



Correlation and Regression Financial Ratio Evidence from Indonesia

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Abstract The purpose of this study is to see how the correlation and the relationship between the financial ratios consisting of ROA, sales growth, Debt ratio, Fixed asset ratio, Inventory turnover, and Receivable turnover in 31 companies in Indonesia Stock Exchange using the fiscal year 2015. Research data is Secondary data obtained from Indonesia Capital Market Directory (ICM). The results of this study indicate that there is no strong correlation between financial ratios in doing research and no significant relationship between financial ratios.

Keywords ROA, sales growth, Debt ratio, Fixed asset ratio, Inventory turnover, and Receivable turnover.

Introduction

In Barus & Leliani, (2009) explains that companies as one form of organization generally have a specific goal to be achieved in an effort to meet the interests of stakeholders. The survival of the company is influenced by many things, among others, the profitability of the company. Profitability is one factor to assess the good performance of the company.

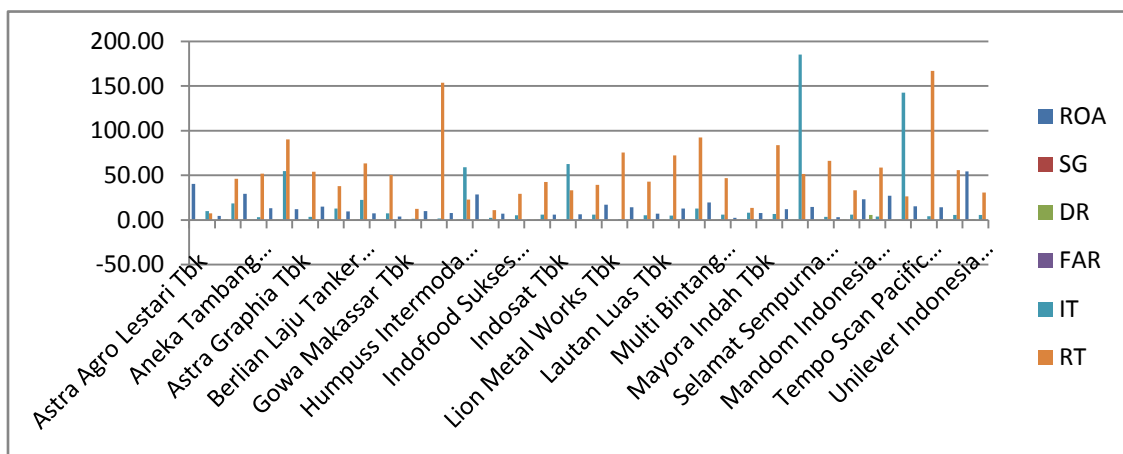


Figure 1: Graphic in Financial Ratio 2015 (Sourced: Proceed by author)

In Figure 1 above can be seen the development of financial ratios of 31 companies during the fiscal year 2015. Most of the creditors use financial ratios as an analytical tool and measure the ability of companies to pay principal and interest on loans, because the company's objectives are established to earn profits where the profit rate can be rejected Measure for the development of the company.

See in Barus & Leliani (2009), said the company's survival is influenced by many things such as profitability of the company. Factors affecting profitability and corporate growth rates include: ROA, sales growth, Debt ratio, Fixed asset ratio, Inventory turnover, and Receivable turnover.

Literature Review

1. Profitability Ratio

Profitability is the end result of a number of company management policies and decisions, so the company's profitability is the company's ability to generate net income from the activities carried out in the accounting period [1]. In this research, return on asset (ROA) is used as a proxy of profitability because return on asset gives explanation about company ability to earn profit by using assets owned, as in research conducted by Timbul and Ismiyati (2013) [2].

2. Ratio of Liquidity

According to Gitman & Zutter (2012) [3] the company's liquidity is measured by its ability to meet its short-term liabilities when it matures. Liquidity refers to a company's ability to pay off the entire financial position of leeway or more ability to pay its bills. Since the common cause of the financial crisis and bankruptcy is the low or decreased liquidity, the ratio may be the first sign of cash cycles and the failure of the business. In this study, using current ratio as a proxy of likiuditas. The current ratio indicates the extent to which current assets cover current liabilities.

3. Solvency Ratio

This ratio is also called Ratio leverage that is measuring the ratio of funds provided by the owner with funds borrowed from the creditors of the company. This ratio is intended to measure to what extent the company's assets financed by the debt ratio indicates the level of security of the lenders (the Bank).

4. Ratio of Rentability

This ratio is also known as Profitability Ratio is the ratio used to measure the ability of a company in obtaining profit or profit, profitability of a company realize the comparison between profit with assets or capital that generate profit.

Research Hypothesis

This study examines the correlation and causal relationship between financial ratio variables contained in 31 companies. Namely working capital, firm size, corporate growth and liquidity to profitability. Here is the development of the hypothesis of the variables studied.

1. There is a correlation between the financial ratios in doing the testing
2. There is a significant relationship between the financial ratios in doing the testing

Research Method

This type of research is a causal research, namely research that examines the correlation and causal relationship between independent variables with dependent variables. The data used is secondary data. The method used is the method of documentation, that is by collecting, recording, and reviewing secondary data in the form of corporate financial statements that have been published and available on the Indonesia Stock Exchange in Indonesia Capital Market Directory (ICMD).

Population and Sampling Techniques

The population in this study are all companies listed in Indonesia Stock Exchange consumption sector according to the publication of Indonesian Capital Market Directory (ICMD). The sampling technique used in this research is the technique of judgment or purposive sampling, also called purposive sampling technique. Sampling by purposive sampling technique is done by selecting samples from a population based on available information and in accordance with ongoing research, representatives of the population can be justified. The company is taking a sample of 31 companies for the fiscal year ending 2015.



Analysis Data Method

1. Correlation Analysis

Correlation is a term that refers to the strength of a relationship between two variables. A strong, or high, correlation means that two variables have a strong relationship with each other, while a weak or low correlation means that the variables are hardly related. Correlation analysis is the process of studying the strength of statistical data.

2. Multiple Regression Analysis

Multiple regression analysis is a regression analysis technique used to test the effect of some independent variables on one dependent variable [4]. This regression analysis has the following equation:

$$Y = a + b_1X_1 + b_2X_2 + b_3X_3 + b_4X_4 + b_5X_5 + \epsilon$$

Where:

Y = Profitability (ROA) a = Constant

B = regression coefficient X1 = Sales growth

X2 = Debt ratio

X3 = Fixed asset ratio

X4 = Inventory turnover

X5 = Receivable turnover

È = Error

Result and Discussion

This research was conducted at manufacturing company of industrial sector of consumer goods which have been go public for 1 year in period 2015. The data used in this research is 31 companies. The data used are financial statements obtained from the website www.idx.co.id

Table 1: Result correlation for financial ratio

	DR	FAR	IT	ROA	RT	SG
DR	1.000000	0.061104	-0.060093	0.124393	-0.028653	-0.045237
FAR	0.061104	1.000000	0.624926	-0.039267	-0.097909	0.155515
IT	-0.060093	0.624926	1.000000	0.014855	-0.122670	0.081330
ROA	0.124393	-0.039267	0.014855	1.000000	-0.141132	0.297803
RT	-0.028653	-0.097909	-0.122670	-0.141132	1.000000	-0.334362
SG	-0.045237	0.155515	0.081330	0.297803	-0.334362	1.000000

Source: Proceed by author

In Table 1 results, the Pearson correlation value between the financial ratios in detail is in the range of 0.01 to 0.33, indicating that there is no moderate positive relationship between the variables. The Pearson correlation between the DR financial ratios is about -0.04, and between FAR and SG about 0.03 to 0.33. The relationship between these variables is a very weak correlation, which indicates that, along with the increase in DR and FAR, the strength of the DR increases.

Table 2: Result regression for financial ratio

Dependent Variable: ROA

Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	12.17176	6.959892	1.748844	0.0926
DR	1.885203	2.342586	0.804753	0.4285
FAR	-9.147675	14.06920	-0.650191	0.5215
IT	0.026237	0.068158	0.384939	0.7035
RT	-0.012050	0.064400	-0.187109	0.8531
SG	25.90315	16.84507	1.537729	0.1367
R-squared	0.123999	Mean dependent var		14.37976



Adjusted R-squared	-0.051201	S.D. dependent var	11.68411
S.E. of regression	11.97949	Akaike info criterion	7.976255
Sum squared resid	3587.706	Schwarz criterion	8.253801
Log likelihood	-117.6320	Hannan-Quinn criter.	8.066728
F-statistic	0.707759	Durbin-Watson stat	1.683912
Prob(F-statistic)	0.623126		

Source : Proceed by author

In the following regression test, where p value for each test of null hypothesis that the coefficient is equal to zero (no effect). A low p value (<0.05) indicates that it can reject the null hypothesis. In other words, a predictor with a low p value is likely to be a significant addition to the proposed model, since the change in the predictor value is related to the change in the response variable. From the result of table 2 above the p value is very high, so it can accept the null hypothesis, the de-predictor has a low p value is likely to be a deduction, which means for the proposed model.

Conclusion

Based on the results of research from the previous discussion, it can be obtained conclusion as follows:

1. There is no strong correlation between the financial ratios in the company in doing research.
2. There is no significant relationship between financial ratios in the company in doing research.

Reference

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