www.bircu-journal.com/index.php/birci
Budapest International Research and Critics Institute-Journal (BIRCI-Journal)
Humanities and Social Sciences
ISSN 2615-3076 Online)
ISSN 2615-1715 (Print)
Budapest Institute

The Determinants of Earnings Response Coefficients: Case Study from Chemical Industry in Indonesia

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Abstract

This study aims to analyze the factors that influence the earnings response coefficient. This study uses secondary data that applies a multiple linear regression model with a sample period 2015-2018 of the basic chemical industry companies listed on the Indonesia Stock Exchange. The test results indicate that capital structure effect negatively to earnings response coefficient and profitability affect positively to earnings response coefficient. While growth opportunity, company size, audit quality and systematic risk partially do not affect the earnings response coefficient. This study provides an insight that growth opportunity, capital structure, company size, profitability, audit quality, systematic risk can affect the earnings response coefficient. This research is expected to assist investors in conducting fundamental analysis in the valuation model to determine the market reaction to the earnings information of a company, so that investors can find out the size of the share price response to the company's earnings information. The limitation in this study is the amount of samples that only take data on basic chemical industry companies listed on the Indonesian stock exchange.

Keywords
Earnings response coefficient; growth opportunity; capital structure; company size; profitability; audit quality; systematic risk

I. Introduction

When an investor decides to invest in a company, he needs information about the company's performance. Information of the company performance can be seen in the company's financial statements. One of the most frequently watched and awaited by investors is information of income statement and a report that provides information about profits achieved by a company during an accounting period. Earnings are considered to be useful to assess management's performance because earnings information can be used to estimate a representative income capacity in the long run and to assess risks in investments or loans. This is what investors consider in making investment decisions. Companies that report high profits in their financial statements will attract investors to invest because of the return/profit that will be paid to each shareholder. Basically, the rise and fall of profits will affect the ups and downs of stock returns in the same direction (Sandi, 2013).

The higher the company's leverage, the company tends to generate less cash, this is likely to affect the occurrence of earning management. Companies with high debt or leverage ratios tend to hold their profits and prioritize the fulfillment of debt obligations first. According to Brigham and Ehrhardt (2013), the greater the leverage of the company, it tends to pay lower dividends in order to reduce dependence on external funding. So that the greater the proportion of debt used for the capital structure of a company, the greater the number of liabilities that are likely to affect shareholder wealth because it affects the size of the dividends to be distributed. (Yanizzar, et al. 2020)

DOI: https://doi.org/10.33258/birci.v5i1.4089

A good earnings quality is measured by using earnings response coefficient (ERC). As said by (Dechow, Ge, & Schrand, 2010) in his research that high earnings quality will provide more information about the company's financial performance characteristics that are relevant to the specific decisions made by decision makers. Dechow also classifies earnings quality proxies into 3 (three) categories, namely: 1) properties of earnings which include earnings persistence, magnitude of accruals, residual models accrual, earnings smoothness, and timely loss recognition; 2) investor responsiveness to earnings which includes earnings response coefficient; and 3) external indicators of earnings misstatement which include Accounting and Auditing Enforcement Releases (AAERs), restatements, and internal control procedure deficiencies reported under the Sarbanes Oxley Act.

Earnings response coefficient is defined as the result of every dollar of unexpected income to stock returns that is usually measured by using the regression slope coefficient for abnormal stock returns and unexpected income (Arifin, 2017). ERC is very useful in fundamental analysis. ERC is an analysis to calculate the actual value of shares using company financial data as the basis of investor valuations in determining market reactions to earnings information in company stock returns (Sandi, 2013). In addition, (Scott, 2015) proved that ERC intensity was caused by several factors including growth opportunities, earnings persistence, beta, capital structure, and company size.

Studies on earnings response coefficient will always be interesting to study because the market always show different reactions to good or bad news from different companies. Therefore, identifying and describing different market reactions to earnings information is one of the important guidelines of financial accounting research that is useful for investors in making investment decisions. This is one of the reasons we conduct research on earnings response coefficient besides the differences/inconsistencies of the results of previous studies conducted on the factors that influence the earnings response coefficient.

Throughout 2019 the basic and chemical industry sectors on the Indonesia Stock Exchange (IDX) managed to record high growth. The basic industry and chemical sectors managed to record a growth of 17.08% year-to-date (ytd). This makes this sector the sector with the second highest growth after the financial sector which recorded growth of up to 29.18 ytd. In addition, the chemical industry is a sector that makes a significant contribution to economic growth. The Indonesian government is also incessantly spurring the development of the chemical industry and making it a pioneer in implementing Industry 4.0, so that it becomes more efficient, innovative and productive. Therefore, this development can encourage increased profits and give signals to investors to invest in chemical industry companies.

Assuming that a different context, time, and object of research will produce different conclusions, then this study uses profitability, systematic risk (beta), company size, growth opportunities, capital structure, and audit quality of basic chemical industry companies listed in Indonesia stock exchange.

II. Review of Literature

2.1. Signalling Theory

Signaling theory was firstly introduced by (Spence, 1973) in his research entitled Job Market Signaling. In other research, Space stated that by giving a signal or signal management may provide relevant information that could be utilized by investors. Then the investor will adjust his decision according to his understanding of the signal. Signaling Theory was later developed by (Ross, 1977). In his research, Ross explained that signaling theory is related to asymmetric information between management and investors, signals

from companies are very important to obtain financial resources. Ross assumes that managers know the true distribution of corporate returns, but not investors. In other words, company managers have.
Better information and tend to provide that information to potential investors. It can be concluded that signaling theory emphasizes the importance of information released by the company on investment decisions to be made by investors. Information received by investors will be understood as a bad signal or a good signal. If the company reports declining earnings information, the information is considered a bad signal, and vice versa if the company reports information about increased earnings, then it is considered as a good signal.

2.2. Earnings Response Coefficient

Earnings response coefficient indicates the magnitude of abnormal stock returns in response to unexpected earnings reported by the company that issued the shares (Scott, 2015). In other words, the earnings response coefficient is the effect of unexpected earnings on cumulative abnormal returns, which is shown through slope coefficient in the regression of abnormal returns of stocks with unexpected earnings (Scott, 2015). Several studies on the factors that influence earnings response coefficient are fulfilled by A. Zubaidi, Zahron, & Rosianawati, 2011; Arifin, 2017; Hasanzade, Darabi, & Mahfoozi, 2013; Kurniawati & Dwimulyani, 2018; and Sandi, 2013.

A research by (A. Zubaidi et al., 2011) shows that it is only beta and market to book value ratio that have a significant effect on earnings response coefficient while leverage and company size do not significantly influence earnings response coefficient, but constanty, beta, market to book value ratio, leverage , and company size will affect the earnings response coefficient of property and real estate companies listed on the Indonesia Stock Exchange in 2004-2008. (Hasanzade et al., 2013) in his research stated that growth opportunities and profitability have a positive effect on the earnings response coefficient, while systematic risk has a negative effect on earnings response coefficient, and only financial leverage which does not affect the earnings response coefficient.

It is in contrast to Sandi (Sandi, 2013). In his research, Sandi mentioned that it is only company size which has positive effect on the earnings response coefficient while growth, capital structure, and audit quality do not have an influence on the earnings response coefficient. (Arifin, 2017) also found different results. His study showed that the leverage proxied by the debt to asset ratio (DAR) had a significant negative effect on the earnings response coefficient, for the free growth opportunity variable which was proxied by the price to book value ratio (PBVR) and company size significantly influences the earnings response coefficient, while systematic risk (beta) does not affect the earnings response coefficient. The results of joint testing of all independent variables: beta, leverage, growth opportunity and company size simultaneously show a positive and significant impact on the earnings response coefficient.

2.3. Growth Opportunity

Growth opportunities can be interpreted as the company's potential in developing the company's future operations by using investor funds to increase the value of the company. Growth opportunities does not only increase the value of the company, but also get a positive response from investors because growth opportunities provide good future profit opportunities to investors, so it can be concluded that the higher the growth opportunities owned by a company, the higher the profit opportunities that will be obtained in the future, as indicated by high ERC scores (Scott, 2015).

Several studies relate growth opportunity with earnings response coefficient such as (Hasanzade et al., 2013; Kurniawati & Dwimulyani, 2018; Mulyani, Asyik, & Andayani, 2007; Sandi, 2013). The results of studies conducted by (Hasanzade et al., 2013; Mulyani et al., 2007) show that growth opportunity has a significant effect on earnings response coefficient, while the results of studies conducted by (Kurniawati & Dwimulyani, 2018) stated that growth opportunity had a negative influence on earnings response coefficient. In contrast, a study conducted by (Sandi, 2013) states that growth opportunity has no effect on earnings response coefficient.

The company cannot always determine the selling price of the product as desired, because several competitors offer a certain price. To produce products that have competitive prices and maintain good product quality to earn a profit, they must be able to sort out, workaround, or even reduce costs or activities that are not needed in the production process so that the profits to be obtained are more optimal. Therefore, a target costing. (Palulun, Y. et al. 2021)

2.4. Capital Structure

Capital structure or leverage shows the number of comparisons between debt and equity reported by the company. The greater the amount of debt used by companies in financial operations and investments compared to equity owned shows a high degree of leverage. Investments made by using debt will result in a greater rate of return without increasing the amount of equity, thereby giving investors greater earnings per share. If this happens, then the market will respond to companies that have a higher level of leverage only, especially when the rate of return on investment is higher than the cost of capital debt used (Arifin, 2017). However, high levels of leverage will also be responded negatively by investors because investors will assume that companies will prioritize creditors' debt payments rather than dividend payments (Azizi, Pramuka, & Hidayat, 2016).

Some studies that link capital structure with earnings response coefficients are made by: (Ambarwati & Sudarmaji, 2019; Arifin, 2017; Azizi et al., 2016; Hasanzade et al., 2013; Kurniawati & Dwimulyani, 2018). In studies conducted by (A. Zubaidi et al., 2011; Ambarwati & Sudarmaji, 2019; Azizi et al., 2016; Hasanzade et al., 2013) it is stated that leverage has no relationship or does not affect the earnings response coefficient. This shows that by increasing or decreasing leverage, changes in dividends and annual stock returns remain intact. Hasanzade et al, said that theoretically the results of their research were different from the conceptual framework of earnings response coefficients in which the net income for companies with large amounts of debt would result a decrease in the earnings response coefficient compared to companies with little or no debt. (Arifin, 2017) states that leverage affects the earnings response coefficient

2.5. Company Size

Company size is a scale that shows that the company is a large or small company by looking at the size of the sales value, asset value or equity value. Large companies will certainly have easy access to the capital market, while companies that are small in size will experience many difficulties to access the capital market. This shows that the size of the company determines the level of investor confidence to invest in the company. As conducted by (Arifin, 2017; Azizi et al., 2016; Mashayekhi & Aghel, 2016; Sandi, 2013) it is explained that they use a proxy measure of total assets to measure company size. This is done by calculating the value of assets that are relatively more stable compared to the value of sales and total capital (Ambarwati & Sudarmaji, 2019).

Sandi in his research shows that company size has a positive relationship with earnings response coefficient. Sandi's research findings are in line with the results of research conducted by (Arifin, 2017; Azizi et al., 2016; Mashayekhi & Aghel, 2016). Arifin, said that company size significantly influences earnings response coefficient. He also mentioned that large total assets reflect a good earnings response coefficient and prove that company size is a significant explanatory variable for earnings response coefficient. Azizi et al., and Mashayekhi & Aghel in their study also showed that company size might increase earnings response coefficient.

2.6. Profitability

Profitability is a picture that shows a company's performance in generating profits. Profitability reflects the effectiveness of companies that affect investor responses to earnings information in investment decision making. The higher profitability will encourage managers to provide more detailed information to investors, because high profitability will attract investors to invest their funds. High profitability indicates that the performance and quality of earnings information presented is good enough. Companies that have high profitability show that the influence of accounting earnings on stock prices will be greater than companies that have low profitability.

In previous studies conducted by (Hasanzade et al., 2013) and (Azizi et al., 2016) it was stated that profitability affects earnings response coefficient. Hasanzade in his research stated that by increasing profitability, the relationship between changes in dividends and annual stock returns will increase and vice versa. So it might be concluded that the higher the level of profitability, the earnings response coefficient will be higher as well.

2.7. Audit Quality

The users of financial statement information prioritize information from audited financial statements because audited financial statements are considered as reliable and relevant information. (Mulyani et al., 2007) audited financial reports such as quality, relevant and trustworthy are produced from audits conducted effectively by qualified auditors. High quality auditors will certainly produce quality testing also includes reported earnings.

Several studies that have been done previously distinguish auditor quality based on the big five and nonbig five. Auditor quality is proxied by the auditor's reputation with assumptions indicating that the higher the quality of the auditor, the better his reputation is. The results of a study conducted by (Mulyani et al., 2007) and (Sandi, 2013) stated that audit quality had no effect on earnings response coefficient.

2.8. Systematic Risk

Systematic risk is risk that affects all company shares which cannot be eliminated by diversifying portfolio assets. Systematic risk can be measured by using beta because beta can reflect a company's sensitivity to market returns. Several studies that have been conducted previously show that systematic risk has a negative relationship to earnings response coefficient, including (Ambarwati & Sudarmaji, 2019; Hasanzade et al., 2013; Mulyani et al., 2007). The results of a study conducted (Kurniawati & Dwimulyani, 2018) differ slightly by stating that systematic risk has a positive effect on earnings response coefficient. Whereas, (Arifin, 2017) in his study stated that systematic risk has no effect on earnings response coefficient.

(Hasanzade et al., 2013) in his study stated that there is a significant relationship between systematic risk and earnings response coefficient. This means that by increasing

systematic risk, the relationship between divident changes and annual stock returns weakens. Beta is a benchmark for effective asset calculation for diversified investors. Investors will consider current year's earnings as a strong indicator of profitability and future returns. The more risk the future returns, the lower the investment market's reaction to changes in dividends. In line with hasanzade's study, Ambarwati & Sudarmaji in their study showed that systematic risk has a significant negative effect on earnings response coefficient. They stated that high risk companies tend to have a small reaction from investors when the company's financial statements are announced, so response coefficient will be lower.

The Based on the description above, the researcher proposes the following hypotheses:

H1: Growth opportunity has a significant positive effect on the earnings response coefficient
H2: Capital structure has a significant negative effect on the earnings response coefficient
H3: Company size has a significant positive effect on the earninsg response coefficient
H4: Profitability has a significant positive effect on the earnings response coefficient
H5: Audit quality has a significant positive effect on the earnings response coefficient
H6: Systematic risk has a significant positive effect on the earnings response coefficient
H7: Growth opportunity, capital structure, company size, profitability, audit quality and systematic risk have a significant effect on the earnings response coefficient

III. Research Method

We conducted this research to find out the determinants of earnings response coefficient in basic chemical industry companies. We obtained research data from www.idx.co.id and www.finance.yahoo.com in 2015-2018. In determining the sample, we apply several criteria limits. The criteria that we applied to limit this research sample are: (1) Company data must be available; (2)The company has never been deleted from IDX; (3) Present financial statements in the form of rupiah currency units; (4) Present audited financial statements. Based on the determined sample criteria from 324 companies during the observation period, 90 companies were selected during the observation period to be the sample of this study. For the sample testing we used a statistical model of multiple regression analysis using spps 20 software.

3.1. Variable Operationalisation

The dependent variable in this study is earnings response coefficient (ERC). ERC is a coefficient resulting from the price proxy regression using cumulative abnormal return (CAR) with the accounting profit proxy using unexpected earnings (EU). This the ERC value can be calculated with the following equation:

$$CAR_{i(-3,+3)} = \beta_0 + \beta_1 UE_{it} + e$$

Note:

$CAR_{i(-3,+3)}$= cumulative abnormal return of company i during the observation period (3 days before), 1 day event and 3 days after the earnings announcement event.

UE_{it} = Unexpected earnings of company i in period t

β_0 = Constanta

β_1 = value of earnings response coefficient

e = Error

To get the value of the company ERC i period t, several calculation stages are firstly performed, namely:

1) Calculate CAR

Company CAR i in period t based on the company's accounting profit is announced and calculated in the observation period (event window) for 7 days, 3 days before the announcement of financial statements, 1 day at the time of announcement, and 3 days after the announcement. Calculation of earnings response for 7 days is considered capable of detecting abnormal returns that occur due to earnings announcements before the confounding effect affects the abnormal return. CAR is calculated with the following formula:

- To calculate the company's returns

$$R_{it} = \frac{P_{it} - P_{it-1}}{P_{it-1}}$$

Note

R_{it} = Return of company i on the t day

P_{it} = The closing price of the company's stock i on the day in the tperiod

P_{it-1} = The closing price of company i shares on the day of t-1 period

- To calculate market returns

$$R_{mt} = \frac{IHSG_t - IHSG_{t-1}}{IHSG_{t-1}}$$

Note:

R_{mt} = Market Return on the t day

$IHSG_t$ = composite stock price index on the day in the t period

$IHSG_{t-1}$ = composite stock price index on the day of t-1 period

- To calculate the abnormal return

$$AR_{it} = R_{it} - R_{mt}$$

- To calculate CAR

$$CAR_{i(-3,+3)} = \sum_{-3}^{+3} AR_{it}$$

2) Calculate UE

$$UE_{it} = \frac{E_{it} - E_{it-1}}{|E_{it-1}|}$$

Note:

UE_{it} = unexpected earnings of i company in the t period

E_{it} = profit after tax of i company in the t period

E_{it-1} = earnings after tax of company i in t-1 period

$|E_{it-1}|$ = absolute value of profit after tax of company I in t-1 period

The independent variable in this study consists of growth, capital structure, company size, profitability, audit quality and systematic risk.

1) Growth opportunity

Growth opportunities are the company's potential to increase the company's value in the future. Growth opportunities are measured by the following formula:

$$price\ to\ book\ value = \frac{market\ value}{book\ value}$$

2) Capital structure

Capital structure shows the number of comparisons between debt and equity reported by the company. The capital structure has a direct effect on the company's finances, where the higher the amount of debt used by companies in financial operations and investments, the higher the company's financial burden. To measure the capital structure in this study, we use a debt to equality ratio (DER). Debt to equity ratio shows the relationship between total debt and total company equity calculated by the following formula:

$$DER = \frac{Total\ Debt}{Total\ Equity}$$

3) Company size

Company size is a measure used to reflect the capacity of a company. The size of the company in this study is based on the logarithm of the total value of assets owned by the company at the end of the accounting period with the following formula:

$$Company\ Size = Ln(total\ assets)$$

4) Profitability

Profitability is often understood as an indicator of a company's ability to generate profits by using the resources owned by the company. In this study profitability is measured by using the following formula:

$$ROA = \frac{Net\ Income}{Total\ Asset}$$

5) Audit quality

Audit quality is measured using a dummy variable. If the sample company's financial statements are audited by high quality auditors given a value of 1 and a value of 0 for auditors who are not of high quality what is said to be a high quality auditor in this study is that auditors are included in the big four public accounting firms.

6) Systematic risk

Systematic risk is an external risk that cannot be controlled by a corporation (company), this risk is also called market risk. Systematic risk in this study was measured by using beta, because beta reflects the sensitivity of the company to market returns which is able to measure the response of each security to market movements.

$$R_{it} = \alpha + \beta Rm + e$$

IV. Result and Discussion

4.1 Multicollinearity Test

Multicollinearity test is conducted to find out whether there is a deviation of the assumption of multicollinearity classifications, namely the existence of linear relationship between independent variables in the regression model or not. In testing the presence or absence of multicollinearity symptoms, we use the value of the variance inflation factor

(VIF). If the VIF value is <10 and tolerance value is > 0.10 and the magnitude of the VIF value is <10, it can be concluded that there are no symptoms of multicollinearity (Ghozali 2016). The results of the multicollinearity test are shown in Table 1. Based on table 1 above, the multicollinearity test results show that the earnings response coefficient, Growth opportunity, capital structure, company size, profitability, audit quality ang systematic risk have a VIF value of <10 and the tolerance value of all independent variables is > 0.1, thus, it can be concluded that there is no independent correlation in this study.

Table 1 Multicollinearity Test Result

Coefficients[a]

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.	Collinearity Statistics	
		B	Std. Error	Beta			Tolerance	VIF
	(Constant)	3.338	3.461		.965	.338		
	PBV	-.153	.225	-.070	-.681	.498	.813	1.229
	DER	-.266	.121	-.207	-2.194	.031	.962	1.039
	LnTA	-.178	.256	-.080	-.694	.489	.648	1.543
	ROA	.240	.047	.503	5.114	.000	.887	1.128
	AuditQuality	-.006	.746	-.001	-.007	.994	.667	1.500
	Beta	-.010	.022	-.042	-.427	.671	.867	1.153

a. Dependent Variable: ERC

4.2 Heteroscedasticity Test

Heteroscedasticity test is performed to see whether there is a variance in residual variance for all observations of the regression model or not. (Ghozali 2016) A good research model is that of no heteroscedasticity. To test the presence or absence of heteroscedasticity we used glacial test, ie by regressing the independent variable with its absolute residual value (ABS_RES). If a significant value is > 0.05 means that heteroscedasticity does not occur. The results of the heteroscedasticity test that we have done are shown in table 2. The results of the heteroscedasticity test showed that the significant value (sig.) of the variable Growth opportunity, capital structure, company size, profitability, audit quality and systematic risk is > 0.05. thus, it can be concluded that there was no heteroscedasticity in this study.

Table 2 Heteroscedasticity Test Result

Coefficients[a]						
Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	3.601	2.479		1.452	.150
	PBV	.060	.194	.038	.310	.757
	DER	.087	.135	.075	.642	.523
	LnTA	-.199	.185	-.149	-1.078	.284
	ROA	-.042	.041	-.119	-1.024	.309
	AuditQuality	-.088	.534	-.022	-.165	.870
	Beta	-.005	.018	-.032	-.280	.780
a. Dependent Variable: Abs_RES						

4.3 Autocorrelation Test

Autocorrelation test is done to see whether there is a correlation between residuals in one observation with other observations in the regression model or not. In this study, to detect the presence or absence of autocorrelation we used the Watson durbin test (DW). If the value of dU <DW <(4 - dU) then there is no autocorrelation. The results of the autocorrelation test are shown in Table 3. Based on Table 3 above, it can be seen that the durbin-watson (DW) value generated from the regression model is 2,153. While the value of dL and dU in the table with a significance of 0.05, the number of data (n) = 84 and the number of free variables (k) = 6 each dU = 1.8008 dandL = 1.4962. It can be concluded that the DW value is between dU and (4-dU) or dU <DW <(4-dU) that is 1.8008 <2.153 <2.1992. This means that autocorrelation did not occur in this study.

Table 3: Autocorrelation Test Result

Model Summary[b]					
Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Durbin-Watson
1	.536[a]	.287	.236	2.72403	2.153
a. Predictors: (Constant), Beta, DER, AuditQuality, ROA, MBV, LnTA					
b. Dependent Variable: ERC					

4.4 Hypothesis Test Results

Table 4. The Partial Test Result

Coefficients[a]						
Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	3.338	3.461		.965	.338
	PBV	-.153	.225	-.070	-.681	.498
	DER	-.266	.121	-.207	-2.194	.031
	LnTA	-.178	.256	-.080	-.694	.489
	ROA	.240	.047	.503	5.114	.000
	AuditQuality	-.006	.746	-.001	-.007	.994
	Beta	-.010	.022	-.042	-.427	.671
a. Dependent Variable: ERC						

Based on table 4, the partial test results above show that the independent variable has an influence on the dependent variable (earnings response coefficient), namely capital structure and profitability with a significant value <0.05, while the other independent variables; growth opportunity, company size, audit quality and systematic risk does not have an effect on earnings response coefficient with the significant value of each independent variable growth opportunity, campaign size, audit quality and systematic risk is > 0.05 as shown in table 4 above.

Significant price book value (PBV) of 0.498> 0.05 shows that growth opportunity as measured by price to book value (PBV) has no effect on earnings response coefficient. Therefore, the first hypothesis is rejected. Theoretically, the results of this study is in contrast to the conceptual framework of earnings response coefficient, the greater the value of growth opportunity, the higher the opportunity for companies to increase profits in the future. Investors will give a positive response because a high growth opportunity will provide a high future for investors.

The results of this study are not in line with the results of previous studies conducted by (Arifin, 2017; Hasanzade et al., 2013; Mulyani et al., 2007) which states that growth opportunity has a significant positive effect on earnings response coefficient. This means that the higher the value of growth opportunity, the higher the earnings response coefficient is. The results of this study are also different from the results of Kurniawati's study which states that growth opportunity has a significant negative effect on Earnings response coefficient. This means that the higher the value of growth opportunity, the eranings response coefficient will be lower. But the results of this study support the results of previous studies conducted by (Sandi, 2013) which states that growth opportunity does not affect earnings response coefficient.

Significant value of capital structure is 0.031 <0.05 in which the coefficient indicates a negative value of 0.207 (- 0.207). This shows that if the value of capital structure measured using DER has increased by one unit or one scale of measurement will result in earnings response coefficient decrease by 0.207. The negative direction of DER coefficient indicates a negative relationship between capital structure and earnings response coefficient. Terefore, the second hypothesis is accepted.

The results of this study prove that the conceptual framework of earnings response coefficient of net income of companies with large amounts of debt will result in a decrease in earnings response coefficient compared to companies with little debt. It is expected that companies of which the debt is higher than capital, an increase in net income will result in securities with other debt that are stronger and safer so that bondholders will receive good news from net income. Therefore, the response to the coefficient of net income for companies with large loans will result in a decrease in their earnings response coefficient compared to companies with little or no debt. The results of our study support previous studies conducted by (Mulyani et al., 2007) and (Arifin, 2017) in their study showing that leverage significant negative effect on earnings response coefficient.

Significant value of logarithm of total assets (LnTA) of 0.489> 0.05 shows that company size measured by using Logarithm of total assets has no effect on earnings response coefficient, therefore the third hypothesis is rejected. The results of this study do not support the results of previous studies conducted by Arifin, 2017; Azizi et al., 2016; Mashayekhi & Aghel, 2016; Mulyani et al., 2007; and Sandi, 2013. The results of their study stated that company size has a significant effect on earnings response coefficient.

Other independent variables that affect earnings response coefficient in our study are profitability variables. Profitability is measured by using ROA. Table 4 above shows that the level of ROA significance of 0.000 <0.05 and the coefficient shows a positive value of 0.503. This shows that if the value of profitablity measured by using ROA increases by one unit or one scale of measurement, it will cause earnings response coefficient to rise by 0.503. The positive ROA coefficient direction indicates a positive relationship between profitability and earnings response coefficient, therefore the fourth hypothesis is accepted.

The results of this study are consistent with the results of previous studies conducted by hasanzade 2013 and azizi. Hasanzade and Azizi in their study stated that profitability had a significant positive effect on earnings response coefficient. The significant relationship between profitability and earnings response coefficient could be interpreted by increasing profitability. The relationship between changes in annual stock returns and dividends would be stronger and vice versa. Theoretically, the results of our study are consistent with the conceptual framework of the earnings response coefficient. Thus, the higher the profitability, the higher the earnings response coefficient is and vice versa the lower the profitability, the lower the earnings response coefficient.

Significant value of audit quality of 0.999> 0.05 shows that audit quality has no effect on earnings response coefficient. Therefore, the fifth hypothesis is rejected. The results of this study support the results of previous studies conducted by Mulyani et al., 2007 and Sandi, 2013. Their research results state that audit quality has no effect on earnings response coefficient.

Significant beta value of 0.671> 0.05 shows that systematic risk measured by beta has no effect on earnings response coefficient. Therefore, the sixth hypothesis is rejected. The results of this study contradict the conceptual framework of the earnings response coefficient, in which by increasing systematic risk, the relationship between annual stock returns and changes in dividends will be even lower. Investors will consider current year's earnings as a strong indicator of profitability and future returns. The more risky returns in

the future, the lower the investment market reaction to changes in dividends so that the resulting earnings response coefficient will be lower. The results of this study support the results of a study conducted by Arifin, 2017 which states that systematic risk does not affect earnings response coefficient.

Table 5. Simultaneous Test Results

ANOVA[a]						
Model		Sum of Squares	Df	Mean Square	F	Sig.
1	Regression	248.260	6	41.377	5.576	.000[b]
	Residual	615.886	83	7.420		
	Total	864.146	89			
a. Dependent Variable: ERC						
b. Predictors: (Constant), Beta, DER, AuditQuality, ROA, MBV, LnTA						

Table 5 shows the simultaneous test can be seen a significant value of 0.000 <0.050. This means that the variable growth opportunity, capital structure, company size, profitability, audit quality and systematic risk simultaneously influence the earnings response coefficient. Therefore, the seventh hypothesis is accepted.

V. Conclusion

In this study, we conclude that growth opportunity which is proxied by price to book value (PBV) does not affect earnings response coefficient. Capital structure which is proxied by a Deb to Equity Ratio (DER) shows a significant negative effect on eranings response coefficient. The size of the camps measured using the logarithm of assets has no effect on eranings response coefficient. Profitability as measured by using Return on Assets (ROA) has a significant positive effect on earnings response coefficient. Audit quality shows no effect on earnings response coefficient and systematic risk as measured by beta has no effect on earnings response coefficient. And the results of simultaneous testing show that growth opportunity, capital structure, company size, profitability, audit quality and systemic risk affect the earnings response coefficient. This research is limited to basic chemical industry companies. The research results cannot be generalized to the corporate sector other

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