Journal of Reseacrh in Business, Economics, and Education Volume 2
E-ISSN 2686-6056 Issue 4
August Edition 2020

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The Effect of Liquidity, Working Capital and Operational Costs on Profitability of Trading Companies Registered in Indonesia Stock Exchange 2013-2015

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Abstract

This study aims to examine and analyze the effect of liquidity, working capital and operational cost on profitability of trading companies listed on the Indonesia Stock Exchange in 2013-2015 period. The study used a quantitative approach, this type of research is quantitative descriptive by causal relationship. The populations of this study are all registered trading companies in Indonesia Stock Exchange consisting of 55 companies. Samples were drawn by 29 companies, by purposive sampling technique. The analytical method used in this research is multiple linear regression and classic assumption test to get a good regression model. The results of this study indicate that simultaneously liquidity, working capital and operating costs have a significant effect on profitability in trading companies listed on the Indonesia Stock Exchange in 2013-2015 period. Partially, liquidity and working capital have a positive and significant effect on profitability in trading companies listed on the Indonesia Stock Exchange in 2013-2015 period, while operating cost does not have any effect on profitability. The conclusion of this research states that increase in liquidity and working capital will lead to an increase in profitability. The results obtained from the coefficient of determination of R2 value is 0.330, meaning that profitability variable variation can be explained by variations of variable of liquidity, working capital and operating expenses reaching up to 33% while the rest of 67% is explained by other independent variables.

Keywords: Liquidity, Working Capital, Operating Costs, Profitability

1. Introduction

The company was founded with the aim of increasing the profitability of the company so that it can provide prosperity for the owners or shareholders. One of the efforts to achieve these goals the company always maximizes its profits. Profitability is the company's ability to earn a profit in relation to sales, total assets, and own capital. The amount of profit is often compared to the financial condition or other activities, such as sales, assets, shareholder equity, and is also used to value the company.

Liquidity measures the company's ability to meet cash needs to pay short-term obligations and to finance day-to-day operations as working capital. This liquidity has a close relationship with profitability, because liquidity shows the level of available working capital needed in operational activities.

Working capital is all current assets that can be used as cash owned by the company, or funds that must be available to finance the company's daily operations, for example to pay

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employee salaries, buy raw materials / goods, pay transportation costs, pay debts and so on. Errors in managing working capital result in business activities being hampered or completely halted.

The success in managing working capital policies reflects the maximum supervision of current assets and current liabilities that can increase profitability. Investing in working capital means investing in cash, accounts receivable, and inventories. This investment will be of maximum benefit if the amount of cash, accounts receivable and inventories is optimal. Optimization of cash, accounts receivable, inventory affects the need for funds for working capital financing and is directly related to sales growth. In connection with working capital expenditures, in particular the company's current liabilities must be managed effectively and efficiently in order to obtain minimum costs and risks.

Operational costs consist of sales costs, which are costs incurred by the company to carry out product sales and marketing activities and administrative costs are costs incurred by the company to coordinate product production and sales activities. Profit is very much determined by the income earned and the costs that must be incurred to obtain that income. Given the company's operating costs continue to increase, due to the higher costs incurred for operating costs at the company. This is due to problems with operating income, the increasing demands for workers' living costs, as well as equipment and equipment in the company which is getting higher.

2. Literature Review

Liquidity

According to Anoraga and Pakarti (2008: 111), the liquidity ratio states the company's ability to meet its obligations in the short term.

According to Sudana (2011: 21), the liquidity ratio measures the company's ability to meet short-term financial obligations.

The liquidity indicator in this study is the current ratio. According to Sudana (2011: 21) the current ratio measures the company's ability to pay current debt using current assets owned. The formula for calculating the current ratio is:

$$Current\ Ratio = \frac{Current\ Assets}{Current\ Liabilities}$$

Theory About Working Capital

According to Subramanyam and Wild (2011: 241) working capital is the difference in current assets after deducting current liabilities. According to Sunyoto (2013: 127) working capital is a company's investment in short-term assets in the form of cash, marketable securities, inventories, and accounts receivable. The working capital indicator in this study is net working capital. According to Sunyoto (2013: 127) the formula for calculating net working capital is:

Net Working Capital = Current Assets - Current Liabilities

Theory About Operating Costs

According to Jusuf (2008: 33), operating costs or operating expenses are costs that are not directly related to the company's products but are related to the company's daily operational activities. According to Keown, et al (2008: 34), operating costs are costs associated with the marketing and distribution of products or services and business administration. The formula for calculating operational costs is as follows:

Operating Costs = Selling Costs + General and Administrative Expenses

Profitability Ratio

According to Kasmir (2012: 196), the profitability ratio is a ratio used to assess a company's ability to seek profit. The profitability ratio also provides a measure of the management effectiveness of a company. This is indicated by the profit generated from sales and investment income. In essence, this ratio is used to show the efficiency of the company. The profitability indicator in this study uses the Net Profit Margin ratio. According to Sudana (2011: 23) Net Profit Margin measures the company's ability to generate net profit from sales made by the company. This ratio reflects the efficiency of all parts, namely production, personnel, marketing and finance in the company. The formula for calculating Net Profit Margin is:

$$\textit{Net Profit Margin} = \frac{\text{Earning After Taxes}}{\text{Sales}}$$

3. Methodology

The research approach used in this research is quantitative research methods. According to Sugiyono (2010: 8). The nature of this research is a causal relationship. Causal relationship research is a causal relationship (Sugiyono, 2010: 37). So here there are independent variables (variables that affect) and dependent variables (influenced).

Population and Sample

The population in this study were all trading companies listed on the Indonesia Stock Exchange, amounting to 55 companies. Some of the criteria specified are:
1. Trading companies listed on the Indonesia Stock Exchange (IDX) for the period 2013-2015.
2. Trading companies that use financial reports as of December 31, 2013-2015.
3. Trading companies that did not experience losses in the 2013-2015 period.

The total number of sample data used in this study is 87 samples taken from a total sample of 29 companies multiplied by 3 periods of the study.

4. Result and Discussion

Descriptive Statistics

Table 1. Descriptive Statistics

	N	Minimum	Maximum	Mean	Std. Deviation
Liquidity	87	,790	52,379	3,33761	6,777545
Working capital	87	-1.251.337.000.000	20.979.423.000.000	1.293.000.926.051,29	3.213.411.219.660,223

Operating costs	87	3.418.099.553	8.436.945.000.000	1.143.136.469.335,82	1.563.114.883.386,658
Profitability	87	,001	,351	,04887	,054676
Valid N (listwise)	87				

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The minimum liquidity value is 0.790 which is obtained at PT. Midi Utama Indonesia, Tbk in 2015. The maximum value of liquidity is 52,379 obtained at PT. Leo Investments, Tbk in 2013. The average liquidity value of trading companies in 2013-2015 was 3.33761. The standard deviation value for liquidity is 6.777545

Kolmogorov Smirnov Normality Test After Transformation

Table 2. One-Sample Kolmogorov-Smirnov Test

		Unstandardized Residual
N		78
Normal Parameters[a,b]	Mean	0E-7
	Std. Deviation	,07779698
Most Extreme Differences	Absolute	,074
	Positive	,074
	Negative	-,037
Kolmogorov-Smirnov Z		,655
Asymp. Sig. (2-tailed)		,785

a. Test distribution is Normal.
b. Calculated from data.

The Kolmogorov Smirnov normality test results show a significant value of 0.785> 0.05. Thus, the Kolmogorov Smirnov normality test results can be concluded that the data is normally distributed.

Spearman's rho Test After Transformation

Table 3. Correlations

			SQRT Liquidity	SQRT Working Capital	SQRT Operating Costs	Unstandardized Residual
Spearman's rho	SQRT_ Liquidity	Correlation Coefficient	1,000	,230*	-,298**	,222
		Sig. (2-tailed)	.	,043	,005	,051
		N	87	78	87	78
	SQRT_ Working	Correlation Coefficient	,230*	1,000	,786**	,092

Capital	Sig. (2-tailed)	,043	.	,000	,422
	N	78	78	78	78
SQRT_ Operating Costs	Correlation Coefficient	-,298**	,786**	1,000	,131
	Sig. (2-tailed)	,005	,000	.	,254
	N	87	78	87	78
Unstandardized Residual	Correlation Coefficient	,222	,092	,131	1,000
	Sig. (2-tailed)	,051	,422	,254	.
	N	78	78	78	78

*. Correlation is significant at the 0.05 level (2-tailed).
**. Correlation is significant at the 0.01 level (2-tailed).

The results of the Spearman's rho test after the transformation of the data in table 6 above show that the significant value of the 3 independent variables is greater than 0.05, thus the results of Spearman's rho can be concluded that there is no heteroscedasticity problem.

Regression Equations

Table 4. Coefficients[a]

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	,091	,024		3,735	,000
	SQRT_ Liquidity	,053	,009	,553	5,654	,000
	SQRT_ Working Capital	3,043E-008	,000	,250	2,133	,036
	SQRT_ Operating Costs	-1,650E-008	,000	-,097	-,800	,426

a. Dependent Variable: SQRT_Profitability

The results of the regression equation in table 7 above can be obtained from the constant values and the regression coefficients of each variable, so that the equation for the multiple linear regression model in this study can be described as:

SQRT Profitability = 0.091 + 0.053 SQRT Liquidity + 0.00003043 SQRT Working Capital – 0.00001650SQRT Operating Costs

The meaning of the multiple linear regression equation above is:

1. A constant value of 0.091 states that if liquidity, working capital and operating costs are 0, then the profitability is 0.091 units.
2. The liquidity regression coefficient value is 0.053 units and has a positive value which states that every increase of 1 liquidity unit will cause an increase in profitability of 0.053 units.

3. The regression coefficient of working capital is 0.00003043 units and is positive which states that every increase of 1 working capital unit will cause an increase in profitability of 0.00003043 units.
4. The operational cost regression coefficient is -0.00001650 units and is negative, which states that every 1 unit increase in operating costs will cause a decrease in profitability of 0.00001650 units.

Determination Coefficient Test

Table 5. Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	,597[a]	,356	,330	,07936

a. Predictors: (Constant), SQRT_ Operating Costs, SQRT_ Liquidity, SQRT_ Working Capital

The result of the determination coefficient test in table 8 shows that the Adjusted R square value is 0.330. This means that the variation in the dependent variable on profitability which can be explained by the independent variables of liquidity, working capital and operating costs is 33%. While the remaining 67% is explained by other independent variables outside of this study.

Simultaneous Test (Test F)

Table 6. ANOVA[b]

Model		Sum of Squares	Df	Mean Square	F	Sig.
1	Regression	,258	3	,086	13,636	,000[a]
	Residual	,466	74	,006		
	Total	,724	77			

a. Predictors: (Constant), SQRT_ Operating Costs, SQRT_ Liquidity, SQRT_ Working Capital

b. Dependent Variable: SQRT_Profitability

The results of the simultaneous significance test in Table 9 above obtained the Fcount value of 13.636. At degrees of freedom 1 (df1) = k - 1 = 4–1 = 3, and degrees of freedom 2 (df2) = n – k = 78–4 = 74, where n = number of samples, k = number of variables, Ftable value on the level of confidence significance 0.05 is 2.73. Thus the value of Fcount = 13.636> Ftable = 2.73 with a significance level of 0.000. Then Ha accepted means that liquidity, working capital and operational costs simultaneously have a significant effect on profitability in trading companies listed on the Indonesia Stock Exchange for the period 2013-2015.

Partial Test (t test)

Table 7. Coefficients[a]

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	,091	,024		3,735	,000
	SQRT_ Liquidity	,053	,009	,553	5,654	,000
	SQRT_ Working Capital	3,043E-008	,000	,250	2,133	,036
	SQRT_ Operating Costs	-1,650E-008	,000	-,097	-,800	,426

a. Dependent Variable: SQRT_Profitability

The results of the partial significance test in Table 10 above, the t table value for the probability of 0.05 at degrees of freedom df = 74 is 1.99254. Thus the results of the t test can be explained as follows:

1. The results of the calculation of the t test partially obtained a liquidity t value of 5.654 with a significant value of 0.000. Value of tcount> ttable or 5.654> 1.99254, then Ha is accepted, meaning that liquidity has a positive and significant effect on profitability in trading companies listed on the Indonesia Stock Exchange for the period 2013-2015.
2. The results of the calculation of the t test partially obtained the t value of working capital of 2.133 with a significant value of 0.036. The value of tcount> ttable or 2.133> 1.99254, then Ha is accepted, meaning that working capital has a positive and significant effect on profitability in trading companies listed on the Indonesia Stock Exchange for the period 2013-2015.
3. The results of the calculation of the t test partially obtained the tcount of operational costs of -0.800 with a significant value of 0.426. Value -thitung> -ttable or -0.800> -1.99254, then H0 is accepted, meaning that operating costs have no effect on profitability in trading companies listed on the Indonesia Stock Exchange for the period 2013-2015.

5. Conclusion

This study examines how the effect of liquidity, working capital and operating costs on profitability in trading companies listed on the Indonesia Stock Exchange for the period 2013-2015. Based on the research results, the conclusions obtained from this study are:

Partially liquidity has a positive and significant effect on profitability in trading companies listed on the Indonesia Stock Exchange for the period 2013-2015.

Partially working capital has a positive and significant effect on profitability in trading companies listed on the Indonesia Stock Exchange for the period 2013-2015.

Partially operating costs have no effect on profitability in trading companies listed on the Indonesia Stock Exchange for the period 2013-2015.

Simultaneously liquidity, working capital and operating costs have a significant effect on profitability in trading companies listed on the Indonesia Stock Exchange for the period 2013-2015 with the results of the Adjusted R2 coefficient of determination of 33% from the variation of the profitability variable which can be explained by the independent variable liquidity, working capital, and operating costs.

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