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The Effect of Earnings Management and Profitability on Stock Prices Future: Information Asymmetry as Moderating

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Authors' contributions

This work was carried out in collaboration between both authors. Both authors read and approved the final manuscript.

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ABSTRACT

Purpose: One of the most popular types of securities in the capital market is stock securities. Stocks that are considered good are stocks that are able to provide realized returns that are not too far from the expected returns, which are reflected in future stock prices. Through information asymmetry, it is expected to see the magnitude of the influence of earnings management on stock prices in the future. The purpose of this study is to examine the effect of earnings management on stock prices in the future with asymmetry as a moderating variable.
Methods: The method used in this study is a quantitative analysis method with cross-sectional data, using secondary data in the form of financial statements of consumption sector manufacturing companies listed on the Indonesia Stock Exchange (IDX) from 2015 to 2019, with analytical tools using SPSS.22
Findings: The higher the information asymmetry, the greater the bid-ask spread, in this case, the disclosure of earnings (ROA) in the financial statements is expected to reduce information asymmetry so that the bid-ask spread also decreases which leads to an increase in stock prices the future.

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Novelty: The higher the information asymmetry, the greater the bid-ask spread, in this case, the disclosure of earnings (ROA) in the financial statements is expected to reduce information asymmetry so that the bid-ask spread also decreases which leads to an increase in stock prices the future.

Keywords: Information asymmetry; earnings management; ROA; stock prices future.

1. INTRODUCTION

"Investors have various considerations to decide on a stock investment in the capital market. Stock price fluctuations that are erratic and contain risks cause investor uncertainty in determining their investment decisions, such as the company's financial condition contained in the annual report", [1]. So to assist investors in making investment decisions, companies need to carry out financial reporting. Wang & Wang [2] analyze the effect of asymmetric information trading, namely how stock prices move after investors obtain information about events that occur. The result is that the price-sensitive trader or information seeker gains an advantage in analyzing the stock market in the presence of information asymmetry so that the data reduces losses.

"Because profit is the main goal of investors, managers can carry out earnings management. Earnings management occurs when managers use judgment in financial reporting and in compiling transactions to alter financial statements to mislead some stakeholders about the firm's underlying economic performance. If the earnings information is used by managers to convey the superior and useful information they know about the company's performance to shareholders and debt holders, then earnings management may not be harmful to shareholders and the public", [3,4]. However, the financial scandals at WorldCom and Enron turned earnings management's view into an opportunistic one. Concerning this view, managers manage earnings for their own personal gain rather than for the benefit of shareholders.

"A relationship can be found between accounting items with managers having the ability to manipulate them such as discretionary accruals and stock returns. Managers of developing companies have more incentives and motivation for signaling confidential information about the company's future performance through discretionary accruals. As a result, investors will recognize incentives and motivations and will be rewarded for this information which is reflected in stock prices", [5]. Pradita & Haryanto [6] examined "the relationship of information asymmetry between budget participation and budgetary slack". The result is that asymmetric information is considered capable of mediating the relationship between budget participation and budgetary slack. Information asymmetry occurs when subordinates have more relevant information in the decision-making process related to budgeting, which the superior does not have. Likewise with the results of research [7] where "there is a significant positive relationship between information asymmetry and earnings management, the higher the information asymmetry, the higher the earnings management so that the existence of earnings management will affect the company's stock price". An imbalance of information from both owners and managers of the company can lead to information asymmetry, which following agency theory, the existence of information asymmetry can provide benefits for managers in maximizing their personal benefits. Utami, [8] revealed that the higher the information asymmetry, the greater the bid-ask spread, in this case, the disclosure of financial statements is expected to reduce information asymmetry so that the bid-ask spread also decreases. "When information asymmetry arises, disclosure decisions made by managers can affect stock prices because information asymmetry between more informed investors and less informed investors raises transaction costs and reduces the expected liquidity in the market for company shares" (Komalasari, 2000), [9].

"The measurement of earnings management can be done by measuring the accruals, namely the difference between earnings and cash flows originating from operating activities. There are two parts, namely (1) the part that should exist in the process of preparing financial statements and (2) the accrual part which is the manipulation of accounting data called abnormal accruals [8]. Sayari et al [10] research on companies in Tunisia adopting earnings management behavior as measured by discretionary accruals, the results conclude that earnings management is a practice adopted by Tunisian companies to influence investors' perceptions of the company's future returns and provide them with unpredictable market returns higher than their expectations". Investors who are unable to capture the effect of changes in accounting methods on firm results can easily be trapped by managers who adopt earnings management policies.

2. METHODS

The population of this study is the consumption sub-sector manufacturing companies on the Indonesia Stock Exchange, with the observation year 2015-2019. The sampling technique used in this research is the purposive sampling method, namely the sample is selected based on the suitability of the characteristics with the specified sample criteria (consideration) in order to obtain a representative sample.

2.1 Dependent Variable

The dependent variable used in this study is the stock price for the following year, namely the stock price t+1. The stock price used is the closing price of manufacturing companies in the consumption sector which is taken one week after the publication date of the financial statements (for that period) in the following year (t+1), where the publication date of the financial statements is obtained from the IDX.

Future Stock price = Stock Price t+1

2.2 Independent Variable

The independent variables used in this study are earnings management and profitability.

a. Earnings Management, proxied based on the ratio of accrual of working capital to sales (Utami, 2005). In this study, the proxy for earnings management used is the actual specific model, namely the accrual of working capital. The use of working capital accruals is more appropriate as has been studied by [8]. Because discretionary accruals are considered more complicated, a proxy for the ratio of working capital accruals to sales is used. The reason is that earnings management mostly occurs in sales accounts. Working capital accruals data can be obtained directly from the cash flow statement of operating activities so that investors can directly obtain the data without performing complex calculations.

Earnings management (EM) = Working capital accruals (t) / Sales period (t)

$$Working\ capital\ accruals = \Delta CA - \Delta CL - \Delta Cash$$

Information:

$\Delta CA =$ $Changes\ in\ current\ assets\ in\ the\ period\ t$
$\Delta CL =$ $changes\ in\ current\ liabilities\ in\ the\ period\ t$
$\Delta Cash =$ $change\ in\ cash\ and\ cash\ equivalents\ in\ period\ t$

b. Return on Assets is a form of profitability ratio to measure the company's ability to generate profits by using the existing total assets. Return on Assets can be calculated using the following formula [11]:

ROA = Net Profit After Tax / Total Assets

2.3 Moderating Variable

Moderating variables are variables that have an influence on the nature or direction of the relationship between variables. The nature or direction of the relationship between the independent variables and the dependent variables may be positive or negative depending on the moderating variable, therefore the moderating variable is also called a contingency variable [12].

The moderating variable in this study is to use information asymmetry variables. Information asymmetry in this study was measured using the relative bid ask spread. Rahmawati & Handayani, [13] calculates the relative bid-ask spread as follows:

$SPREAD_{it} = (ask_{it} – bid_{it}) / ((ask_{it} + bid_{it})/2) \times 100$

Information:

$SPREAD_{it}$ = *Relative bid-ask spread* Company i on day t
ASK_{it} = The highest ask (bargaining) price of company i's shares on day t
BID_{it} = The lowest bid (ask) price for company i shares on day t

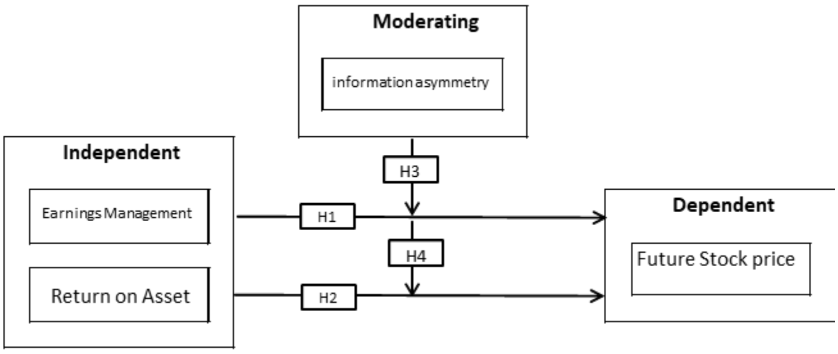

Fig. 1. Thinking framework

To test the framework above, using SPSS.22 analysis tool to test the feasibility of the model, F test and t test. There are several ways to test regression with moderating variables and one of them is Moderated Regression Analysis (MRA). Moderated Regression Analysis (MRA) or interaction test is a special application of linear multiple regression where the regression equation contains interaction elements (multiplication of two or more independent variables), [12]. The multiple linear regression equation in this study is as follows:

$$FS_{t+1} = \alpha_1 + \beta_1 EM + \beta_4 AI + \beta_5 EM{*}AI + \varepsilon$$
$$FS_{t+1} = \alpha_2 + \beta_2 ROA + \beta_3 AI + \beta_5 ROA{*}AI + \varepsilon$$

Keterangan:

FS_{t+1} = next year's stock price (future stock price)
a = constanta
β1, β2, β3, β4, β5 = coefisien Regresion
EM = Earning Management
ROA = Return on asset
AI = Asimetri Informasi
EM*AI = Moderating_1
ROA*AI = Moderating_2
ε = Error

3. RESULTS AND DISCUSSION

3.1 Results

Based on the results of the descriptive test in Table 1, it can be described as follows:

1. Earnings management is an effort by company managers to intervene or influence the information in the financial statements. The earnings management proxy used in this study is the actual specific model, namely the accrual of working capital. The minimum score is -2.79, namely Pt Kino Indonesia Tbk and has a maximum value of 1.04, namely Pt Ultrajaya Tbk. On average, manufacturing companies in the consumption sector have a value of -0.009, this means that the management has -0.9% in influencing the company's operations. The smaller the accrual value, the smaller the management action in influencing the company's operations.
2. The performance of the company represented through ROA has a minimum value of 1.3%, namely Pt. Chitose International Tbk and has a maximum value of 92.1%, namely Pt Merk Tbk. On average, manufacturing companies in the consumption sector have an ROA of 12.7%, this means that the company can generate a net profit of 12.7% on its assets, due to high sales growth resulting in higher profits than total assets.
3. Information asymmetry in consumption industry companies obtained a minimum value of 0.89 by Pt Chitose Internasional Tbk in 2016 and a maximum value of 18.59 belonging to Pt Merk Tbk in 2018. On average, the value of information asymmetry in companies in this sector is 4.80, where the higher the information asymmetry, the greater the bid-ask spread, in this case the disclosure of financial statements is expected to reduce information asymmetry so that the bid-ask spread also decreases.
4. The future share price in the study is the closing share price in the following year (t+1) one week after publication on the Indonesian stock exchange. obtained a minimum value of 186, namely Pt Pyiridam Farma Tbk in 2016 and a maximum value of 83325, namely Pt Gudang Garam Tbk in 2017. On average, the front share price of the company was 6520. In 2020 the share

price decreased in almost all companies, although The 2019 financial report was good, but in 2020 the Covid-19 pandemic began so that the purchasing power of investors in the capital market decreased.

Based on Table 2, the results of the model suitability test show that the F test value is below 0.05 (0.019), so it can be said that this model is fit, so simultaneously all independent variables have an influence on the dependent variable.

If you look at the R-square value of 0.132, it can be said that the independent variable can give an effect of 13.2% on the dependent variable and the remaining 86.8% is influenced by other variables outside this study.

If you look at the t-test by paying attention to the significant coefficient values in Table 2, it can be said that earnings management and information asymmetry do not affect stock prices the following year, while ROA affects stock prices the following year. The moderating variable between information asymmetry and earnings management has no effect on stock prices the following year. In this case, it can be said that the moderation between information asymmetry variables and earnings management is included in the type of moderating potential (Homologiser Moderator), that is, the variable has the potential to be a moderating variable. While the moderating variable of information asymmetry with ROA affects stock prices the following year, the moderation between the information asymmetry variable and ROA is included in the pure moderator type, namely the variable that moderates the relationship between the independent variable and the dependent variable. where pure moderator variables interact. with the independent variable without being the independent variable, in this case, the information asymmetry variable does not affect the stock price of the following year.

3.2 Discussion

3.2.1 The effect of earnings management on stock prices in the following year

In the results of Table 2, it can be said that earnings management does not affect stock prices the following year. It can be said that investors still see the historical element of financial ratios in the company as a consideration in making decisions to buy shares in the capital market. These results support that the complexity in the calculation of earnings management makes investors in Indonesia still do not see the element of earnings management as an indicator

Table 1. Descriptive test results

	N	Minimum	Maximum	Mean
Earning Management	100	-2.7953	1.0412	-.012198
Return on Asset	100	1.3800	92.1000	12.971320
Asimetri Informasi	100	.8982	18.5950	4.806820
Stock Price t+1	100	186	83325	6520.29
Valid N (listwise)	100			

Source: data processing spss.22

Table 2. The results of the model suitability test

Coefficients[a]					
Model	Unstandardized Coefficients		Standardized Coefficients	t	Sig.
	B	Std. Error	Beta		
(Constant)	6.642	.381		17.418	.000
Earning Management	.246	1.461	.057	.168	.867
ROA	.074	.020	.648	3.638	.000
Asimetri information	.079	.058	.174	1.364	.176
moderating 1 (EM*Ai)	-.022	.116	-.066	-.189	.850
moderating 2 (ROA*Ai)	-.004	.002	-.520	-2.504	.014
a. Dependent Variable: Stock Price t+1					
Uji F = 0.019					
R Square = 0.132					

Source: data processing spss.22

and benchmark in determining their investment policies, because to calculate earnings management data it is necessary to come from financial statement records because they are not available directly in the financial statements. In the summary financial statements. Meanwhile, investors are still looking at historical financial reports.

This result is contrary to [14] where increasing accrual earnings management will increase Future Shares, this is because the possibility of consistency in dividend distribution which is a requirement in this study supports the theory that dividends are one of the factors that can reduce conflict. agency, thereby minimizing earnings management and preventing management from acting opportunistically by taking concrete action.

3.2.2 The effect of ROA on the stock price of the following year

In the results of Table 2, it can be said that ROA has a positive effect on stock prices the following year. The positive direction indicates that when the company's profit shown in the financial statements is high, the company's stock price will tend to rise because it is influenced by the stock market value and investors' perceptions of the company so that it will affect the demand and supply of shares in the secondary market. These results support the signal theory [15], this information is important for investors and business people because information essentially presents information, notes, or descriptions, both for past, present, and future conditions for survival. company and how it affects the company.

“This research is in line with [16,17] in his research on companies listed in generating ROA that have a high correlation with stock prices at the level of all industries, and it can be used as the main factor that is effective for investors in influencing prices. Stock”.

3.2.3 Information asymmetry strengthens the significant influence of earnings management on stock prices in the following year

In the results of Table 2, it can be said that the moderating relationship obtained between the information asymmetry variable and earnings management is a moderating potential, that is, the variable has the potential to be a moderating variable. These results can be said that although information asymmetry does not affect future stock prices, it provides the potential for investors if earnings management actions through accruals continue to be carried out.

This result is not in line with [18] which says that “when there is information asymmetry, managers can give a signal about the condition of the company to investors to maximize the value of the company's shares. The signal given can be done through the disclosure of accounting information”.

3.2.4 Information asymmetry strengthens the significant influence of ROA on stock prices in the following year

In the results of Table 2, it can be said that information asymmetry has a strong influence between ROA and stock prices the following year. The moderating relationship obtained is pure moderation or pure moderator, namely the variable that moderates the relationship between the independent variable and the dependent variable where the pure moderating variable interacts with the independent variable without being an independent variable, in this case, because the information asymmetry variable has no effect on future stock prices. The negative direction obtained in Table 1 shows that the higher the information asymmetry, the greater the bid-ask spread, in this case, the disclosure of earnings (ROA) in the financial statements is expected to reduce information asymmetry so that the bid-ask spread also decreases which leads to an increase. stock price the following year.

This result is in line with [19] which “results in ROA having a positive influence on future stock prices, in the signal theory framework it is stated that the company's urge to provide information is because there is information asymmetry between company managers and outsiders because the company knows more about the company and its future prospects than outsiders”.

4. CONCLUSIONS

Investors in consumption sector companies still see historical elements of financial ratios in financial statements, namely looking at earnings (ROA) which are listed as prospects in the future, compared to earnings management calculations through accrual earnings elements which are more complicated and not available in financial statements.

The moderating relationship between information asymmetry and earnings management is potential for moderation, i.e., although information asymmetry does not affect stock prices in the following year, it has potential for investors if earnings management actions through accruals continue. While the moderating relationship between information asymmetry and ROA is pure moderation or pure moderator, namely the pure moderating variable interacts with the independent variable without being an independent variable, in this case, because the information asymmetry variable does not have an effect on stock prices the following year.

COMPETING INTERESTS

Authors have declared that no competing interests exist.

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