About

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Selected papers from the 6th IABC 2019
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FOREWORD BY DEPUTY RECTOR OF RESEARCH, INDUSTRIAL LINKAGES & ALUMNI

Since 2018, the INSIGHT JOURNAL (IJ) from Universiti Teknologi MARA Cawangan Johor has come up with several biennial publications. Volume 1 and 2 debuted in 2018, followed by Volume 3 this year as well as Volume 4 with 19 published papers due to the great response from authors both in and out of UiTM. Through Insight Journal, lecturers have the ability to publish their research articles and opportunity to share their academic findings. Insight Journal is indexed in MyJurnal MCC and abstracted in Asian Digital Library (ADL). Moreover, is is also an international refereed journal with many international reviewers from prestigious universities appointed as its editorial review board members.

This Volume 6 is the second special issue for the 6th International Accounting and Business Conference (IABC) 2019 held at Indonesia Banking School, Jakarta. The conference was jointly organized by the Universiti Teknologi MARA Cawangan Johor and the Indonesia Banking School Jakarta. Hence, this volume focuses mainly on the accounting and business research papers compiled from this conference, which was considered a huge success as over 66 full papers were presented.

Lastly, I would like to thank the Rector of UiTM Johor, Associate Professor Dr. Ahmad Naqiyuddin Bakar for his distinctive support, IJ Managing Editor for this issue Dr. Noriah Ismail, IJ Assistant Managing Editor, Fazdillah Md Kassim well as all the reviewers and editors who have contributed in the publication of this special issue.

Thank you.

ASSOCIATE PROFESSOR DR. SAUNAH ZAINON
Deputy Rector of Research, Industrial Linkages & Alumni
Editor-in-Chief for INSIGHT Journal
Universiti Teknologi MARA Cawangan Johor
Earning Response Coefficient: The Indonesia Stock Exchange Case

Ambarwati¹, Eka Sudarmaji¹
Faculty of Economic & Business, University of Pancasila
Jakarta, Indonesia
esudarmaji@univpancasila.ac.id

Abstract

This research examines the effects of profitability, systematic risk, leverage and earnings persistence on Earnings Response Coefficient (ERC) in companies listed in LQ45 at the Indonesia Stock Exchange (IDX). The objects of this research are companies that are consistently listed in LQ45 in the year of 2015-2017. This study uses panel data regression analysis using the software, Eviews. The empirical results of this research showed that systematic risk and earnings persistence has a significantly negative effect on ERC, leverage has a significantly positive effect on ERC, while profitability does not have an effect on ERC. The results of the research show that the factors of systematic risk, leverage and earnings persistence owned by the company have an effect on investment decisions made by investors.

Keyword: CAPM, Earnings Response Coefficient, Systematic Risk

1. Introduction

According to the Capital Asset Pricing Model (CAPM) of Sharpe (1964), Lintner (1965) and Black (1972), beta is the only determinant for systematic risks - this reflects the sensitivity to variations in the return of market portfolios of all risky assets. Systematic risk is a risk that affects many companies (Husnan, 2005). Fauzan and Purwanto (2017) revealed that, according to the theory of Capital Asset Pricing Model (CAPM), if there is a company in the market with a high level of risk information in the future, the company will most likely to receive a good response from investors. That is because one of the theoretical assumptions says that investors are risk averse, so the value of earnings response coefficient will weaken. The announcement of financial information that contains high risk related information becomes a signal for investors, which results the response to weaken and result in the ERC value going down. The high CAPM must be associated with low ERC, indicating a negative relationship between these parameters. The reason behind this relationship is that risk is the company’s expected return in the future, thus the value is lower for investors who avoid risk.

Easton and Zmijewski (1989) examined variations in stock market responses between companies for accounting earnings announcements. The results of their research indicate that Earnings Response Coefficient (ERC) is negatively related to systematic risk. Likewise, the research conducted by Collins and Kothari (1989) showed that risks are negatively related to Earnings Response Coefficient (ERC). According to Halim (2005), systematic risk is a risk that cannot be eliminated by diversifying asset portfolio formation,
because this risk fluctuation is influenced by macro factors that can affect the market as a whole. This risk is general and applies to all shares.

The riskier the order of return that the company expects in the future, the lower the value is for investors who reject risk. Investors will tend to buy if the company recently released good news regarding revenue and issued securities that have high beta. Reduced demand implies a lower increase in market prices and stock returns in response to good news, hence ERC is lower than it should be when it can be higher. This high-risk effect will affect stock prices (and stock returns) through the discount rate in the valuation model. Therefore, "because investors view current earnings as an indicator of a company's future performance and stock returns, the riskier this return will be in the future, the lower investor's reaction to the amount of unexpected income will be" (Scott, 2012, p. 163). Thus, the CAPM has a negative denominator effect on the earnings-return association.

However, Chambers et al. (2005) advertised that this negative relationship is based on a strong assumption that beta CAPM is stable. In particular, derivation assumes that CAPM does not (or should not) change from time t-1 to time t. In result, Chambers et al. (2005) argued (and reported evidence) that the current income is informative with regard to coefficients (Ait + k) that connect dividend expectations with reported earnings.

In particular, Ariff et al. (2013) and Collins and Kothari (1989) reported negative coefficients between ERC and CAPM, while Cready et al. (2001) reported a significant positive relationship. On the other hand, Easton and Zmijewski (1989), Ghosh et al. (2005), and Warfield et al. (1995) did not find a consistent and significant relationship between ERC and CAPM. The CAPM methodology is based on the premise that market participants assimilate new information efficiently, in addition to having homogeneous expectations. Usually, the empirical literature considers, for the purpose of simplicity, the CAPM constant the whole time.

This research is also to find out whether the Capital Asset Pricing Model (CAPM) exists and its ability to explain the Income Response Coefficient (ERC) in companies listed in LQ45 at the Indonesia Stock Exchange (IDX). Because the Indonesia Stock Exchange (IDX) is highly concentrated in several large companies that are responsible for most market liquidity. Most small and medium-sized companies do not have the sufficient stock liquidity. Machado dan Medeiros (2012) found that CAPM is incapable in explaining the stock return and liquidity effect on the liquidity of the Brazilian market. Combining the Indonesian stock market has a smaller free-floating problem and lower trading activities. Therefore, the results show that CAPM beta causes errors in risk measurement, which is consistent with under-diversification of the local stock market index and also recent empirical evidence (Amorim et al., 2012; Simon et al., 2014). This theoretical and empirical conflict about CAPM and ERC motivates this research, especially in the case of Indonesia.

2. Literature Review

2.1 Capital Market Theory of Efficiency

Theory of market efficiency or Efficient Market Hypothesis (EMH) states that the market will react quickly to new information, so that for a moment and after the financial
statements are published, information about earnings will affect investors’ behaviors (Scott, 2009). According to Tandelilin (2001), efficient markets are markets where the prices of all traded securities have reflected all the available information, which includes past information, current information, as well as information that is opinion or rational opinion that can influence the changes in price. The faster the new information is reflected in the price of securities, the more efficient the capital market is.

In an efficient market, no relevant information is ignored. So, when there is information on profit (loss) in the securities market that has valuable content, which then results in a change of prices, then the price formed is a reflection of information on profits (losses) in the securities market (Millatina, 2012). In efficient market theory, accounting information is in a competitive position with other sources of information such as news in the media, financial analysts, and even market prices themselves. As a mean of conveying information to investors, accounting information will be useful only if the information is relevant, reliable, timely, cost effective and relative to other sources of information. In reality, financial information is the basis to form opinions from other information.

Tandelilin (2001) classified efficient forms of markets into three Efficient Market Hypotheses (EMH), 1) Efficient in the form of weak, which means that all information in the past (historical) will be reflected in the current prices, 2) Efficient in the form of mediocrity, is a more comprehensive form of market efficiency because in this form the stock price in addition is influenced by market data (stock prices and trading volume in the past) and also by all published information, such as earnings, dividends, announcements stock split, issuance of new shares, and financial difficulties experienced by the company, and 3) Efficient markets in the strong form, where all the information either published or unpublished, have been reflected in the current securities prices.

2.2 Earnings Response Coefficient

Earnings Response Coefficient (ERC) research aims to determine the difference in market response to earnings information announced by companies (Scott, 2009). Earnings response as measured by Earnings Response Coefficient (ERC) calculates the level of securities abnormal returns in response to unexpected components from company earnings announcements; in other words, there are variations in the relationship between company earnings and stock returns. The strong market reaction to earnings information will be reflected in the high ERC value, and vice versa (Kartadjumena, 2010).

The rationale for ERC is that investors have their own profit expectation calculation well before the financial statements are issued. The profit forecasting period can reach one year before the announcement of the company’s profit figures. Towards the issuance of financial statements, investors will have more information in making an analysis of periodic earnings figures. This can happen because information leakage ahead of the issuance of financial statements often happens (Ambarwati, 2008).

Cho and Jung (1991) in Yanti (2015) defined ERC as the effect of every unexpected dollar earnings on stock returns and are usually measured by the slope of the coefficients in the abnormal return on regression and unexpected earnings. Thus, ERC is a coefficient that shows the magnitude of the market reaction to accounting profits announced by the company. The reaction given depends on the quality of profits generated by the company. And the high or low of Earning Response Coefficient (ERC) is very much determined by
the responsive strength reflected in the information (good / bad news) contained in the profit. Earning Response Coefficient (ERC) is one measure or proxy used to measure earnings quality (Collins et al., 1984 in Paramita and Hidayanti, 2013).

The reaction given by investors depends on the content of the information in the profits of each company, so that the resulting Earnings Response Coefficient (ERC) differs from one company to another. The several factors that cause differences in Earnings Response Coefficient (ERC) are systematic risks which are measured using beta, a leverage that is a proxy from the capital structure, profit persistence where the ability to generate profits permanently will cause ERCs to be different for each company, growth opportunities, the similarity of investor expectations, and the informativeness of price which is proxied by firm size (Scott, 2009).

It is good news when the company announces that the actual annual profit is higher than the profit prediction, thus investors will decide to buy the stock. Conversely, investors will decide to sell the company’s shares if the profit forecasted is higher than the actual profit because it would mean that the company’s performance is not as good as expected. Theoretically, the volume of shares will change after the company announces its profit. If there are more investors who are happy with company’s performance, then there will be an increase in the market price of the shares of the company concerned. If it is the other way around, then there will be a decrease in the share price which will accumulate in the Cumulative Abnormal Return (CAR) of each company stock.

2.3 Systematic Risk (CAPM)

Systematic Risk is measured using systematic risk (beta) obtained through Pefindo Beta Stock, with calculations as follows:

\[ R = \alpha + \beta R_m + e \]

Where as:  
\( R \) = stock return  
\( \beta \) = Beta stock (systematic risk)  
\( R_m \) = Market Return

According to Jogiyanto (2008) in Arif (2016), beta is a measure of securities return volatility on market returns. Volatility can be defined as a fluctuation in the return of a security in a given period of time. Therefore, beta is a measure of systematic risk of security against market risk. Beta can also be a measuring tool to determine the investment that will be made. The higher the beta of a security, the more sensitive the security is to market changes. So, if a company whose stock prices fluctuate relatively broadly (which will produce high beta), the future income that investors will get is comparatively unpredictable. Companies that have a higher risk will cause investors’ expectations of company profits to be smaller. So, the higher the beta risk of a company, the lower the investor's reaction to unexpected earnings and the lower the level of Earnings Response Coefficient (ERC) of a company. Thus, the relationship between risk and ERC will be negative and significant. This study examines the effect of profitability, systematic risk, leverage, and earnings persistence as independent variables, on earnings response coefficient as the dependent variable. Based on the theoretical framework, the research hypothesis can be described as follows:
H1: Profitability affects earnings response coefficient (ERC)
H2: Systematic risk affects earnings response coefficient (ERC)
H3: Leverage affects earnings response coefficient (ERC)
H4: Earnings persistence has an effect on earnings response coefficient (ERC)

2.4 Construction Operationalization

2.4.1 Earnings Response Coefficient (Y)

Earning Response Coefficient (ERC) is the coefficient obtained from the regression results between Cumulative Abnormal Return (CAR) as a proxy for stock prices and Unexpected Earning (EU) as an accounting profit proxy used to explain the difference in market reaction through stock prices on earnings information. ERC is a coefficient that measures investors’ responses to earnings announcements. ERC is obtained from the regression results between the relationship of CAR and EU, which is calculated from the slope α1 in the relationship between CAR and EU.

2) \[\text{CAR}_{it} = \alpha_0 + \alpha_1 \text{UE}_{it} + \varepsilon_{it}\]

Where as: \(\text{CAR}_{it}\) = Cumulative Abnormal Return on firm x at period t
\(\text{UE}_{it}\) = Unexpected Earnings at company x at period t
\(\alpha_0\) = Constants
\(\alpha_1\) = Earning Response Coefficient indicated by the coefficient
\(\varepsilon_{it}\) = Error

The first step to measure ERC is to calculate CAR. Cumulative Abnormal Return (CAR) is a proxy of stock prices or market reactions (Soewardjono, 2005). Market adjusted model is used to calculate the Abnormal Return (AR). Stock prices in stock exchanges tend to move on certain days or events, so we will not encounter difficulties by using the market adjusted model because trading tends to be more frequent around the announcement day (Junaedi, 2005). CAR is the sum of abnormal returns. CAR is the dependent variable in the measurement of ERC. The variables used in calculating CAR in this study are the data of the company’s stock closing price and the company’s stock closing price with the period during reporting. The steps for calculating CAR are as follows:

**Calculating the company's Actual Return on day t with the formula:**

3) \[\text{R}_{it} = \frac{(P_{it} - P_{it-1})}{P_{it-1}}\]

Where as: \(\text{R}_{it}\) = Actual company return i on day t
\(P_{it}\) = Closing Price of stock i on day t
\(P_{it-1}\) = Closing Price of stock i day t-1

**Calculate the daily market return with the formula:**

4) \[\text{R}_{mt} = \frac{(\text{HSGt} - \text{HSGt-1})}{\text{HSGt-1}}\]
Where as:  
\[ \text{Rm}_t = \text{Daily market return} \]  
\[ \text{IHSG}_t = \text{Cumulative Stock Price Index on day } t \]  
\[ \text{IHSG}_{t-1} = \text{Cumulative Stock Price Index on day } t-1 \]

**Calculating Abnormal Return.**

Abnormal Return is one of the indicators used to see the market conditions that occur. Abnormal return (AR) is the difference between the actual return and expected return. In this study, abnormal returns are calculated using the market adjusted model. Calculation of abnormal returns is as follows:

5) \[ AR_{it} = R_{it} - Rm_t \]

Where as:  
\[ AR_{it} = \text{Abnormal company return } i \text{ in the } t\text{-period} \]  
\[ R_{it} = \text{Actual Return of company stock } i \text{ in the } t\text{-period} \]  
\[ Rm_t = \text{Market return in the } t\text{-period} \]

**Calculating Cumulative Abnormal Return (CAR)**

Calculation of CAR in this study is done when accounting earnings that are published referred to the research of Delvira and Nelvirita (2013) and Anggraini (2015), which calculates the CAR in a short window of 11 days (5 days before the announcement of financial statements audit, 1 day during the announcement of financial statements audit, and 5 days after the announcement of the financial statement audit). CAR can be obtained by the formula as follows:

6) \[ \text{CAR}_{it}(-5, +5) = \sum_{t=-5}^{+5} AR_{it} \]

Where as:  
\[ \text{CAR}_{it}(-5, +5) = \text{Cumulative abnormal return of company } i \text{ during the observation period } \pm 5 \text{ days from the date of publication of financial statements year } t. \]

\[ AR_{it} = \text{Abnormal company return } i \text{ on day } t \]

Unexpected Earning (EU), in this study, was calculated using measurements of earnings per share with a random walk model (Delvira and Nelvirita, 2013). Measured by the formula as follows:

7) \[ UE_{it} = \frac{\text{EPS}_{it} - \text{EPS}_{it-1}}{\text{EPS}_{it-1}} \]

Where as:  
\[ UE_{it} = \text{Unexpected earnings of company } i \text{ in period } t \]  
\[ \text{EPS}_{it} = \text{Earnings per share of company } i \text{ in period } t \]  
\[ \text{EPS}_{it-1} = \text{Earnings per share of company } i \text{ in the previous period} \]

**2.4.2 Profitability**

Companies that have a high level of profitability will be able to attract investors to invest their funds, this is because investors consider the potential high dividend that they might
receive. Conversely, if the level of company profitability is low, it will cause investors to withdraw their funds. Research conducted by Naimah and Utama (2006) and Setyaningtyas (2009) shows that companies that have a high level of profitability also have high ERC values. In this study profitability is proxied using ROE.

2.4.3 Leverage

Scott (2009), states that high level of company leverage will cause low ERC coefficient. Companies that have a high-level leverage have a debt greater than capital. Therefore, the profit will flow more to the creditor so that the good news on the profit will be given to the creditor rather than the shareholder, because the creditor has confidence that the company is able to pay the loan and principal interest on the loan. So that information on earnings announcements was reacted quickly by creditors but was responded negatively by investors because investors assumed that companies preferred debt more than dividend payments. Therefore, Earnings Response Coefficient (ERC) in companies with large debt levels will be lower than companies with less debt.

Harris and Raviv (1990) in Etty (2008) stated that the amount of debt shows the quality of the company and the prospects that are not good in the future. For companies with large debts, increased profits will strengthen the position and security of debtholders rather than shareholders. Thus, if there is an increase in profits, the debtholders are benefitted (Scott, 2009). Previous research conducted by Dhaliwal and Reynolds (1994), Moradi, Salehi and Erfanian (2010), Hapsari and Simorangkir (2013) found that leverage was significantly negative with respect to ERC. In this study leverage is proxied by the Debt Equity Ratio (DER).

2.4.4 Profit Persistence

According to Soemarso (2005) in Delvira and Nelvirita (2013), profit is the difference in income over expenses related to business activities. On the basis of persistence, quality earnings are profits that are permanent and not transitory. Earning persistence is earnings capability to be used as indicators for future earnings produced by the company repeatedly in the long term (Imroatussolihah, 2013). According to Wijayanti (2006) in Fanani (2010), persistent profit is profit that can reflect the continuation of earnings in the future, which is determined by the accrual component and cash flow. Whereas according to Sunarto (2010), earning persistence is profit that has the ability of future earnings indicators produced by the company repeatedly. Profit is said to be persistent if the current profit can be used as a measure of future earnings. Lipe (1990) used a regression coefficient from the regression between current period accounting earnings and the previous period as a proxy for earnings persistence. Earning persistence indicates how current profits will continue to appear in the future (permanent) so that they have implications for future valuations and market reactions. In contrast to the transitory nature, which means that the components of earnings are variable, they cannot be predicted to appear in the future so that they cannot be used as valuations for the future (Ambarwati, 2008). Scott (2009) said that the more permanent the changes in earnings over time, the higher the earnings response coefficient. Higher market reactions to earnings information are expected to be consistent in the long term rather than temporary.

The value of Earnings Response Coefficient (ERC) is predicted to be higher if the company's earnings are more persistent in the future. Earning persistence reflects the
quality of company earnings and shows that the company can maintain profits from time to time and not just because of a particular event. Earning persistence is found to have a positive relationship with Earnings Response Coefficient (ERC). The more persistent or more permanent earnings of the company is, the higher the Earnings Response Coefficient (ERC), this condition indicates that the profits obtained by the company increase continuously. Market reactions tend to be higher for information that is expected to be consistent in the long term rather than temporary earnings information. This is consistent with the research conducted by Delvira and Nelvirita (2013), Mulyani, Asyik and Andayani (2010) found consistent results that earning persistence has a positive effect on Earnings Response Coefficient (ERC). Investors will be more responsive to profits for companies that have high persistence levels. Earnings persistence can be determined by the formula:

8) \( X_{it} = \alpha + \beta X_{it-1} + \varepsilon_t \)

Where as:  
\( X_{it} = \) Company profit i in year t  
\( X_{it-1} = \) Company profit i in year t-1  
\( \beta = \) Regression result coefficient (earnings persistence)

3. Method

In this study, researchers used secondary and quantitative data, namely by conducting a study of the data or information obtained as well as providing an assessment of these problems. Secondary data in this study were obtained from summary statistics of LQ45 company performance reports, financial statements of companies listed in LQ45 on the Indonesia Stock Exchange during 2015-2017, daily stock price data per company, daily Cumulative Stock Price Index (IHSG), and beta data shares per company. The data is obtained from www.pefindo.com, www.idx.co.id, www.finance.yahoo.com, and or on the website of each company. The population used in this study were companies listed in the LQ45 Index on the Indonesia Stock Exchange during 2015-2017. The total companies that fit the criteria were 30 companies, so the total research data for 3 years amounted to 90 data with reduced data outliers as many as 24, so the total unit of analysis (N) studied in this study is 66 data.

3.1 Validity and Reliability

There are three approaches (models) consisting of Common Effect, fixed effect approach, and random effect approach in estimating model parameters with panel data. To choose the most appropriate model, the F test must first be done, which consists of Chow Test, Hausman Test and Lagrange Multiplier Test. Chow test is used to determine the fixed effect or common effect model that is most appropriate to use in estimating panel data. The Hausman test is used for statistical testing to choose whether the fixed effect or random effect model is best used in estimating panel data. The Lagrange Multiplier test is used to choose whether to use the random effect or common effect model. While testing this classic assumption is intended to find out and test the feasibility of a regression model to ensure that in the regression model used there is no multicollinearity, autocorrelation and heteroscedasticity. Tests of classical assumptions that are used are Normality Test, Multicollinearity Test, Autocorrelation Test and Heteroscedasticity Test.
In this study, the model used is panel data regression analysis. It is used to test the relationship and influence that result from several independent variables on one dependent variable. The regression model used to test the hypothesis in this study has been formulated as follows:

9) \[ ERC = \beta_0 + \beta_1 \text{ROE} + \beta_2 \text{BETA} + \beta_3 \text{DER} + \beta_4 \text{PRST} + \varepsilon \]

Where as:

- \( ERC \) = Earnings Response Coefficient
- \( \text{ROE} \) = Profitability
- \( \text{BETA} \) = Systematic Risk
- \( \text{DER} \) = leverage
- \( \text{PRST} \) = Earning Persistence
- \( \beta_0 \) = Constant
- \( \beta_{1,2,3,4} \) = Coefficient of variable
- \( \varepsilon \) = Error Component

Meanwhile Panel Data Regression Analysis is also used with the help of the software, Eviews analysis tools, to help process research data in the form of panel data.

4. Result & Discussion

To determine the fixed effect model or the most common effect that is best used in estimating panel data, the author performs the Chow Test. Based on the results of data processing, it shows that the probability of cross section F is 0.2129 or > 0.05, which means that H0 is accepted, and Ha is rejected, so it can be concluded that the 'common effect' model that is used in this study is compared to fixed effects to estimate panel data. The next step, the Lagrange Multiplier Test is used to choose whether the random effect or common effect model is best used. Based on the results of data processing, it shows that the probability value of the Breusch - Pagan cross section is 0.6970 > 0.05 therefore H0 is accepted and Ha is rejected, which means that the common effect model is properly used compared to the random effect to estimate panel data. The Hausman test is not carried out because the chosen model is a common effect model.

Meanwhile based on the results of the Classic Assumption Test and data processing, the results of the normality test after the outlier show that there are 66 valid samples. To find out whether the data are normally distributed or not, the probability value of Jarque-Bera is compared to alpha level of 5%. The normality test that has been done shows that the probability value of Jarque-Bera is 0.4303493 > 0.05, meaning that the data is normally distributed. Whereas in the Multicollinearity Test, which is included in table 4.1 below, it can be seen that the figures for Profitability (X1), Systematic Risk (X2), Leverage (X3) and Earnings Persistence (X4) < 0.80. The test results identified that there was no multicollinearity among the independent variables of the study.
Table 4.1: Multicollinearity Test Results

<table>
<thead>
<tr>
<th></th>
<th>ROE</th>
<th>BETA</th>
<th>DER</th>
<th>PRST</th>
</tr>
</thead>
<tbody>
<tr>
<td>ROE</td>
<td>1.000</td>
<td>-0.314</td>
<td>0.059</td>
<td>0.135</td>
</tr>
<tr>
<td>BETA</td>
<td>-0.314</td>
<td>1.000</td>
<td>0.299</td>
<td>-0.209</td>
</tr>
<tr>
<td>DER</td>
<td>0.059</td>
<td>0.299</td>
<td>1.000</td>
<td>0.023</td>
</tr>
<tr>
<td>PRST</td>
<td>0.135</td>
<td>-0.209</td>
<td>0.023</td>
<td>1.000</td>
</tr>
</tbody>
</table>

In the Heteroscedasticity Test, the results of data processing show that the probability value of profitability variables, systematic risk, leverage and persistence of earnings are 0.4838, 0.0772, 0.2139 and 0.7128 respectively. These results indicate that the significance value of all the independent variables with absolute residuals is more than 0.05, it can be concluded that the data in this study have similarities in the variance in the regression function or there is no occurrence of heteroskedasticity. For the Autocorrelation Test, the Durbin-Watson value in this study was 1.852517. The number of samples used in this study is 66 samples with the number of independent variables tested is 4 so that the dU value in the Durbin-Watson table is 1.7319 and the 4-dU value is 4-1.7319, which is 2.2681. The DW value in this study lies between the dU and 4-dU values, namely 1.7319 < 1.942 < 2.2681. These results indicate that research is free from problem of autocorrelation. The empirical results will be presented below using regression analysis, to confirm four hypotheses (H1, H2, H3 & H4) above, especially to assess the relationship between the independent variables and the dependent variable used in this study.

In the univariate technique, t-test is used to test the statistical significance of the difference between the mean values of the four groups and is used to test the factors that distinguish individuals from the ratio between groups. The empirical study found that the four mean values of the four significant one-tail variables at the significance level were 0.25. The value of 't' of the four variables is greater than the value of 't' tabulated. In table 4.2 below, it can be seen that the coefficient of profitability as measured by Return on Equity (ROE) shows a positive relationship to ERC. To obtain t table, the formula used is \((a / 2; n-k-1) = \(0.05 / 2; 66-4-1\) = (0.025; 61). Profitability has a t count of 0.616555 < t table value of 1.99962 with a probability value of 0.5398 > \(\alpha = 0.05\). So, it can be concluded that H0 is accepted and Ha is rejected, which means that profitability has no significant effect on ERC.

The systematic risk coefficient measured by beta indicates a negative relationship to the ERC. Systematic risk has a t count of 2.2446459 > t table value of 1.99962 with a probability value of 0.0283 < \(\alpha = 0.05\). Therefore, it can be concluded that H0 is rejected and Ha is accepted, which means that systematic risk has a significant effect on ERC. The leverage coefficient as measured by the Debt Equity Ratio (DER) shows a positive relationship to the ERC. Leverage has a t count of 2.632122 > t table value of 1.99962 with a probability value of 0.0107 < \(\alpha = 0.05\). Thus, it can be concluded that H0 is rejected and Ha is accepted, which means that leverage has a significant effect on ERC; and the earnings persistence coefficient shows a negative relationship to the ERC. Earnings persistence has a t count of 2.217877 > t table value of 1.99962 with a probability value of 0.0303 < \(\alpha = 0.05\). So, it can be concluded that H0 is rejected and Ha is accepted, which means that earnings persistence has a significant effect on ERC.
After analyzing and recognizing discrimination and predictive power based on univariate, the next attempt was to test the hypotheses mentioned above based on multivariate analysis. Efforts to obtain linear combinations of variable characteristics are best used. After the discriminant coefficient value is determined, it is possible to calculate the discriminant to one group based on the score produced.

### 4.1 Earnings Response Coefficient (ERC)

Overall regression shows the direction of influence of each variable in the research model. The results of data processing obtained F count value of 3.480, while the F table can be searched with df1 (number of variables - 1) = 4 and df2 (n-k-1) = 61 which obtained F table amount of 2.52. From the table above, it shows that F count 3.480 > F table 2.52 with a significance level of 0.012628. The significance level is smaller than 0.05, which can help conclude that the regression model that is reasonably feasible is used to explain the effect of profitability, systematic risk, leverage and earning persistence on Earnings Response Coefficient (ERC).

The test results of the coefficient of determination indicate that the adjusted R2 value is 0.132402 and the R-squared value is 0.185793. The r-square value ranges from 0-1. The result of r-square which approaches 0 means that the independent variable has a very weak power in explaining the dependent variable. Adjusted R2 value is 0.132402 or 13.24% which indicates that the Earnings Response Coefficient (ERC) variable can be explained 13.24% by profitability variables, systematic risk, leverage, and earning persistence in this study. While the remaining 86.76% is explained by other variables outside of this study, such as auditor specialization, company growth, CSR disclosure, growth opportunities, company size, timeliness of information and others. Based on the hypothesis testing that has been done, the multiple linear regression equation of this study are as follows:

\[
\text{Y(ERC)} = 0.132 + 0.054 \times \text{ROE} - 0.126 \times \text{BETA} + 0.039 \times \text{DER} - 0.033 \times \text{PRST}
\]

Based on the tests that have been conducted, the results of this study indicate that the variable profitability (ROE) has a significance level of 0.540 greater than 0.05. Therefore, the first hypothesis (H1) is rejected, meaning that profitability does not have a significant effect on Earnings Response Coefficient (ERC). This shows that companies that have high profitability measured by equity do not necessarily have a high ERC because investors are not fixated to take economic decisions only by profitability factors. The results of this study are in line with research conducted by Alkartobi (2017), Fauzan and Purwanto (2017), and Tania (2018) who found that profitability did not significantly influence ERC. The results of this study contradict the theory which states that the market response is
influenced by the amount of high profitability. It claimed that the higher the profitability, the market response to the company also increases. This research proves that the rate of return on equity does not affect investors in making decisions, regardless of the size. The results of this study are different from the results of research conducted by Mulianti and Ginting (2017) who found that profitability significantly affects ERC.

Based on the testing that has been done, the results of this study indicate that the systemic risk variable (BETA) has a significance level of 0.028 smaller than 0.05. Thus, the second hypothesis (H2) is accepted, meaning that systemic risk has a significant effect on Earnings Response Coefficient (ERC). A negative sign on the regression coefficient indicates that systemic risk has a negative relationship with ERC. The results of this study are in line with the research conducted by Delvira and Nelvirita (2013) and Imroatussolihah (2013) which found that systematic or beta risk had a significant and negative effect to ERC. The results of this study are different from the results of research conducted by Fauzan and Purwanto (2015) and Yanti (2015) who found that systematic risk did not have a significant effect on ERC.

This study indicate that the leverage variable (DER) has a significance level of 0.011 smaller than 0.05. Hence, the third hypothesis (H3) is accepted, meaning that leverage has a significant effect on Earnings Response Coefficient (ERC). A positive sign on the regression coefficient indicates that leverage has a positive relationship with ERC. The existence of this significant influence indicates that leverage affects market reactions at the time of the announcement of financial statements. This result is in accordance with the theory put forward by Etty (2008) that high leverage does not only mean that debtholders will be benefitted, but shareholders will also get a share of the company's profits. Because regardless of the size of profits obtained by the company, debtholder will receive a relatively fixed interest, so that the amount of profits the company will receive will be responded positively by the shareholders. The use of debt can provide benefits in the form of tax protection (Delvira and Nelvirita, 2013). This is because interest payments are a tax deduction, so the profits obtained by investors will be greater. Companies use leverage to aim for profits obtained to outweigh the cost of assets and sources of funds. In other words, the greater the debt is, the higher the ability of the company to increase their profits obtained, so that it will also affect the profits that will be obtained by shareholders.

The results of this study are in line with the research conducted by Arif (2016), Alkartobi (2017), and Lukman (2014) who found that leverage has a significant and positive effect on ERC. This is in accordance with the tradeoff theory which assumes that to maximize market value, companies use debt in financing their additional investments because financing with debt can obtain tax deductions while maintaining the number of outstanding shares. According to Fitriyana (2011), investors will not always react negatively to the increase in profits of the company that has high debt. This is because investors also consider the prospects and performance of the company in the future instead of just looking at the debt level of the company. The results of this study are different from the results of research conducted by Romasari (2013) who found that capital structure (leverage) did not significantly influence ERC.

The results of this study indicate that the earnings persistence variable (PRST) has a significance level of 0.030 smaller than 0.05. Thus, the fourth hypothesis (H4) is accepted,
meaning that earnings persistence has a significant effect on Earnings Response Coefficient (ERC). A negative sign on the regression coefficient indicates that earnings persistence has a negative relationship with ERC. The results of this study are in line with the research conducted by Wulandari (2016) and Arif (2016). This is because some companies in this study obtained a decrease and increase in profit drastically from year to year during the study period, so that the resulting earnings persistence is negative and investors tend to prefer short term when it comes to obtaining capital gains, so that earning persistence negatively affects ERC. This is different from previous studies which stated that earnings persistence has a positive effect on ERC. The results of this study are different from the results of research conducted by Imroatussolihah (2013) and Romasari (2013) which found that earnings persistence had no effect on ERC with the explanation that investors did not respond to earnings changes even though the company had shown positive earnings persistence for the future.

5. Conclusion

Based on the results of the study, it can be concluded that profitability does not significantly influence Earnings Response Coefficient (ERC). This shows that companies that have high profitability measured by equity do not necessarily have a high ERC and influence investor decisions. Systematic risk has a significant negative effect on Earnings Response Coefficient (ERC) because companies that have high risks tend to have a small reaction from investors when its financial statement is announced, so the resulting ERC will be lower. Leverage has a significant positive effect on Earnings Response Coefficient (ERC). This is in accordance with the tradeoff theory which assumes that to maximize market value, companies use debt in financing their additional investment because financing with debt can obtain tax deductions. These findings indicate that investors will not always react negatively to the increase in profits of a company that has a high debt, but rather consider the prospects and performance of the company in the future compared to just looking at the company’s debt level.

Earnings persistence has a significant negative effect on Earnings Response Coefficient (ERC). The argument that can be explained here is that several companies in this study have drastically reduced and increased profits over the years during the study period so that the resulting earning persistence is negative, and investors tend to focus on the short term to obtain capital gains. The results of this study can hopefully be used as useful additional information in setting policies related to investment in each company to improve company performance and then can be used as an evaluation tool for its performance so far. For investors and prospective investors, it is recommended to consider matters relating to investment decision making, because investors will be faced with a large investment risk if they want large profits, because almost all investments contain uncertainty.

6. Future Research

For future research, the authors expect the next researchers to use a sample of research from all public companies that are in the Indonesia Stock Exchange. Because by not focusing on one type of company or industry, it is expected to obtain coefficients that
reflect the reaction of the capital market as a whole. Likewise, to extend the period of observation, add variables to be used such as auditor specialization, company growth, disclosure of CSR, growth opportunities, company size, timeliness of information and other variables, so the results will enrich the discussion of earnings response coefficient.

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