Return On Asset, Return On Equity, And Debt To Equity Ratio on Agricultural Sector in Indonesia Stock Exchange

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Abstract:
Agriculture companies experienced a significant development along with the increasing number of population in Indonesia as well as increasing the needs and ability of people's purchasing power. To compensate for the increase in demand, the companies need additional capital to expand their company's operational activities with the challenge of increasingly narrow agriculture land in Indonesia as development in various regions increases. One of the ways to get additional capital is by selling company shares to investors. Some companies have even sold their shares to the public through the Indonesia Stock Exchange to attract investors that increase their capital. However, an investor has to analyze the performance of the company before deciding to invest. The analysis can be done by observing Return on Asset (ROA), Return on Equity (ROE), Debt to Equity Ratio (DER), and Market Capitalization of the company. The sample of this research used all of the population in the agriculture sector listed on the Indonesia Stock Exchange which is 19 companies. As the result shows there is a significant effect between Return on Asset (ROA), Return on Equity (ROE), Debt to Equity Ratio (DER) simultaneously on Market Capitalization. Thus it can be concluded that the way to increase Market Capitalization is company needs to maintain its financial performance especially those related to Return on Asset (ROA), Return on Equity (ROE), Debt to Equity Ratio (DER), where Market Capitalization reflects the level of investor confidence to the company.

I.   INTRODUCTION

Today's industrial world is experiencing significant developments, especially supported by increasingly rapid technological advances in various fields. Entering the era of digitalization provides a great opportunity for companies to create and market more products and services more easily. By capitalizing on technological innovation and digitizing companies should be able to improve their performance in the free market. One of the industries that is experiencing significant impacts with the advancement of this technology is the industry engaged in agriculture which consists of several industrial sub-sectors including the plantation sub-sector, the fishery subsector, the livestock subsector, the food crops subsector, and the forestry sector.

Along with increasing the necessities of life, especially in terms of food, making the agricultural sector develop rapidly. This is what makes these companies become giant companies both globally and nationally so that many investors are interested in investing their funds in these companies. However, not all companies that have been listed on the Indonesia Stock Exchange can easily attract investors to buy their shares. Companies need to maintain financial stability and increase corporate profits so that investors remain interested in

investing their shares in the company. One indicator that investors can use as a basis for investment decision making in a company is market capitalization as a basic determinant of various characteristics including risk and level of investor interest in the company's shares. The decision to buy shares of a company that is reflected by market capitalization itself tends to be influenced by other financial ratios such as Return On Assets (ROA), Return On Equity (ROE), and Debt Equity Ratio (DER).

A company's financial statements consist of a balance sheet, income statement, cash flow statement, and capital change report. The income statement is often associated with company performance because this report measures the amount of profit generated by the company in a certain period of time with the basic format of profits generated from sales less expenses (Keown, 2011: 34)(Fitriana, 2019). The income statement answers the question of how profitable the company is through 5 major activities that can be seen in this report, namely income (sales), cost of goods sold, operating expenses related to marketing/distribution/administration, financial burden in doing business, and tax burden. However, after seeing the results of the income statement we need to determine whether these results are good through the analysis of financial ratios to create value for shareholders. Because looking at the income statement alone is not enough to conclude whether the company is healthy enough or not.

Ratio analysis and trend analysis are always used to find out the financial health and progress of the company each time a financial statement is published. Ratio analysis is comparing (1) balance sheet elements, (2) income statement elements, (3) balance sheet and income statement elements, and (4) one issuer's financial ratios with other issuer's financial ratios (Samsul, 2015: 173). If you want to know the strength of management, then the liquidity ratio, activity ratio, and solvency ratio must be analyzed. And if you want to assess the company's performance, the profitability ratio must be

considered. The following are the ratios that can be considered by investors to determine the level of investment feasibility in the company, including:

a. Return on Asset (ROA)

This ratio calculates returns on assets by determining the amount of net income generated from company assets by linking net income to total assets (Keown, 2011: 37). Return on Assets (ROA) is a comparison between operating profit / operating profit against total assets (Samsul, 2015: 174). Return is defined as operating profit instead of net profit. This is because operating income is obtained from the normal activities of the company. If you use net profit, it is feared that there will be an influence from the post "nonoperating income (expenses)" that does not originate from the core business. The greater ROA means the more efficient use of company assets or in other words the same amount of assets the company is able to generate greater profits, and vice versa.

ROA = Net Profit: Total Assets

b. Return on Equity (ROE)

ROE shows the company's ability to generate profits after tax using its own capital (Sudana, 2015: 25). This ratio is important for shareholders to know the effectiveness and efficiency of their own capital management by the company. The higher this ratio means the more efficient use of own capital by the company management.

ROE = Net Profit: Total Equity

c. Debt to Equity Ratio (DER)

This ratio is used to assess a company's debt with its equity/capital that is by comparing all debt including current debt with all equity/capital owned by the company (Kasmir, 2013: 112)(Sriyono, 2019). This ratio is useful to know the amount of funds provided by the creditor for the owner of the company. In other words, DER is used to

find out any own capital used as collateral for corporate debt.

DER = Total Debt: Total Equity

d.   Market Capitalization

According to Hartono (2013: 135) understanding Market Capitalization or market capitalization is the market price which is the easiest price to find because the market price is the price of a stock in the ongoing market. In general, companies that have shares with large market capitalization will be the target of investors to invest long-term given the potential for good company growth with a low-risk value that will provide a large return for investors. Meanwhile, according to Fakhruddin (2008: 115) market capitalization is defined as the value of public companies that have listed their shares on the stock exchange. So based on these two definitions we can conclude that market capitalization is the market value contained in a company that is used to see the size of a company on the stock market.

Market Capitalization = Total Outstanding Shares x Share Price

Previous Research

1.   Kabajeh, et al (2012), showed a weak positive relationship between ROA with stock prices and ROE with stock prices and no effect of ROE was found on stock prices.
2.   Gerald Edsel Yermia Egam, et al (2017), showed ROA and ROE has no influence on stock prices.
3.   Sitti Suhariana Buchari (2015), showed that ROA, ROE, and EPS simultaneously have a significant effect on stock prices.

II.   RESEARCH HYPOTHESIS

This Research hypothesized that:

H_1:   Return on Assets (X1) has effect partially on Market Capitalization (Y) on the companies in the agricultural sector which are listed on the Indonesia Stock Exchange for the period 2013 - 2018

H2:   Return on Equity (X2) has effect partially on Market Capitalization (Y) on the companies in the agricultural sector which are listed on the Indonesia Stock Exchange for the period 2013 - 2018

H3:   Debt Equity Ratio (X3) has effect partially Market Capitalization (Y) on the companies in the agricultural sector which are listed on the Indonesia Stock Exchange for the period 2013 - 2018

H4:   Return on Assets (X1), Return on Equity (X2), Debt Equity Ratio (X3) has effect simultaneously on Market Capitalization (Y) on the companies in the agricultural sector which are listed on the Indonesia Stock Exchange for the period 2013 – 2018

III.   METHOD

This study uses a quantitative approach. This study takes object in the IDX companies of various textile and garment sub-sector industries as well as all data about the company's financial statements in 2011 - 20015. The population of this study is 17 companies, but there are 10 companies whose financial reports are incomplete. Then the remaining 7 companies are PT EratexDjajaTbk (ERTX), PT Ever Shine Tex Tbk (ESTI), PT Indo-Rama Synthetics Tbk (INDR), PT Pan Brothers Tbk (PBRX), PT Ricky Putra GlobalindoTbk (RICY), PT Sunson Textile Manufacturer Tbk (SSTM), PT Nusantara Inti Corpora Tbk (UNIT). The sample selection is done based on the purposive sampling method with the aim of getting samples that are in accordance with the research objectives

IV.   RESULT

Type of Research

This research is an associative quantitative study that investigating an effect of Return on Assets, Return on Equity, and Debt Equity Ratio on Market Capitalization in 19 companies under the agricultural sector which are listed on the Indonesia Stock Exchange.

Place and Time of Research

The study was conducted at the Indonesia Stock Exchange Investment Gallery UMSIDA by downloading the financial statements of 19 agricultural companies listed on the Indonesia Stock Exchange from 2013 to 2018.

Population and Sample

Because the number of companies listed on the Stock Exchange engaged in agriculture is only 19, the authors make the entire population a research sample.

The type of data used is quantitative data and the source data is secondary data in the form of company financial statement data from 2013 - 2018 obtained from the Indonesia Stock Exchange (www.idx.co.id). The following is a list of listed companies used as samples for this study:

Table 1 List of Agriculture Sector Companies

No	Kode	Emiten
1	AALI	Astra Agro Lestari Tbk
2	ANJT	Austindo Nusantara Jaya Tbk
3	BISI	BISI International Tbk
4	BWPT	Eagle High Plantation Tbk
5	DSFI	Dharma Samudra Fishing Indust
6	DSNG	Dharma Satya Nusantara Tbk
7	GOLL	Golden Plantation Tbk
8	GZCO	Gozco Plantations Tbk
9	JAWA	Jaya Agra WattieTbk
10	LSIP	London Sumatra Indonesia Tbk
11	MAGP	Multi Agro Gemilang Plantation
12	MGRO	Mahkota Group Tbk
13	PALM	Provident Agro Tbk
14	SGRO	Sampoerna Agro Tbk
15	SIMP	SalimIvomasPratamaTbk
16	SMAR	Smart Tbk
17	SSMS	SawitSumbermasSaranaTbk
18	TBLA	Tunas Baru Lampung Tbk
19	UNSP	Bakri Sumatra Plantations Tbk

(Source: www.idx.co.id)

This research method uses multiple linear regression models with Generalized Least Square method between independent variables, namely Return On Assets, Return on Equity, and Debt Equity Ratio with the dependent variable Market Capitalization which is processed using EViews 9 software with the following formula:

$$Y = a + b_1X_1 + b_2X_2 + b_3X_3 + e$$

Y = Market Capitalization (Independent Variable)
a = Constanta
b = Regression Coefficient
X_1 = Return on Asset Variable
X_2 = Return on Equity Variable
X_3 = Debt Equity Ratio Variable

Classical Assumption Test

Hypothesis testing from this study uses multiple linear regression test. However, to get the best regression model, it requires the best linear unbalance (BLUE / Best Unlimited Estimator) from predictors where BLUE must meet the requirements including normality test, multicollinearity symptom test, autocorrelation symptom test, and heteroscedasticity symptom test.

a. Normality Test

Based on the results of the normality test of the residual value of the regression model produces a probability value of 0.110896> α 0.05, so it can be concluded that the data meets the normality assumptions as shown in the figure 1.
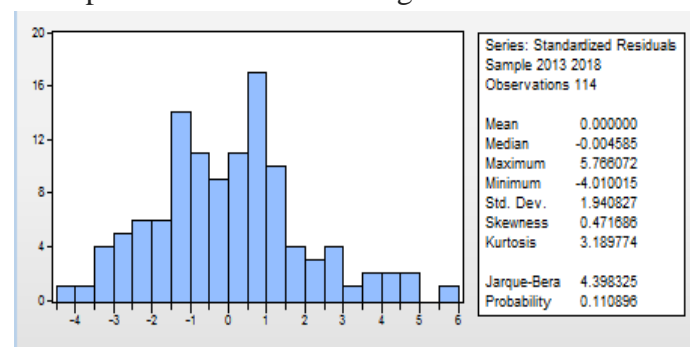

Figure 1 Normality Test
(Source: Data Processed, 2019)

b. Multicollinearity Test

Based on the results of the multicollinearity assumption test for all independent variables in this study results of the correlation between variables are less than 0.8, it can be concluded that there is no multicollinearity as shown in the table below:

Tabel 2Multicollinearity Test

	X1	X2	X3
X1	1.000000	0.401906	0.085700
X2	0.401906	1.000000	0.306723
X3	0.085700	0.306723	1.000000

(Source: Data Processed, 2019)

c. Autocorrelation test

In order to know the presence or absence of autocorrelation symptoms in the regression model, the authors conducted the Durbin-Watson (DW)-Test, by comparing the DW-Statistic value with the DW-Table. DW boundary table with the number of samples observed (n) of 114 and independent variables (k) of 3 will produce an upper boundary value (dU) = 1.7488 and a lower boundary value (dL) = 1.6410. While the DW-Test test results produce a DW-Statistic value of 1.925428. Because the DW Test value is greater than the dU value, it can be concluded that there was no positive autocorrelation in this regression model.

d. Heteroscedasticity Test

Heteroscedasticity assumption test is performed to test whether in the regression model there is an inequality of variance from residuals on one observation to another. The results of the heteroscedasticity test showed that the probability value of each independent variable (X1, X2, X3)> α 0.05, it can be concluded that there were no symptoms of heteroscedasticity as shown in the following table:

Table 3 Heteroscedasticity Test

Dependent Variable: RESABS
Method: Panel Least Squares
Date: 09/26/19   Time: 20:26
Sample: 2013 2018
Periods included: 6
Cross-sections included: 19
Total panel (balanced) observations: 114

Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	1.673403	0.169262	9.886443	0.0000
X1	-0.015974	0.013665	-1.168972	0.2449
X2	-0.002349	0.013087	-0.179483	0.8579
X3	-0.008559	0.023962	-0.357209	0.7216

R-squared	0.019229	Mean dependent var	1.531903
Adjusted R-squared	-0.007520	S.D. dependent var	1.182927
S.E. of regression	1.187366	Akaike info criterion	3.215809
Sum squared resid	155.0822	Schwarz criterion	3.311816
Log likelihood	-179.3011	Hannan-Quinn criter.	3.254773
F-statistic	0.718868	Durbin-Watson stat	1.099854
Prob(F-statistic)	0.542784		

(Source: Data Processed, 2019)

Multiple Linear Regression Analysis

This research used 3 independent variables which are Return on Asset (ROA) as X_1, Return on Equity (ROE) as X_2, and Debt to Equity Ratio (DER) as X_3. Through the regression test the regression equation is obtained, namely:

$$Y = 5.401998 + 0.076935X_1 + 0.039221X_2 - 0.059291X_3$$

Table 4 Multiple Linear Regression Analysis Test

Dependent Variable: Y
Method: Panel Least Squares
Date: 09/26/19   Time: 19:22
Sample: 2013 2018
Periods included: 6
Cross-sections included: 19
Total panel (balanced) observations: 114

Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	5.401998	0.435159	12.41386	0.0000
X1	0.076935	0.033956	2.265717	0.0258
X2	0.039221	0.034802	1.126964	0.2627
X3	-0.059291	0.063301	-0.936657	0.3514

Effects Specification

Cross-section fixed (dummy variables)

R-squared	0.908661	Mean dependent var	6.156684
Adjusted R-squared	0.887811	S.D. dependent var	7.651212
S.E. of regression	2.562741	Akaike info criterion	4.891587
Sum squared resid	604.2230	Schwarz criterion	5.419625
Log likelihood	-256.8204	Hannan-Quinn criter.	5.105888
F-statistic	43.58248	Durbin-Watson stat	1.925428
Prob(F-statistic)	0.000000		

(Source: Data Processed, 2019)

Hypothesis testing results are as follows:

1. Partial test results on Return on Assets (ROA) as variable X_1 produce a calculated value of 2.265717> t-table of 2.131, and a probability level of 0.02258 <0.05 (α), then H_0 is rejected and H_1 is accepted.

2. Partial test results on Return on Equity (ROE) as variable X_2 produce a t-test value of 1.126964 <t-table of 2.131, and a probability level of 0.2627> 0.05 (α), then H_0 is accepted and H_2 is rejected.

3. Partial test results on Debt to Equity Ratio (DER) as X_3 variables produce t-count value of -0.936657 <t-table of 2.131, and a probability level of 0.3514> 0.05 (α), then H_0 is accepted and H_3 is rejected.

4. Simultaneous test results between Return on Assets (ROA) as variable X_1, Return on Equity (ROe) as variable X_2, and Debt to Equity Ratio (DER) as variable X_3 against Market Capitalization as variable Y yields an F-count of 43.58248 > F-table of 3.24, and the probability level (F-count) <0.05 (α), then H_0 is rejected and H_4 is accepted.

V. CONCLUSION

Return on Assets (ROA) has a significant influence on Market Capitalization, meaning that in order to increase Market Capitalization a company needs to become Return on Assets (ROA) as one indicator of the level of investor confidence in the company where this ROA measures how efficiently the asset management is carried out company to generate net profit. Return on Equity (ROE) does not have a significant effect on Market Capitalization. Even so, companies still need to maintain the stability of the value of ROE because it is an important measure for potential investors to be able to know how efficiently a company will use the money they will invest to generate net profit. Debt to Equity Ratio DER) does not have a significant effect on Market Capitalization. Nevertheless, the company still needs to maintain the stability of the DER value because it is an important ratio to measure the financial health of a company, especially its ability to manage company assets financed by debt or capital. So that if this ratio increases every year, it will begin to worry that the company will not be able to pay off its obligations. Return on Assets (ROA), Return on Equity (ROE), and Debt to Equity Ratio

DER) simultaneously have a significant influence on Market Capitalization, which means to be able to increase the Market Capitalization value of the company also needs to pay attention to factors that can influence it such as Return on Assets (ROA), Return on Equity (ROE), and Debt to Equity Ratio DER). The high value of Market Capitalization shows that the company is a large scale company and is highly trusted by the public.

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