

# The Effects of Leverage, Sales Growth, Firm Size, and Corporate Social Responsibility Disclosure on Earnings Response Coefficient

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## ABSTRACT

Financial information owned by a company is considered as a good signal for investors to make investment decisions, so they tend to see the earnings information as a benchmark, but other information is needed to predict the value of the company's stock returns, which is the earnings response coefficient. Therefore, a test is needed to find out how the influence of independent variables, namely leverage, sales growth, firm size, and corporate social responsibility disclosure, on the dependent variable, earnings response coefficient. This research was conducted to take the population of manufacturing companies listed on the Indonesia Stock Exchange in 2016-2018. This research data was processed using Eviews. This study used 58 samples of manufacturing companies based on purposive sampling method. The results showed that leverage had a negative and significant effect on ERC, sales growth had a positive and significant effect on ERC, while firm size and corporate social responsibility disclosure did not.

**Keywords:** *Leverage, Sales Growth, Firm Size, Corporate Social Responsibility, Earnings Response Coefficient.*

## 1. INTRODUCTION

A good or bad indicator of financial statement information that has been announced by company management is the Earnings Response Coefficient (ERC). This is useful in fundamental analysis for investors, in the valuation model to determine capital market reactions to earnings information announced by company management. ERC is the coefficient obtained from the regression between the proxies of stock prices and accounting earnings. One of the factors that influence it, is the leverage. A company with high leverage has more debt than capital. This will get a negative response from investors, because they assume that when the company makes profit, the company will firstly use the profit to pay debts to creditors rather than use it to pay dividends. In addition to the leverage factor, sales growth shows the company's ability to earn revenue with the opportunity to expand its size. Companies tend to focus on sales growth and improving their performance. Large companies have easier access to enter the capital market [1]. They are considered more stable and able to generate higher profits compared to those of medium and small companies. The size of the company affects investor's confidence, because large companies are considered to have smaller risk, so that the future unexpected return will be greater. Investors nowadays are starting to consider the company's Corporate Social Responsibility (CSR) activities. This indicates that investors are implementing CSR information disclosed in the company's annual report [2]. The considerations of these investors will affect the market response to corporate profits, because investors do not only

use earnings information in making investment decisions, but also use the information contained in CSR reports [3].

## 2. LITERATURE REVIEW

ERC serves as a measure of the value of abnormal stock returns as a response to the unexpected earnings component announced by the company that issued the shares [4]. In other words, ERC is the reaction or market response to earnings information announced by the company to the public. [5] stated that the use of debt is an effort to increase profits. Many companies try to maximize profits in the beginning with the resources they owned, but there are more costs and capital that must be sacrificed. At that time, the company uses the debt to maintain the equity that is still owned. Higher leverage can inhibit the management's flexibility and initiative in pursuing profitable opportunities. This is considered by investors as a decrease in management performance in meeting investor interests. This implies that the growth in a company has positive effect on ERC [6]. The higher the level of sales growth, the more the company shows consistency in performing in the market. This also increases its value, because the expected coefficient is higher. The more the sources of information available to large companies are, the higher the ERC will be [7]. Earnings persistence does not have significant effect on ERC, while firm size and earnings growth do have significant effect on ERC [8]. By using reverse regression, beta and earnings persistence have negative and significant effects on ERC, while growth and firm size have positive and significant effects [9]. The bigger the company is, the

higher the level of sales will be, so that the profit generated will be greater than those of smaller companies. [10] CSR disclosure by companies has a positive effect on investor or market reaction (ERC). [11] mentioned that the disclosure of CSR has no such effect.

The degree of leverage will provide different market responses. Leverage shows that the company has a liability to the creditor. This is considered as a problem for investors, if large obligations can hamper the flexibility and management initiatives in pursuing profit opportunities. [12] stated that leverage and systematic risk have negative and significant effects on ERC.

H<sub>1</sub>: Leverage has a negative and significant effect on ERC.

High sales growth shows that the income earned by the company has increased. If the sales growth is high, the profit generated will also be high, so that the portion of profit to be distributed to investors will increase as well. [13] concluded that sales growth, growth opportunities, capital structure, and firm size have no significant effect on ERC, with or without being moderated by earnings management.

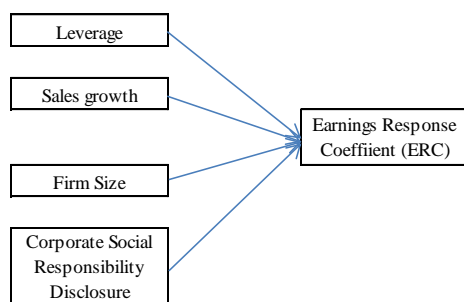
H<sub>2</sub>: Sales Growth has a positive and significant effect on ERC.

The bigger the company is, the higher the level of sales will be, so that the profit generated will be greater than those of smaller companies. [9] Beta and earnings persistence have negative and significant effects on ERC, while growth and firm size have positive and significant effects on ERC.

H<sub>3</sub>: Firm Size has a positive and significant effect on ERC. Investors do not only use earnings information in making investment decisions, but also use the information contained in CSR reports. This consideration can affect market response to company profits. [14] mentioned that CSR has a negative effect on ERC if the ability of income in the implication of CSR is lower under the law in the initial stages of developing the CSR.

H<sub>4</sub>: CSR Disclosure has a positive and significant effect on ERC.

The research model in this study can be described in **Figure 1** as follow:



**Fig 1.** Research Model

### 3. METHODOLOGY

The population of this research was manufacturing companies listed on Indonesia Stock Exchange (IDX) during the 2016-2018 period. The sample selection was carried out by using a purposive sampling technique, with the criteria: (1) The manufacturing companies were listed on IDX; (2) The manufacturing companies presented financial statements in the denomination of Rupiah (IDR); (3) The manufacturing companies presented their financial statements as of December 31<sup>st</sup> during the period; (4) The manufacturing companies had been registered as IPO before the period, and had not been delisted and relisted during the period; (5) The manufacturing companies presented all necessary financial data as the variables of this research; and (6) The companies did not experience losses during the period.

The dependent variable in this study is Earnings Response Coefficient (ERC). The independent variable consists of leverage, sales growth, firm size, and corporate social responsibility. ERC is the investor's response to earnings information obtained by a company. ERC can be calculated by regression between the proxy of accounting earnings and stock prices. The accounting profit proxy uses Unexpected Earnings (EU), while the stock price proxy uses Cumulative Abnormal Return (CAR). The measuring instrument used to measure ERC is Unexpected Earnings (EU), because in terms of calculation and application it is easier, thus a number of previous studies frequently used the Unexpected Earnings (UE). The operational definitions of the variables can be seen in **Table 1** as follow:

**Table 1.** The Operational Definition of Variables

Variables	Proxy	Scale
<b>Independent Variables</b>		
Leverage	$DER = \frac{\text{Total Liabilities}}{\text{Total Shareholder's Equity}}$	Ratio
Sales Growth	$ROA = \frac{\text{Current Period Net Sales} - \text{Prior Period Net Sales}}{\text{Prior Period Net Sales}}$	Ratio
Firm Size	Firm Size = Ln (Total Asset)	Ratio
Corporate Social Responsibility (CSR)	CSR Disclosure = Global Reporting Initiative (GRI3)	Nominal
<b>Dependent Variables</b>		
Earnings Response Coefficient (ERC)	$R_{it} = \frac{(P_{it} - P_{it-1})}{P_{it-1}}$ $R_{mt} = \frac{(IHSG_t - IHSG_{t-1})}{IHSG_{t-1}}$ $AR_{it} = R_{it} - R_{mt}$ $CAR_i = AR_{i,t}$ $UE_{it} = \frac{(EAT_{it} - EAT_{it-1})}{EAT_{it-1}}$ $CAR_{it} = \alpha_0 + \alpha_1 + UE_{i,t} + \epsilon_{i,t}$	Ratio

**4. RESULTS AND DISCUSSIONS**

This research object will be described in form of descriptive statistical analysis. This aims to provide general information related to the data sampled in this research, in the form of mean, median, maximum, minimum, standard deviation, skewers, and kurtosis. Descriptive statistical analysis was performed before testing the data in order to present data overview by using the Eviews 9.0 software. The R-Square Test generated an R-square value of 0.089962. This can be interpreted that the ability of the independent variables, namely leverage, sales growth, firm size, and CSR disclosure in predicting or influencing the dependent variable of ERC was only 8.99%. Meanwhile, the remaining was influenced by other factors outside the scope of this study, such as earnings persistence, systematic risk, voluntary disclosure, and others.

The regression coefficient of the leverage variable was -0.089767. This can be described that if the value of leverage increased by one unit, the value of ERC would decrease by 0.089767. The regression coefficient of the sales growth variable was 0.449018. This can be described that if the value of sales growth increased by one unit, the value of ERC would increase by 0.449018. The regression coefficient of the firm size variable was -0.007324. This can be described that if the value of firm size increased by one unit, the value of ERC would decrease by 0.007324. And the last, the regression coefficient of the CSR disclosure variable was 0.371946. This can be described that if the value of CSR disclosure increased by one unit, the value of ERC would increase by 0.371946.

The value of F-statistics was 0.0029886. This value was below the significance level used in this study, which was 0.05 or 5%. This can be interpreted that there were significant effects of leverage, sales growth, firm size, and CSR disclosure on ERC simultaneously.

The t-test results of each independent variable namely leverage, sales growth, firm size, and CSR disclosure on ERC, were as follows:

1. The result of the first hypothesis testing indicated that leverage had a negative and significant effect on ERC, with the significance value of 0.0227 (less than 0.05). Thus, the first hypothesis was accepted.
2. The result of the second hypothesis testing indicated that sales growth had a positive and significant effect on ERC, with the significance value of 0.0012 (less than 0.05). Thus, the second hypothesis was accepted.
3. The result of the third hypothesis testing indicated that firm size had no significant effect on ERC, with the significance value of 0.8131 (greater than 0.05). Thus, the third hypothesis was rejected.
4. The result of the fourth hypothesis testing indicated that CSR disclosure had no significant effect on ERC, with the significance value of 0.1342 (greater than 0.05). Thus, the fourth hypothesis was rejected.

The results of these hypotheses testing showed that the value of ERC of manufacturing companies listed on IDX was not affected by firm size and CSR disclosure, but leverage had a negative and significant effect as well as sales growth has a positive and significant effect. Leverage had a negative and significant effect on ERC, because investors assume that companies with higher debt than capital will be more profitable for creditors or debt holders. High degree of leverage also has a greater risk, because the companies will experience a crisis in which the assets are insufficient to pay the obligations to creditors and investors. Companies that have large long-term debt, give a signal that they have a long-term strategy such as reducing or holding expenses, one of which is reducing or holding dividend payments. This causes companies with high level of leverage become not attractive to investors, so that market reaction and stock prices will decline, meaning that the value of ERC will also decrease. Sales growth had a positive and significant effect on ERC, because it reflects the

company's performance from year to year. The higher the sales growth, the greater the revenue earned by the company will be, meaning that it has good cash flow and can pay more dividends. Investors consider that this is a positive signal, so that the demand for this share increases and causes the share prices to rise. Based on this explanation, it can be concluded that higher sales growth will increase the value of ERC.

Firm size had no significant effect on ERC. The greater the total assets are, the greater the operational costs that must be sacrificed by the company will be, so it does not focus on meeting the interests of investors. On the other hand, large companies get more trust from investors, because they can generate the profits faster than do small companies. The conclusion from the explanation above is that the size of a company, either large or small, does not affect the value of ERC. CSR had no significant effect on ERC. This showed that the companies could not convince their investors to increase the ownership of the companies' shares, because investors bought those shares to be traded, and they might not see the survival and continuity of CSR of those companies in the long-term.

## 5. LIMITATIONS OF THE STUDY

Several limitations in this study are: (1) The sample used were only the companies that were included in the manufacturing sector and that met the criteria that had been determined, so this study did not apply to companies from other sectors; (2) The observation period was only carried out for three years, namely 2016-2018; (3) There are many factors influencing ERC, but this study only four factors were provided; and (4) This study only used the Debt-to-Equity Ratio (DER) as a proxy variable of leverage and the Return-on-Assets (ROA) as a proxy variable of sales growth.

Suggestions for further research include: (1) The sample may consist of companies from various sectors; (2) The observation period can be extended to more than three years; (3) Independent variables that affect ERC can be added such as systematic risk, earnings persistence, and voluntary disclosure; and (4) The leverage variable can use a proxy other than Debt-to-Equity Ratio (DER), such as Debt-to-Asset Ratio (DAR).

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