Factors Affecting Return on Assets

Arif Rakhman[1] , Heikal Muhammad Zakaria[2], Gusganda Suria Manda[3]
Program Studi Akuntansi, Universitas Singaperbangsa Karawang, Indonesia[1]
Program Studi Akuntansi, Universitas Singaperbangsa Karawang, Indonesia[2]
Program Studi Akuntansi, Universitas Singaperbangsa Karawang, Indonesia[3]

Abstract. Return on assets is the most commonly used measures of firm profitability, most of the researcher study about return on assets but the results still different among each other. The objective of this research is to examine factors affecting return on assets such as cash turnover and account receivable turnover of food and beverage firm listed in Indonesia Stock Exchange. Source of data used in this study is financial statements as secondary data based on purposive sampling technique. The results showed that cash turnover does not significantly influence return on assets, this is because the value of t count is 0.558 greater than t table 2.030 so that H0 is rejected. And then, account receivable turnover significantly influence return on assets, this is based on the value of t count 5.659 is greater than t table 2.030 so H0 is accepted. And the last, The output of ANOVA results shows that the F count obtained from the variable cash turnover and accounts receivable turnover is 16.016 greater than F table 2.830 so that H0 is accepted. These results mean that there is a significant influence between cash turnover and receivable turnover on profitability in food and beverages companies listed on the Indonesian stock exchange. Based on the results, we can conclude that partially account receivable turnover was factor affecting return on assets and simultaneously cash turnover and account receivable turnover affect return on assets. Therefore, the company must concern of account receivable turnover ratio because that ratio has impact to measure a return on asset, and the limitation of this research is there were only two independents variable and the sample was very small.

Keywords. cash turnover, account receivable turnover, return on assets, Indonesia stock exchange

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Corresponding Author. arif.rakhman@fe.unsika.ac.id

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INTRODUCTION

Nowadays, working capital is very important for every company. Working capital is a vital function within corporate-finance decision making (Wieczorek-Kosmala, Dos, Blach, & Gorczynska, 2016). Companies need the potential of working capital resources both cash and account receivables in carrying out their operational activities. Working capital is a company's investment in short-term assets such as cash and accounts receivable (Brigham & Houston, 2012).

Companies are required to regulate cash turnover and account receivables turn over as efficiently as possible so that day-to-day operations of the company can go smoothly. Companies are also required to maintain the quality of products and good company performance (Kasmir, 2012).

Cash required by the company to finance the day-to-day operations of the company and to invest in new fixed assets. Cash is the component of working capital with the highest level of liquidity. Cash turnaround describes the speed of cash flow back that has been invested in working capital. Cash turnover is the comparison between sales with average cash amount (Riyanto, 2011).

The higher the cash turnover the faster the cash returns to the company, the cash will be reused to finance the operational activities so as not to disrupt the company's financial condition and increase profits for the company (Sartono, 2011). According to (Dong & Su, 2010) cash flow has a significant positive effect on profitability.

In addition, the company also sells many products on credit, either in the form of goods or services, so the company has account receivables. Accounts receivable occur as a result of the sale policy of goods or services made on credit (Hongren, 2009).

Account receivables are the working capital elements that are always in rotation. The account receivable turnover period is related to the terms of payment. The more soft the terms of payment, the longer the capital is bound in the account receivables which means lower turnover rate. Account receivable turnover is the ratio used to measure how long the collection of accounts receivable over a period or how many times the funds invested in these account receivables rotate in one period (Warren, Reeve, & Duchac, 2018). Account receivable turnover also has positive and significant effect on profitability (Dong & Su, 2010).

Both components, namely cash turnover and account receivable turnover can affect the level of profitability. Profitability is the ability of a company to earn profits in relation to sales, total assets and own capital (Fraser & Ormiston, 2016). High profitability will be able to support operational activities maximally. Achieving the level of profitability emphasizes the use of cash turnover elements and receivable turnover as efficiently as possible. Unlike other profitability ratios, return on assets compares bottom line profits to the total assets, thus measuring the return to total investment (Youn & Gu, 2010). According to (Rothschild, 2006), return on assets incorporates both net income and firms' assets into its computation and is therefore the premier metric in evaluating the performance of management.

The main purpose of this study is to understand the factors affecting return on asset in Indonesia. We analyze financial statements from food and beverages company listing in Indonesia stock exchange for the period 2012 – 2016. We investigate whether cash turnover and account receivable turnover are factors affecting return on assets.

Using a sample of listing company in Indonesia stock exchange, Diana and Santoso analyzed the influence of cash turnover, account receivable turnover, and inventory turnover to profitability on cement companies. This study was conducted in the years 2009 until 2013. They found that cash turnover and inventory turnover has significant effect to profitability whereas account receivable turnover does not significantly affect the profitability. Diana and Santoso's findings suggest that the company should improve its credit policy decisions, based on the results of this study, cement companies have an average increase in account receivables compared with the average increase in sales, so that credit sales by the company do not contribute to increasing sales (Diana & Santoso, 2016).

(Ainiyah, 2016) analyzed the influence of account receivables turnover, the inventory turnover and debt to equity ratio to the profitability in the animal feed companies which are listed in Indonesia Stock Exchange periods in 2010-2014. They found that account receivables turnover, inventory turnover, and debt to equity ratio have significant influence to the animal feed companies. The result of the research simultaneously shows that the accounts receivable turnover, inventory turnover, and debt to equity ratio variables have significant influence to the profitability. Meanwhile, partially shows that the accounts receivable turnover, inventory turnover, and debt to equity ratio have significant influence to the profitability. It has been found from the result of partial determination coefficient that account receivables turnover variable has the dominant influence to the profitability in the animal feed companies.

(Sartika, Feranika, & Wahyudi, 2018) analyzed activity ratio influencing company's profitability on automotive sector listed in Indonesia stock exchange. The data studied in this research is the financial statements of automotive industry companies listed on the Indonesian Stock Exchange during 2009 – 2012. They found that the working capital turnover, cash turnover, account receivable turnover, and inventory turnover simultaneously have a significant effect on profitability. While, partially, working capital turnover, accounts receivable turnover, and inventory turnover has no significant effect on profitability. Only cash turnover has a significant effect on profitability. Based on these results, they suggest that companies should pay more attention to the ratio of activities especially on cash turnover to increase maximum profit.

(Sandhar & Janglani, 2013) analyzed the working capital management in terms of profitability and liquidity. The Population of the study was all the companies listed in the NSE. The data is used

on the basis of profitability random sampling. Secondary data was used from the journals and internet. The data was analyzed through the regression analysis to find out the impact of liquidity on profitability. The empirical investigation revealed that current ratio and liquid ratio are negatively associated with ROA and ROI, while cash turnover ratio is negatively associated with ROI and ROA. It is worthy to mention here that the inverse direction reveals with respect to CR and LR with profitability ratios ROA and ROI is very informative of the fact as it proves the theoretical foundation (liquidity- profitability trade off theory) which posts that profitability and liquidity are inversely related or that there must always be a trade-off between profitability and liquidity.

Another relevant study is that of (Mulyana, 2015), who analyzed the effect of cash turnover and working capital turnover to profitability on food and beverages companies listed in Indonesia stock exchange 2009 – 2013. This research was conducted in the food and beverages company. The purpose of this study is to determine how much influence the cash turnover and working capital on profitability that measured by return on asset. The method used in this research is descriptive method verification with quantitative approach. The sample used in this study was annual financial report in 2009 – 2013 as many as 30 samples. The analysis showed that the cash turnover significantly affect profitability, working capital has no significant effect on profitability.

The authors of this study chose manufacturing companies, especially in the food and beverages sector listed on the Indonesia Stock Exchange because this sector is one of the sectors that continue to grow. This is due to the company's production is the basic needs of society, namely food and beverages that tend to be more stable production compared with other industries. The food and beverage subsector is one of the sub-sectors in the manufacturing industry that also experienced a decline due to the crisis in year 2010. The decline occurring in the year is estimated at 8.84% to 2.73%. On the other hand, the food and beverage subsector plays an important role in the development of the industrial sector. Keeping the company's profits is one way, but the cost of raw materials are increasingly expensive and high production costs make the product sale price becomes high. The competitiveness of existing products in the food and beverage subsector will be lower because Indonesian products tend to be more expensive compared to foreign products so that it can affect the company's profit if it continues. A prolonged decline in profits or losses in a company can lead to financial distress that can ultimately impact a company's bankruptcy (‘https://www.idx.co.id/’, 2018).

In addition, we selected the period 2010-2016 as the object of research in food and beverages companies because in this period seen a fairly stable volume of sales growth after the global crisis that occurred in the world although the level of profitability for this sector tends to decline. Account receivables turnover that have a value below the average, this indicates that the company's ability to collect account receivables is still low because it is below the average value of combined account receivables turnover. The low ability of the company in collecting these account receivables may result in the risk of bad debts so that the cash inflows that should be obtained from debt payments by debtors become impeded. Whereas, receivable turnover that has a high average value indicates that the company's strategy in collecting account receivables can be said to be good, the company is able to get the average number of account receivable turnover is far above the average value of the combined so that cash inflows of the company obtained from debt payments by the debtor goes smoothly, so the condition can increase the company's profit.

METHOD

This research was conducted using quantitative research methods. The population in this study were manufacturing companies of food and beverage companies that are listed on the Indonesia Stock Exchange (IDX) as many as 14 (fourteen) companies. The research sample consisted of five food and beverage companies from 2010-2016. The sampling technique in this study is purposive sampling, which is a sample determination technique with certain considerations. Specific considerations or performance used in this study are manufacturing companies with the goods and consumption industry especially food and beverage sub-sectors listed on the Indonesian stock exchange. The companies have financial reports for the last 7 years in the period 2010 – 2016 and have cash turnover and accounts receivable turnover below 50 times the turnover in one period.

This study consists of two independent variables and one dependent variable namely; (1) the independent variable consists of cash turnover (X1) and accounts receivable turnover (X2), (2) the dependent variable in this study is return on assets (Y). This study uses multivariate data analysis techniques. Multivariate data analysis is a statistical method that allows to do research two or more variables simultaneously. This analysis technique can analyze the influence of several variables on other variables simultaneously. Researchers used multivariate data analysis techniques to analyze the effect of cash turnover and accounts receivable turnover on return on assets in food and beverage companies listed on the Indonesian stock exchange.

RESULTS AND DISCUSSION

This study uses cash turnover, accounts receivable turnover, and return on assets (ROA) data in the period 2010 – 2016. To facilitate the calculation of the data in the SPSS program, the data are changed in the form of data that has been calculated. Cash Turnover at Food and Beverage Companies on the Indonesia Stock Exchange (IDX) Period 2010 – 2016. The following is a table of cash turnover conditions for food and beverages companies listed on the Indonesia Stock Exchange for the period 2010-2016:

Table 1. Cash Turnover Food and Beverage Company Listed in IDX 2010-2016

No.	Company	Years							Average
		10	11	12	13	14	15	16	
1	PT. Tiga Pilar Sejahtera Food. Tbk.	38.1	5.3	7.4	19.3	6.7	6.6	14.8	14.0
2	PT. Delta Djakarta. Tbk.	3.8	5.6	6.4	5.5	4.9	3.4	2.8	4.6
3	PT. Multi Bintang Indonesia. Tbk.	6.5	8.1	9.0	29.1	20.4	10.9	8.7	13.3
4	PT. Mayora Indah. Tbk.	18.2	23.7	12.6	7.5	11.0	12.3	11.3	13.8
5	PT. Nippon Indosari Corporation. Tbk.	6.8	9.6	27.6	21.6	14.2	6.4	4.4	12.9

Based on the table above, the value cash turnover of PT. Delta Djakarta, Tbk. in 2016 as many as 2.88 in one period. Meanwhile, the average annual cash turnover value is 4.67. This indicates that the company experienced a decrease in sales so that the cash turnover of PT. Delta Djakarta, Tbk. drop. If cash turnover is low, then the turnover is not efficient because a lot of money is not used. It is clear that such conditions affect company profits.

PT. TigaPilar Sejahtera Food, Tbk. in 2016 had the highest cash turnover of 14.08 in one period. This value shows that the company obtained an increase in sales compared to 2014 and 2015 which resulted in cash turnover of PT. TigaPilar Sejahtera Food, Tbk. spin faster. Cash turnover used also becomes more efficient so that conditions can increase company profit.

Account Receivable Turnover at Food and Beverage Companies on the Indonesia Stock Exchange(IDX) Period 2010 – 2016. The following is a table of account receivable turnover conditions for food and beverages companies listed on the Indonesia Stock Exchange for the period 2010-2016:

Table 1. Account Receivable TurnoverFood and Beverage Company Listed in IDX 2010-2016

No.	Company	Years							Average
		10	11	12	13	14	15	16	
1	PT. TigaPilar Sejahtera Food. Tbk.	4.4	5.5	5.3	5.5	4.5	3.6	2.9	4.5
2	PT. Delta Djakarta. Tbk.	8.2	7.8	10.5	14.9	12.7	8.6	11.1	10.6
3	PT. Multi Bintang Indonesia. Tbk.	11.6	7.7	7.3	14.4	8.4	9.1	13.0	10.2
4	PT. Mayora Indah. Tbk.	6.7	6.3	5.6	4.9	4.8	4.6	4.7	5.4

5	PT. Nippon Indosari Corporation. Tbk.	9.5	9.0	9.9	9.4	9.5	9.4	9.5	9.4

Based on the table above, account receivable turnover's PT. TigaPilar Sejahtera Food, Tbk. in 2016 there were 2.99 in one period and had a value below the average. This indicates that the company's ability to collect account receivables is still low. The low ability of companies to collect receivables can result in the risk of uncollectible receivables. These results in cash inflows that should be obtained from debt payments by debtors become hampered and affect the company's profit. Receivable turnover of PT. Multi Bintang Indonesia, Tbk. in 2016 there were 13.07 in one period and had a value above the average receivable turnover. This shows that the company's strategy in collecting receivables is good. The company's cash inflows obtained from debt payments by debtors run smoothly, so these conditions can increase company profits.

Return on Assets at Food and Beverage Companies on the Indonesia Stock Exchange(IDX) Period 2010 – 2016. The following is a table of return on assets (ROA) for food and beverages companies listed on the Indonesia Stock Exchange for the period 2010-2016:

Table 3. Return on Assets Food and Beverage Company Listed DX 2010-2016

No.	Company	Years							Average
		10	11	12	13	14	15	16	
1	PT. TigaPilar Sejahtera Food. Tbk.	3,9	4,1	6,5	9,9	5,0	4,1	7,6	5,9
2	PT. Delta Djakarta. Tbk.	19,7	21,7	28,6	31,2	29,0	18,4	21,6	24,3
3	PT. Multi Bintang Indonesia. Tbk.	38,9	41,5	39,3	66,9	35,3	23,9	43,0	41,3
4	PT. Mayora Indah. Tbk.	11	7,3	8,9	10,8	4,0	11,1	10,4	9,1
5	PT. Nippon Indosari Corporation. Tbk.	17,5	15,2	12,3	8,6	8,8	9,7	9,0	11,6

PT. TigaPilar Sejahtera Food, Tbk has the smallest average ROA value compared to other companies. This shows that this company has the least ability to generate profits because the profit generated is still very low. Whereas, when viewed from the average ROA value, PT. Multi Bintang Indonesia, Tbk. have the highest ROA so that it can be seen that the company produces very good profits.

Data normality test aims to determine whether in a regression model has normal data distribution or not. A good regression model is normal or near normal data distribution.

Table 4. Normality Test Results

		Cash Turnover	Account Receivable Turnover
N		35	35
Normal Parameters	Mean	11.7717	8.0666
	Std. Deviation	8.29946	3.09679
Most Extreme Differences	Absolute	0.176	0.123
	Positive	0.176	0.123
	Negative	-0.142	-0.061
Komolgorov-Smirnov Z		1.041	0.730
Asymp. Sig. (2-tailed)		.229	0.661
a. Test distribution is Normal.			
b. Calculated from data.			

The table above shows that the residual value is 0.229 and 0.661, this shows the residual value is greater than 0.05, then the distribution of the data meets the assumption of normality.

Multicollinearity tests are needed to determine whether there are independent variables in a model. In addition, this test also avoids habits in the decision making process regarding the effect on the partial test of each independent variable on the dependent variable. If VIF is produced between 1-10, there is no multicollinearity.

Table 5. Multicollinearity Test Results

Coefficients[a]

Model		Collinearity Statistics	
		Tolerance	VIF
1	(Constant)		
	Cash Turnover	0.988	1.013
	Account Receivable Turnover	0.988	1.013

a. Dependent Variable: Return on Assets

Based on the table above, tolerance values obtained for all independent variables> 0.1 and VIF values for all independent variables <10.

1. The tolerance value for cash turnover is 0.988> 1
2. The tolerance value for accounts receivable turnover is 0.988> 1

While:

3. The VIF value for Cash Turnover is 1.013 <10
4. The VIF value for Receivable Turnover is 1.013 <10
5.

The autocorrelation test in this study uses the Durbin-Watson test (DW-test). The following table in the decision making whether this linear regression has autocorrelation symptoms or not:

Table 6. Autocorrelation Test Results

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Durbin-Watson
1	707[a]	0.500	0.469	10.637	2.180

a. Predictors: (Constant), Cash Turnover, Account Receivable Turnover
b. Dependent Variable: Return on Assets

Table Durbin Watson values obtained are du = 1.584 and d = 1.343. Then, the autocorrelation value between 1.584 <2.180 <2.416, so there is no autocorrelation.

The purpose of descriptive analysis is to describe a data statistically, consisting of the mean, min, max, and standard deviation of each variable, with the variables used namely cash turnover and accounts receivable turnover on return on assets of food and beverage companies listed in Indonesia stock exchange period 2010 – 2016.

Multiple linear regression analysis is used to analyze the linear relationship between the independent variable and the dependent variable.

The determination coefficient is used to determine the percentage of the change in the dependent variable (Y) by the independent variable (X), or in other words the determination coefficient is the percentage of the change in the independent variable to the value of the dependent variable.

This analysis is used to determine how much the contribution of the independent variable cash turnover and receivable turnover to the dependent variable return on assets. The coefficient of determination (R) is obtained from squaring the correlation coefficient (r).

Partial Test (T Test)

Table 7. T Test Results

Coefficient[a]

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	Constant	-10.05	5.972		-1.68	0.102
	Cash Turnover	0.123	0.221	0.070	0.558	0.581
	Account Receivable Turnover	3.355	0.593	0.712	5.659	0.000

a. Dependent Variable: Return on Assets

Based on the table above, we can see the value of t count and significance for each variable. By using a significance level of 5%, the t table value is 2.03.

The Effect of Cash Turnover to Return on Assets in Food and Beverage Companies

The results of the cash turnover output above show that the calculated t value obtained from the cash turnover variable is 0.558, while the value of the t table is 2.030. The value of t arithmetic (0.558) is greater than t table (2.030) so that H0 is rejected. Partially, cash turnover has no significant effect on return on assets.

This is has difference result with (Haryanto, Sodikin, & Chaeriyah, 2018) that cash turnover significantly affect return on assets. The difference between our research and their research was on sample. Their research used only one sample.

The Effect of Account Receivable Turnover to Return on Assets in Food and Beverage Companies

The output of account receivable turnover above shows that the calculated t value obtained from the account receivable turnover variable is 5.659, while the value of the t table is 2.030. The value of t count 5.659 is greater than t table 2.030 so H0 is accepted. Partially, account receivable turnover has a significant effect on profitability.

The result is same as (Haryanto et al., 2018) with the same sample in food and beverage company. Moreover, our research has same result with (Sufiana & Purnawati, 2013) that account receivable turnover has significant effect on profitability.

The Effect of Cash Turnover and Account Receivable Turnover to Return on Assets in Food and Beverage Companies

Based on the ANOVA results, it can be seen that the significance value of this study is smaller than the 5% significance level of 0.000 <0.05 and F count is greater than F table. The output above shows that the calculated F value obtained from the variable cash turnover and accounts receivable turnover is F arithmetic (16.016)> F table (2.830) so that H0 is accepted. These results mean that there is a significant influence between cash turnover and receivable turnover on profitability in food and beverages companies listed on the Indonesian stock exchange.

This result was same with another researcher (Haryanto et al., 2018; Sufiana & Purnawati, 2013). These results show that cash turnover and account receivable turnover simultaneously affect to return on assets. This is showed by the absence of different research results between our research and other research.

CONCLUSION

Based on this result, the company must concern of account receivable turnover ratio because that ratio has impact to measure a return on asset. This means account receivable turnover ratio must become a reference for a user. When we have a good account receivable turnover that means we have an asset on another hand but we cannot use it now so we can save asset for the future. Difference with cash, when we have a lot of cash, it is means we can use it now and it is too risky if we can't use cash with caution. The point of this conclusion is when a company have more cash turnover it is means sometimes they spend with no caution so can make a company fall. When we have good account receivable turnover it is mean can make more safely because that asset has on another hand.

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