The Effect of Cash Turnover, Account Receivable Turnover and Inventory Turnover on ROA in Mining and Quarrying Sector Companies Listed in IDX From 2017-2019

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ABSTRACT. The mining sector is a manufacturing company sector whose activities consist of extracting, processing and exploiting and selling coal, minerals, metals and natural gas. This research was conducted with the aim to determine whether ROA is affected by cash turnover, accounts receivable turnover and inventory turnover using documentation as a data collection and a method of multiple linear regression analysis through SPSS data processing. The population used is the mining and quarrying sector companies listed on Indonesia Stock Exchange (IDX) from 2017-2019 totaling 43 companies. The purposive sampling method was used in determining the sample which resulted in 33 samples. The research shows that cash turnover, accounts receivable turnover and inventory turnover have no effect on ROA because this is due to a decrease in the amount of production, cash flow constraints due to low turnover of accounts receivable and low sales so that inventory turnover is slow and inventory costs are higher.

Keyword: Account Receivable Turnover; Cash Turnover; Inventory Turnover; Mining and Quarrying Sector; ROA

INTRODUCTION

Profit is one of the many purposes for establishing a company. Companies can meet other goals or targets by making a profit. Many factors influence financial performance, one of which is the company's survival. To find out a healthy financial performance, one way is to observe the company's proficiency in processing profits using the profitability ratio. Profitability is the ratio to see how efficient the management is in carrying out its operational activities in order to get profit during a certain period (Kasmir, 2015). Sartono (2010) argues that the company's ability to generate profits is evaluated by the profitability ratio. According to Kasmir (2015), the role of profitability ratios for companies includes seeing the profits that the company gets during one period, seeing the development of company profits from year to year and knowing company funds both own capital and loan capital used for production. (kasmir, 2015)

Financial performance according to Sucipto (2003) is a performance parameter that assesses the analysis and the company has succeeded in getting a profit in the accounting period. Munawir (2012) argues that the purpose of a financial company is to see the ability to cover its debts at repayment and liquidation, the ability to earn profits for a certain period and to see the company's ability to stabilize its business by paying off the burden on its debt.

In this study, ROA is used as a parameter to measure profitability. ROA is a ratio to estimate a company's ability to use its assets to generate profits. A high ROA value will illustrate the company's good ability to utilize its assets so that the company's profits will get better because it gets a large return (Fahmi, 2013). According to Raharja (2009), high and low ROA are caused by many factors such as cash, accounts receivable and inventories. The amount of cash at least and the level of cash turnover indicates the use of cash in the company. The amount of cash held indicates that the company has not been effective in using it so that it will have an impact on profitability. High profits will be obtained if the cash turnover rate is high. As with accounts receivable and turnover, profits will increase if the proportion of receivables that have been allocated from creditors is also high so that the company will also have high profits. Likewise inventory, high inventory turnover will smooth the cash return with sales. Sales will increase if the inventory rotates quickly, because this will minimize inventory costs and reduce the risk of loss levels due to stockpiling. High sales will increase the revenue generated. To estimate a company's ability to use its assets to earn a profit, researchers used indicators of cash turnover, accounts receivable turnover and inventory turnover.

Cash turnover according to Kasmir (2015) is a ratio to assess a company's ability to use its cash to earn income. High cash turnover in one period, the higher the income generated. Accounts receivable turnover is the ratio to see the amount of cost turnover in one period that comes from accounts receivable (Kasmir, 2015). Company finances are in good shape if the turnover of accounts receivable in one period is running fast because the cash flow will run smoothly, thereby minimizing losses from the amount of bad debts. Smooth cash flow can be used to finance sales for profit so that the company's profit will also increase.

Inventory turnover is the ratio to find out how efficient the company's inventory is (Sutrisno, 2012). Sales will increase if the inventory rotates quickly, because this will minimize inventory costs and reduce the risk of loss levels due to stockpiling. High sales will increase the revenue generated.

The research is focused on mining and quarrying companies listed on the IDX for the 2017-2019 period. In the midst of Indonesia's rapid economic growth, the mining and quarrying sector has contracted since 2017. In the first quarter of 2019, Indonesia's economic growth increased to 5.01% compared to the previous year with the same quarter of 4.92%, but this made the mining sector and excavation experienced a -0.49% contraction as a result of several companies experiencing a decline in production and expiration of concentrate export permits.

From 2017 to 2019, the mining and quarrying sector contracted due to a decrease in the amount of production. The decrease in the amount of production was due to the decline in metal ore mining production by 25.93% and oil, gas and geothermal by 4.11%. This resulted in the mining and quarrying sector contracting in the first quarter by 2.65% and a decline in the second quarter by 1.70%. The contribution to Gross Domestic Product (GDP) also decreased to 7.38% in the second quarter of 2019. This decrease in production had an impact on profitability because the company was unable to sell its products in large quantities so that the profits were not large. Because a decrease in the amount

of production has an effect on a decrease in the level of sales so that the level of company profitability can also decrease, therefore the researchers conducted research with the aim of analyzing how mining and mining sector companies generate profitability by utilizing their assets such as cash turnover, accounts receivable turnover and inventory turnover.

This study intends to see the effect of cash turnover, accounts receivable turnover and inventory turnover on ROA in the case of the mining and quarrying sectors listed on the IDX for the 2017-2019 period. This study also aims to add insight for researchers and train scientific thinking. This study can also be used as reference material for investors before making investment decisions.

Signal Theory

Signal theory is a shareholder's point of view, which originates from the information provided by the management department of the company, this point of view regarding the company's opportunities to increase corporate value in the future (Brigham & Houston, 2014). In his research, Spence said that signal theory is a signal given by the sender or management to the recipient or stakeholders in the form of financial reports to predict company opportunities. This signal theory can be used to show shareholders the company's financial performance. Therefore, this signal will make it easier for shareholders to see the development of a company's financial performance which will make it easier for them to make decisions. In this study, profitability is used as a signal that management will share with shareholders. This profitability describes the company's ability to make profits using its assets. High profitability indicates that the company's financial performance is in good condition, so that good financial performance can be used by management to send good signals to shareholders (Fahmi, 2013).

Return on Assets (ROA)

Return on assets is a ratio that describes the capability of a company to benefit from its assets (Primatua Sirait, 2017). Increasing the ROA value, of course, will increase the benefits you get. This is because the level of return on investment is getting bigger, therefore ROA is also used to describe how far the company's ability to make profitability from available assets. Sutrisno (2012) argues that ROA can be calculated by dividing Earning Before Interest and Taxes by the company's total assets which are then multiplied by 100%.

Cash Turnover

Cash turnover according to Kasmir (2015) is the reliability of cash in describing the extent to which a company uses its cash in one period to earn revenue. The higher the amount of cash turnover in one period, the higher the income generated. Cash is included in the company's assets, which is actually a divider in calculating ROA. The fast turnover of cash will be a measure of the company's success in using cash. Cash turnover during one period according to Kasmir (2015) can be calculated by dividing net sales by the average cash.

Account Receivable Turnover

Accounts receivable turnover is the amount of accounts receivable turnover each year in a company related to the collection period of accounts receivable. Herry (2012) argues that accounts receivable turnover is usually used to calculate the time from the receivables collection period during one accounting period. A good financial condition is described by the fast turnover of accounts receivable in one period, due to the low number of uncollectible accounts that make cash flow smooth. When cash flow is smooth, sales will increase, increasing the company's revenue. Apart from cash, receivables are also included in the company's assets so that they become a divider when calculating ROA.

Inventory Turnover

Inventory turnover is a comparison to calculate the entire turnover of funds in one period that is invested in inventory (Kasmir, 2015). The normal production cycle can be viewed from the fast inventory turnover. Its agile turnover is considered very good because it indicates rapid sales activity. The fast inventory turnover will also increase sales activity. In addition to cash and receivables, inventory is also included in the company's asset component, which of course will be a divider in calculating ROA. The fast inventory turnover in one period is a measure of the success of a company's production cycle. According to Sutrisno (2012), cash turnover during one period can be calculated by dividing the cost of goods sold by the average inventory.

METHODS

This research is a quantitative study because it uses numerical data as an analysis instrument. Documentation is used as a data collection technique and makes Return on Assets (ROA) the dependent variable and cash turnover, accounts receivable turnover and inventory turnover independent variables.

Utilizing secondary data which is the source of data from the annual financial statements of companies in the mining and excavation sector for the 2017-2019 period published on www.idx.co.id totaling 43 companies. Because the research was conducted in three periods so that the population numbered 129. The sample collection technique was purposive sampling based on certain criteria, then a sample of 33 samples was obtained. The criteria used include 1) Mining and quarrying companies listed on the IDX for the period 2017 - 2019. 2) Companies do not report financial reports continuously in 2017 - 2019. 3) Mining and quarrying sector companies do not report complete account components in 2017 - 2019. 4) The company does not use rupiah in its financial statements. 5) Outlier data.

To prove whether there is an impact of cash turnover, accounts receivable turnover and inventory turnover on ROA, multiple linear analysis method is used. To complete a good multiple linear regression model, the data normality test, multicollinearity test, autocorrelation test, t test and coefficient of determination were carried out.

Formula / Mathematical Equation
ROA (Return on Assets)
According to Sutrisno (2012), ROA is the company's ability to generate profits with its assets. The profit used to calculate ROA is profit before interest and taxes or EBIT (Earning Before Interest Tax). The ROA formula is (Sutrisno, 2012) is:

$$ROA = \frac{EBIT}{TOTAL\ ASSETS} \times 100\%$$

Cash Turnover
According to Kasmir (2015) cash turnover is a ratio to calculate the level of cash availability that can be used to pay debts and other costs related to sales. To calculate the cash turnover ratio can be done by comparing the results of sales and the average amount of cash. This is done to find out how many times cash flows in a period that can generate income.
The Cash Turnover Formula (Kasmir, 2015) is:

$$\text{Cash Turnover} = \frac{\text{Net Sales}}{Cash\ average}$$

$$Cash\ Average = \frac{Beginning\ of\ Year\ Cash\ +\ End\ of\ Year\ Cash}{2}$$

Accounts Receivable Turnover
According to Sutrisno (2012) accounts receivable turnover is a measure of the company's effectiveness in managing receivables. This ratio is used to see the company's ability to collect its receivables. The good ability of the company to collect its receivables can be seen from the high value of this ratio.
Accounts Receivable Turnover Formula (Sutrisno, 2012) is:

$$\text{Account Receivable (AR) Turnover} = \frac{\text{Net Sales}}{\text{Account Receivable } Average}$$

$$AR\ Average = \frac{Beginning\ of\ Year\ \text{AR}\ +\ End\ of\ Year\ \text{AR}}{2}$$

Inventory Turnover
According to Kasmir (2015) inventory turnover is a ratio used to see how many times the funds invested in inventory rotate in one period. Inventory turnover can also be used to see the company's ability to manage its inventory which will be converted into sales (Sutrisno, 2012).

The Inventory Turnover Formula (Sutrisno, 2012) is:

$$Inventory\ Turnover = \frac{Net\ Sales}{Inventory\ Average}$$

$$Inventory\ Average = \frac{Beginning\ of\ Year\ Inventory\ +\ End\ of\ Year\ Inventory}{2}$$

RESULT AND DISCUSSION

Descriptive Statistics

Table 1. Descriptive Statistics

	N	Minimum	Maximum	Mean	Std. Deviation
ROA	33	-,0758	,1755	,027874	,0592117
Perputaran Kas	33	,8999	48,0942	13,891472	10,4861592
Perputaran Piutang	33	,3741	88,2896	11,486158	18,2976112
Perputaran Persediaan	33	-171,2661	-,1575	-27,779096	40,1617200
Valid N (listwise)	33				

Source: data processed by SPSS (2021)

Based on the results of the table 1, it shows that 33 samples were used in this study during the 2017-2019 period. Based on the table 1, ROA has a minimum value of -0.0758 and a maximum value of 0.1755. While the mean value is 0.027874 and the standard deviation is 0.0592117. Standard deviation greater than the mean value indicates a large distribution of variable data or gaps.

Based on the table 1, cash turnover has a minimum value of 0.8999 and a maximum value of 48.0942. Meanwhile, the mean value is 13.891472 and the standard deviation is 10.4861592. Standard deviation smaller than the mean value indicates the distribution of variable data that is small or there is no gap.

Based on the table 1, accounts receivable turnover has a minimum value of 0.3741 and a maximum value of 88.2896. Meanwhile, the mean value is 11.486158 and the standard deviation is 18.2976112. Standard deviation greater than the mean value indicates a large distribution of variable data or gaps.

Based on the table 1, inventory turnover has a minimum value of -171.2661 and a maximum value of -0.1575. Meanwhile, the mean value is -27.779096 and the standard deviation is 40.1617200. Standard deviation greater than the mean value indicates a large distribution of variable data or gaps.

Data Normality Test

One Sample Kolmogorov-Smirnov was used to check the normality of the data with 5% si. The following are the results of the data normality test conducted in this study:

Table 2, One-Sample Kolmogorov-Smirnov Test

	ROA
N	33
Kolmogorov-Smirnov Z	,635
Asymp. Sig. (2-tailed)	,814

Source: data processed by SPSS (2021)

Sourced in table 2, it is known that the data is spread normally because the Sig. 0.814> 0.05. So it can be concluded that the distribution of residual values in all regression equation models is stated to be normally distributed.

Multicollinearity Test

The multicollinearity test is carried out, which is to check whether there is a correlation between the independent variables.

Table 3. Coefficients

Model	Collinearity Statistics	
	Tolerance	VIF
Cash Turnover	,945	1,058
Account Receivable Turnover	,953	1,049

Inventory Turnover	,989	1,011

Source: data processed by SPSS (2021)

Based on table 3, it was found that there was no multicollinearity between the independent variables because the VIF value was <10 and the tolerance value> was 0.10. So it can be concluded that the regression model used avoids multicollinearity problems.

Autocorrelation test

The autocorrelation test is a method used to find out whether the data used has errors related to data in the previous period. One of them is the Run Test method.

Table 4. Runs Test

	ROA
Total Cases	33
Number of Runs	18
Z	,005
Asymp. Sig. (2-tailed)	,996

Source: data processed by SPSS (2021)

Based on table 4, the Sig. 0.996> 0.05. Thus it can be concluded that the data used is quite random so that there is no autocorrelation problem in the data being tested.

Test coefficient of determination (R2)

The implementation of the coefficient of determination (R2) test to explain the modification of variables by looking at the capabilities of the regression model.

Table 5 Model Summary

R	R Square	Adjusted R Square	Std. Error of the Estimate
,177a	,031	-,101	,0429290

Source: data processed by SPSS (2021)

Based on the table 5, the R Square value is 0.031. The meaning of the capability of the independent variable in influencing the dependent variable is only 3.1%, while 96.9% is influenced by variables that are not examined.

The t test

The t test was carried out to see the influence of the independent variables in a spatial manner on the dependent variable which was processed using SPSS assistance. The following are the results of the t test in this study:

Table 6 Uji-t

Variable	t	Sig.
Cash Turnover	-.390	.701
Account Receivable Turnover	.570	.575
Inventory Turnover	.257	.799

Source: data processed by SPSS (2021)

Based on the results of the t statistical test in the table 6, it can be concluded that the variables of cash turnover, accounts receivable turnover and inventory turnover have no effect on ROA because all variables have a sig > 0.05.

DISCUSSION

Effect of Cash Turnover on ROA

Based on the results of partial hypothesis testing in the table 6, it is revealed that cash turnover has no effect on ROA. This is because the results of the t-test statistic show that the significance value of cash turnover is 0.701. This value is greater than the real rate value of 0.05 or 0.701> 0.05. This condition proves that hypothesis 1 is rejected. So it can be concluded that the variable x1, namely cash turnover, has no effect on the dependent variable, namely ROA in the case of mining and quarrying companies. These results are in line with research by Ita Dewi Fitriana, Anita Wijayanti and Riana Rachmawati Dewi (2020) and (Widasari & Apriyanti, 2017) which reveal that cash turnover has no effect on ROA.

Table 7. Cash Turnover Data

Emiten	2017	2018	2019
ANTM	1,92	5,12	8,24
CITA	15,31	61,49	48,09
DKFT	0,89	29,99	28,82
ELSA	6,04	8,16	10,64
FIRE	16,87	25,34	31,62
PKPK	8,30	6,14	10,61
PTBA	5,38	4,29	3,94
RUIS	17,71	17,54	22,42
SMMT	3,48	6,03	4,11
SMRU	28,04	12,61	14,13
TINS	9,59	10,28	16,19
ZINC	10,91	11,18	13,22

Source: data processed by Ms. Excel (2021)

Cash turnover has no effect on ROA in mining and quarrying sector companies because cash turnover in companies in this sector has fluctuated on average. It can be seen in table 7 that only 5 out of 12 companies experienced an increase in cash turnover and the rest experienced fluctuation. The fluctuations that occur are caused by a decrease in the amount of production. Low cash turnover illustrates the inefficient use of cash because of the large amount of cash that is stored or not used.

Effect of Accounts Receivable Turnover on ROA

Based on the results of partial hypothesis testing in table 6, it is revealed that the value of accounts receivable turnover has no effect on ROA. This is because the results of the t test statistic showed that the significance value of accounts receivable turnover was 0.575. This value is greater than the real rate value of 0.05 or 0.575> 0.05. This condition proves that hypothesis 2 is rejected. So it can be concluded that the variable x2, namely receivables turnover, has no effect on the dependent variable, namely ROA in the case of mining and quarrying companies. This result is in line with the research of Rika Ayu Nurafika and Khairunnisa Almadany (2018), Lucky Nugroho, Evi Aryani, Akhmad Amien Mastur (2019), Putri Ayu Diana (2016), Hoiriya and Marsudi Lestariningsih (2015) and Irman Deni (2014) which states that receivables turnover has no effect on ROA.

Table 8. Receivable Turnover Data

Emiten	2017	2018	2019
ANTM	10,68	17,98	22,87
CITA	3,40	10,05	14,55
DKFT	0,62	3,72	5,49
ELSA	5,04	4,68	4,57
FIRE	2,19	6,84	13,17
PKPK	0,53	0,37	1,22
PTBA	5,10	5,21	7,91
RUIS	3,90	4,03	4,19
SMMT	21,14	68,41	88,28
SMRU	1,38	5,95	2,97
TINS	7,16	6,02	10,26
ZINC	12,13	8,75	4,58

Source: data processed by Ms. Excel (2021)

Based on the table 8, accounts receivable turnover has no effect on ROA in mining and quarrying sector companies because there are two companies that have experienced a significant decrease in receivables turnover. Even though in this case, the average company experienced an increase in accounts receivable turnover each year. Low accounts receivable turnover can result in choked up cash flow.

Effect of Inventory Turnover on ROA

Based on the results of partial hypothesis testing in table 6, it is revealed that the value of inventory turnover has no effect on ROA. This is because the results of the t test statistic showed that the significance value of inventory turnover was 0.799. This value is greater than the real rate value of 0.05 or 0.799> 0.05. This condition proves that hypothesis 3 is rejected. So it can be concluded that the variable x3, namely inventory turnover, has no effect on the dependent variable, namely ROA in the case of mining and quarrying companies. These results are in line with Sarjito Surya's research (2017), Feibi Teresa Budiang, Sifrid S Pangemanan, Natalia Y T Gerungai (2017) and Putri Ayu Diana (2016) which reveals that inventory turnover has no effect on ROA.

Table 9. Inventory Turnover Data

Emiten	2017	2018	2019
ANTM	9,56	15,36	17,96
CITA	1,45	4,68	9,83
DKFT	0,31	1,69	1,38
ELSA	43,85	50,26	44,09
FIRE	18,65	49,72	27,68
PKPK	0,87	0,75	3,25
PTBA	17,24	15,63	14,85
RUIS	167,99	204,81	126,22
SMMT	20,38	42,73	51,81
SMRU	18,01	72,93	35,34
TINS	3,82	3,34	3,60
ZINC	5,12	7,97	9,97

Source: data processed by Ms. Excel (2021)

Inventory turnover has no effect on ROA in mining and quarrying sector companies because of the fluctuations in average inventory turnover in companies in this sector. It can be seen in table 9 that only 4 out of 12 companies experienced an increase in cash turnover and the remaining 8 companies experienced fluctuation. This results in lower sales and leads to higher inventory costs.

CONCLUSION

This study succeeded in revealing that cash turnover, accounts receivable turnover, and inventory turnover had no effect on ROA. This is for the following reasons fluctuations that occur in cash turnover which make cash turnover on ROA have no effect, a significant decrease in the value of accounts receivable turnover so that inventory turnover has no effect on ROA and fluctuations that occur in inventory turnover that make inventory turnover on ROA have no effect.

The suggestions that researchers try to give can be considered for further research such as expanding the object of research and the number of research periods and increasing the analytical methods used. This research is also expected to have benefits as a consideration for investors in taking action before investing in the mining and quarrying sector.

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