 1X1 + \beta 2X2 + \varepsilon}$$ Source:
(Sugiyono, 2016) Information:
Y = ROA
X1 = Inventory Turnover

X2 = Accounts Receivable Turnover a
= Intercept Constant
β1 = Regression coefficient of Ratio variable inventory turnover
β2 = Regression coefficient of receivable turnover variable e
= Error term

C. Pearson Correlation Coefficient Analysis

Correlation analysis aimed to measure the presence or absence of a linear relationship between the independent variable and the dependent variable, in this case to see the relationship between Inventory Turnover (X1) and Receivable Turnover (X2) with Return on Assets (Y).

D. Coefficient of Determination (R2)

According to (Ghozali, 2012) the coefficient of determination (R2) was a tool to measure how far the model's ability to explain the variation of the dependent variable.

Data analysis method

Partial Test (Test Statistics t)

The t statistic test was used to test whether there was a partial or one-sided effect of each independent variable (X) with the dependent variable (Y). The null hypothesis (H0) had no significant effect and the alternative hypothesis (H1) showed an influence between the independent variable and the dependent variable.

Drawing Areas of Acceptance and Rejection of Hypotheses

1. (a) If tcount ≤ ttable then H0 is in the rejection area, this means that Ha is accepted and it means that the X variable and Y variable have an influence.
(b) If tcount ≤ ttable then H0 is in the acceptance area, this means that Ha is rejected and it means that the X variable and Y variable have no effect.
(c) tcount is searched with the tcount calculation formula.
(d) ttable is searched in the student distribution table with the provisions α = 0.05 and dk = (n – k – 1)

2. The results of Fcount are compared with Ftable with the following criteria: (a) Reject H0 if Fcount > Ftable at 5% alpha for a positive coefficient.
(b) Reject H0 if Fcount < Ftable at 5% alpha for negative coefficients. (c) Reject H0 if the value of Fcount < 0.05.

Withdrawal of Conclusion

If tcount and Fcount fall in the area of rejection (acceptance), then H0 is rejected (accepted) and Ha is accepted (rejected). This means that the regression coefficient is significant (not significant). In conclusion, inventory turnover and receivable turnover have an effect (no effect) on ROA. The significant rate is 5% (α = 0.05), meaning that if the null hypothesis is rejected (accepted) with a 95% degree of confidence, then the probability that the result of the conclusion draw has a truth of 95% and this indicates the existence (absence) of a convincing (significant) influence between the two variables.

RESULTS

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Verification Analysis Results

Classic Assumption Test

Normality Test

From the results of the data normality test, it was seen that the probability value (sig) obtained by residual variables was 0.929 greater than 0.05 which indicated that the data used had a normal distribution. That way, the data normality test was met.

Multicollinearity Test

From the test results, it was known that the tolerance value obtained by each free variable > 0.1 and Variance Inflation Factor (VIF) less than 10 which was 1,738. This showed that there was no strong correlation between free variables, so the assumption of multicollinearity of data had been fulfilled.

Autocorrelation Test

Durbin Watson scored 1,427. This value would be compared to the dL and dU values on the Durbin Watson table. With α = 0.1%, the dL value of 1,141 and dU of 1,370 was obtained. Thus, it obtained 4-dU of 2,630 and 4-dL of 2,859. From these values, it was seen that the value of dW obtained at 1.427, was between dU = 1,370 and 4-dU = 2,859. In accordance with the testing criteria that no autocorrelation violations were found.

Heteroskedasticity Test

Heteroskedasticity testing results using the scatter plot graph method showed that the points obtained forms irregular random patterns and spread above and below the number zero (0) on the Y axis, so no violation of heteroskedasticity was found.

Multiple Linear Regression Equation

The multiple linear regression equation obtained was as follows:

$Y = -0{,}185 + 0{,}028X_1 + 0{,}038X_2$

a. A constant of -0.185 indicated that when the two independent variables are zero (0) and there was no change, the Return on Assets was predicted to be -0.185 percent.
b. b. The X1 variable, namely Inventory Turnover, had a regression coefficient value of 0.028, indicating that when Inventory Turnover increases, it was predicted to increase Return on Assets by 0.028 percent.
c. c. Variable X2, namely Receivable Turnover, had a regression coefficient of 0.038, indicating that when Receivable Turnover had increased, it was predicted to increase Return on Assets by 0.038 percent.

Correlation Analysis

Correlation Between Inventory Turnover and ROA

The test results showed the correlation value obtained between Inventory Turnover and Return on Asset was 0.767 including the category of strong relationships, being in the interval class between 0.600 - 0.799.

Correlation Between Accounts Receivable Turnover with ROA

The test results showed the correlation value obtained between Receivable Turnover and Return on Asset was 0.921 including the category of very strong relationships, being in the interval class between 0.800 - 1,000.

Coefficient of Determination

Based on the SPSS output, the following calculations were carried out:
Effect of X_1 on Y = 0.291 x 0.767 = 0.223 or 22.3%

Effect of X_2 on Y = 0.732 x 0.921 = 0.674 or 67.4%
It could be concluded that Receivable Turnover (X_2) provided the most dominant contribution to Return on Assets (Y) with a contribution of 67.4%, while the remaining 22.3% was provided by Inventory Turnover (X_1).

Hypothesis Test
Partial Hypothesis Testing (t Test)
1. Partial Hypothesis Testing X_1
Based on the test results obtained the t-count value obtained by 3.885, was outside the value of t-table (-2,037 and 2,037). In accordance with the hypothesis testing criteria that H0 was rejected and H1 accepted, it meant that partial inventory turnover had a significant effect on return on asset in cosmetic industry companies and household needed listed on the Indonesia Stock Exchange for the period 2011 - 2017.
2. Partial Hypothesis Testing X_2
Based on the test results obtained the t-count value obtained by 9,779, was outside the value of t-table (-2,037 and 2,037). In accordance with the hypothesis testing criteria that H0 was rejected and H1 was accepted, meaning that partially Receivable Turnover had a significant effect on Return on Asset in cosmetic and household industry companies listed on the Indonesia Stock Exchange for the period 2011 - 2017.

DISCUSSION

Practical Suggestion
a) For Company
For cosmetics and household goods industry companies listed in the IDX for the period 2011 - 2017 should increase ROA, some ways are to increase inventory turnover and receivable turnover, so ROA will also increase. One way to increase inventory turnover is to streamline production costs, while to increase receivable turnover some ways are to increase profits and streamline expenses. The high ROA indicates a profitable company, this is good because it will attract investors to invest to expand the company's business.
b) For Investors
Investors or prospective investors should pay attention to ROA before deciding to invest in a company. The greater the value of ROA, it shows the good performance of companies in managing and using their assets to earn profits. Choose a company that has an increasing ROA but is still in a reasonable stage.

Academic Suggestion
1. For the Development of Science
There should be more reference books, especially in the field of accounting and finance, so that there are many sources for researchers in making scientific works like this. Especially from Indonesian authors there are still relatively few who make books that can be a source of connecting theories of scientific research. Furthermore, for students who take the topic of financial accounting for thesis, you should take courses that make this clear such as portfolio theory or other financial accounting courses.
2. For the Other Researchers
For further researchers should research with other methods or the same method as this study but with other variables that can affect ROA in addition to inventory turnover and receivable turnover such as current ratio, net income, or other variables. Also selected other samples not raised in the study e.g., banking, automotive, and other group of companies. In addition, researchers can further increase the scope of research and the research period.

CONCLUSION

From the results of research and discussion which had been done and spelled out in previous chapters, the author could conclude some of the following:

1. Partially inventory turnover had a significant effect and had a positive and strong correlation in cosmetics and household appliance industry companies listed on the IDX period 2011 - 2017. This showed that the higher the turnover of inventories, the more followed by the high ROA.
2. Partially the turnover of receivables had a significant influence and had a positive and very strong correlation in cosmetics and household use industry companies listed on the IDX period 2011 - 2017. This showed that the higher the turnover of receivables, the more followed by the high ROA.
3. This research show that inventory turnover and receivables turnover are significantly has positive influence towards ROA for cosmetics and household appliance industry companies listed on the IDX period 2011 – 2017. It's recommended for the companies to maintain good inventory turnover and receivables turnover to also have a good profitability (ROA).

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DECLARATION OF CONFLICTING INTERESTS

No conflict of interest.

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