ANALYZING FACTORS THAT INFLUENCE EARNINGS RESPONSE COEFFICIENT IN THE MANUFACTURING COMPANY LISTED IN INDONESIA STOCK EXCHANGE DURING 2006-2010

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This thesis entitled "ANALYZING FACTORS THAT INFLUENCE EARNINGS RESPONSE COEFFICIENT IN THE MANUFACTURING COMPANY LISTED IN INDONESIA STOCK EXCHANGE DURING 2006-2010" prepared and submitted by Stephanie Angelia in partial fulfillment of the requirements for the degree of Bachelor of Science in the Faculty of Economic has been reviewed and found to have satisfied the requirements for a thesis fit to be examined. I therefore recommend this thesis for Oral Defense.

Cikarang, Indonesia, January 28th, 2013

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CHAPTER I

INTRODUCTION

1.1 Background of Study

Investment is the way of making money by used money. Lots of investors take the risk of their money in stocks to get benefit in future, either in short term period or long term period. The short term period player is called as trader, while the other is investors. However, the difference between trader and investor is not the period only, but how they play the stocks. Traders and investors must know the role and act accordingly. Traders can not act like investors and investors must not think like traders.

Traders tend to hold stock for a short period of time. When the stock is bearish, traders will immediately sell it and buy other profitable stocks because they used to cut losses and take profits quickly. Commonly, traders have plan that tell them when to buy and sell. Traders know what to do if the trade goes against them, and also know when the trade is profitable. They use technical indicators and charts in analyzing the stocks (Russell, n.d.). Traders used to observe the market movement from years then analyze it. Based on the previous movement, traders predict the projected stocks return.

Meanwhile, investors likely buy and hold stock. They analyze the fundamental of corporate, like the corporate performance from year to year. Russell stated that investors focus on accumulated profit after years. They will not exit the market because of losses. Typically, investors will hold the stock even it is falling because they believe it will bounce back and win the market.

However, things could go wrong. FibTimer (www.fibtimer.com) stated that the S&P 500 declined by 50% and Nasdaq declined by 80% in 2000-2002. To regain the
losses, it will take 100% gain who invested in S&P 500 and 250% gain who invested in Nasdaq. Therefore, it is not only traders who need strategy to play the stock, but investors also need strategy which is different from traders’.

Commonly, issues from digest news stories, company websites, social network, and others may be sentiment to move the market. Bagehot (1971) said that stock price is determined by the information or issues. When there is a key issue of emitter, the stock price will be influence. It could go up or fall down.

Either trader or investor, they will be responsive when the earnings announcement comes. As the Statement of Financial Accounting Concept (SFAC) No. 1 stated that the earnings released is necessary to predict not only the asset-liabilities and cash flow, but also functional as the information for investment and credit. From the earnings released, investors can examine some factors by calculating through ratio, like liquidity ratio, debt ratio, dividend payout ratio, and many others. That ratio may be needed in analyzing how the performance of stock is. They also commonly have set the expected earnings, in order to project the stock return. Through the earnings announcement, trader and investor will know what decision needs to be taken. As the earnings show good performance of the company, investor will invest more and vice versa. Hence, the earnings announcement has influence on the market response, which will influence the stock price. The information of the earnings announcement may vary the market response (Jang et al, 2007).

Nayar and Rozeff (1992) stated that Earnings Response Coefficient (ERC) is a coefficient that indicates how big the response of stock prices for a change in earnings. ERC can define how significant the influence of earnings announcement toward the return. Higher earnings will lead to higher return and vice versa.

Unfortunately, the financial statement in the earnings announcement could be manipulated by the agent (the management). The agent is hired by the principals of the company to manage and take decision on the principal’s behalf. Here, the principal refers to shareholders, while the agent is the company’s executive. Since the
agent manages the whole company, the agent knows deeply about the company, while the principal does not. Therefore, the agent needs to inform the company’s performance through the annual report, financial statement, or earnings announcement. However, agent sometimes manipulates the information to deliver the good performance to principal.

PT Kimia Farma Tbk (KAEF) has ever marked up its financial statement of 2001. KAEF reported net asset of Rp 132billion. BAPEPAM saw this earnings surprise was not reliable and decided to check on KAEF. Then, BAPEPAM found that KAEF’s net asset was actually Rp 99.56billion. It was marked up by Rp 32.44 billion. Then, KAEF was commanded to pay Rp 1billion as the sanction of the manipulation financial statement.

From the agency conflict above, the agent, which refers to the management of KAEF, seems to be opportunistic for itself in the earnings announcement (Shapiro, 2005). The earnings marked up will lead to low earnings quality (Novianti, 2012). Investors commonly prefer to keep away from company with low earnings quality, in order to prevent from being tricked by the agent. If investors do not interest in anymore, the stock price could fall down. Moreover, after the marked up got caught and the company was asked to restate the earning, the restatement announcement will influence the market response negatively (Romanus, 2007).

Either investors or traders have to analyze the factors that influence the earnings quality in order not to be tricked by the manipulation of financial statement in the earnings announcement. According to Scott (2003) stated in his book “Financial Accounting Theory” that ERC is influenced by Earnings Persistency, Firm Size, Growth Opportunity, Leverage and Systematic Risk. His theory is constant with the research by Collins and Kothari (1989), who found Earnings Persistency, Firm Size and Growth Opportunity influence ERC. Similar with theory by Scott (2003), Mulyani et al (2007) stated that Earnings Persistency, Firm Size, Growth Opportunity, Leverage and Systematic Risk influence the ERC. The research by
Hapsari (2012), who relied on the theory by Scott (2003), found Growth Opportunity, Leverage and Systematic Risk influence the earnings significantly. Furthermore, Hapsari (2012) add some improvement by testing other factors on ERC, and found that Board Composition also influences the ERC.


However, those researchers have different research result. Hapsari (2012) found that Earnings Persistency and Firm Size don’t influence on the ERC significantly. Sulistiyono (2010) and Ardilla (2012) stated that Leverage and Earnings Growth (Growth Opportunity) has no influence on the earnings quality. Furthermore, the Liquidity is rarely to be taken as the factor. Thus, researcher decided to test the influence of Earnings Growth, Earnings Persistency, Firm Size, Leverage, and Liquidity on the earnings quality measured by ERC.

1.2 Problem Identified

Investors expend lots of fund in investment in order to get high return by investing in good and healthy company. Good investment will give worth return. But if investors put fund in unhealthy company, the fund might not give return or gain, but loss. Therefore, investors should analyze the company’s health through its financial statement. There are some factors that influence the stock price which is measured by ERC:
1. Earnings Persistency
2. Growth Opportunities
3. Systematic Risk
4. Investment Opportunity Set (IOS)
5. Auditor Quality  
6. Firm Size  
7. Accruals Quality  
8. Leverage  
9. CSR Disclosure  
10. Board Composition

Those factors have been tested by other researchers and gave different results on some factors. In this research, researcher would like to test the theory of Scott (2003) that said Systematic Risk, Earnings Persistency, Firm Size, Growth Opportunity, and Leverage influence the ERC. However, researcher does not test on Systematic Risk because it refers to the market risk, not the risk that can be calculated from data in financial statement. Furthermore, researcher would like to improve by adding another factor which is Liquidity, as Subiyantoro (1997) stated that it influences ERC significantly. Indeed, researcher takes five factors as the independent variable, which are Earnings Persistency, Firm Size, Growth Opportunity, Leverage, and Liquidity. Then, researcher takes ERC as the dependent variable to calculate the response of changes in financial statement on stock price.

1.3 Statement of Problem
1. Is there significance influence of earnings persistency, firm size, growth opportunity, leverage, and liquidity simultaneously on the ERC?  
2. How significant is the partial influence of earnings persistency, firm size, growth opportunity, leverage, and liquidity on the ERC?

1.4 Research Objectives
1. Identify and analyze the significance influence of earnings persistency, firm size, growth opportunity, leverage, and liquidity simultaneously on the ERC.  
2. Identify and analyze how significant the partial influence of earnings persistency, firm size, growth opportunity, leverage, and liquidity on the ERC.
1.5 **Significance of Study**

1. **For Society**
   a. To remind investors and traders of the earnings report manipulation.
   b. To help investors and traders in decision making around the earnings announcement date.
   c. To provide necessary references for investors or traders.

2. **For Other Researcher**
   a. To be the comparison with other research on ERC
   b. To develop the research with different research object.
   c. To provide reference for other researchers who conduct research on related topic.

3. **For Company**
   a. To remind company to have integrity in reporting the financial statement.
   b. To provide information about the most influential factors that will affect the market response on the earnings announcement.

1.6 **Theoretical Framework**

The announcement of company’s earnings used to lead a positive or negative response to the market reaction, based on Cho and Jung (1991). Therefore, the earnings seem to have the power of response. The slope coefficient which measures the relations between company’s earnings and the stock return is ERC (Scott, 2003).

Earnings Persistency, Growth Opportunity, Firm Size, Leverage and Systematic Risk influence the ERC (Mulyani et al, 2007). This research was supported by Scott (2003) theory who found that Earnings Persistency, Firm Size, Growth Opportunity, Leverage and Systematic Risk influence ERC on his book “Financial Accounting Theory”. Constant with the theory, the research by Hapsari (2012) who found Board Composition, Growth Opportunity, Leverage and Systematic Risk influence ERC significantly.
Based on the research by Subiyantoro (1997) in Susilowati (2008), Liquidity, Leverage, and Firm Size influence the ERC. Higher level of Liquidity, Leverage, and Firm Size could lead to higher ERC. Mostly investors look for the company with high liquidity since it will give less risk. Thus, the researcher believe that Liquidity could be one of the factors that defining the ERC.

Researcher takes five factors as the independent variables, which are Earnings Persistency, Firm Size, Growth Opportunity, Leverage, and Liquidity. Those variables will be tested to know how influential those variables toward the dependent variable which is ERC. From six tested variable of previous research, researcher does not take the systematic risk as the variable since systematic risk is actually market risk, like interest rates and recession. It does not literally show the company’s performance, instead it may influence the company’s performance. Thus, researcher assumes the systematic risk is constant.
Figure 1.1  Theoretical Framework

Source: self-constructed
1.7 **Scope and Limitation**

Referring to the research title, there would be several limitations to pursue in depth analysis of the topic being investigated. From those factors stated that influence ERC above, this research is delimited to the following factors, which are Earnings Persistency, Firm Size, Growth Opportunity, Leverage, and Liquidity. In calculating the value of Earnings Persistency and ERC of each company, researcher will use the simple regression. Here, researcher limits the data is only five (one data in each year) to get the value of EarningsPersistency and ERC of the company during 2006 - 2010.

The scope of the research is taken from Indonesian manufacturing company that listed in Indonesian Stock Exchange (IDX). Researcher takes the manufacturing company as the sample since the ERC of manufacturing company is lower than non-manufacturing company (Susilowati, 2008). Thus, researcher wants to figure out how significant the influencing factors can give impacts on the stock price through ERC. The period of the study is also delimited during period 2006 – 2010.

1.8 **Definition of Terms**

1. **Earnings Response Coefficient (ERC)**

According to Collins and Kothari (1989), ERC is defined as

“The price change including by one-dollar stock to current earnings and is equal to one plus the present value of the revisions in expected future earnings caused by this stock”.

Indeed, ERC is measurement of the market response toward the earnings information.

2. **Leverage**

Based on the Investopedia (www.investopedia.com), leverage is the use of various financial instruments or borrowed capital, to increase the potential return of an investment.
3. **Earnings Growth**

Earnings growth defines the increasing or decreasing net income in some specific period.

4. **Earnings Persistency**

Earnings persistency is the capability of the company to earn consistent earnings from accounting to accounting period, which is commonly year to year.

5. **Firm Size**

The firm size is the relative size of the company for the government records. Investors commonly prefer to invest in the big company since they assume the big company is able to maintain and develop the firm more rather than the small company.

6. **Liquidity**

Liquidity is the capability of company to cover their obligation (short term or long term debt) with their asset. Nikolau (2009) stated that the inability would render the financial entity illiquid.
CHAPTER II

LITERATURE REVIEW

2.1 Investment

Investment is the common word that people used in describing a fund that they expend with hope that they will get profit in the future. That is the general definition of investment. People who study in college could be said they invest in education to get better knowledge. People who buy a stock also could be said is doing investment. Thus, here the meaning of investment has been muddle. But in this research, investment refers to a purchased of monetary asset with the hope that it will generate profit, appreciate or even be sold in higher price in the future, based on Investopedia (www.investopedia.com).

There are many types of investment. Based on the value of the investment, investment is divided into autonomous investment and induced investment. Autonomous investment is the investment which the value does not change although the emitter’s income changes, while induced investment will have change in investment value as the emitter’s income changes. There are also planned investment and unplanned investment, based on how the investor’s investment plan. Based on the total amount of money invested, there are gross investment and net investment. Based on the product, investment divided into two types which are financial investment and real investment. Financial investment is investing in financial instruments like stocks, bonds, and other securities, while real investment is investing in building, land, property, etc. For this research, researcher will discuss and elaborate deeply about the financial investment, especially in equity market.
2.2 Financial Investment

In financial investment, there are two markets, which are money market and capital market. Both markets sell products with the stipulated time frame. Both markets also apply the same concept which is higher risk you have, higher return you will get. The differences between money market and capital market are:

a. Instrument

The money market instruments are call money, collateral loans, acceptances, bills of exchange. The instrument is more homogeneous than the instruments in capital market. Too much diversity might be a problem for investors. The capital market instruments are stocks, bonds, securities of the government, mutual funds, options, derivatives, etc.

b. Maturity Period

Money market maturity period is shorter than capital market maturity period. The purpose of company issues in money market is to get working capital, while purpose of issues in capital market is to get the fixed capital, like to buy land, machinery, etc.

c. Institution

The institutions of money market are central bank, commercial banks, acceptance houses, non-bank financial institutions, bill brokers, etc. The central bank has a role in the money market and the policy of central bank impacts to the money market directly, then the influence on money market sometimes could impacts on the capital market. The institutions of capital market are stock exchanges, commercial banks, insurance companies, and other non-bank institutions.

d. Risk

Since the maturity of money market is short, then the risk is also minimized. Thus, money market has lower risk than capital market.

This research tested the market response on the capital market, especially in the equity market like stocks. Thus researcher will explain more about the capital market and its instruments.
2.3 Capital Market

Capital market seems similar with common market like traditional market. There are the buyer, seller, and of course the bidding price. The differences are products and the fact that capital market has strong potency in developing the national economic.

According to Law No. 8 Year 1995 concerning Capital Market (UUPM),

“Capital market is defined as an activity concerned with the public offering and trading of securities, the public company relating to the issuance of securities, as well as the institutions and professions related to securities.”

In London South East Finance Glossary (www.lse.co.uk/FinanceGlossary.asp), capital market is defined as

“In which large amounts of money (capital) are raised by companies, governments and other organizations for long term use and the subsequent trade of the instruments issued in recognition of such capital.”

Meanwhile, Darmadjji and Fakhruddin (2001) defined the capital market as

“Pasar yang terdiri dari beberapa instrumen jangka panjang yang dapat diperjual-belikan, baik dalam bentuk utang maupun kepemilikan.”

It defines as the market that trades any financial instruments, which usually is played for long period of time, either in the form of debt or equity. There are two type of capital market, which are primary market and the secondary market. Primary market is the market in which investors can get the first opportunity to buy a newly issued security, as the company sells its stock to the public through its Initial Public Offering (IPO). Once the initial sale is completed, the security will be traded in the secondary market.
2.4 Stock

Stock is defined as the ownership of a company with each share representing a piece of ownership (Pankow, 2005). As you own more shares, the more ownership of company you own, and in returns, you will earn more dividends when the company makes profit. In the financial world, ownership is called equity.

Darmadji and Fakhruddin (2001) stated that

"Wujud saham adalah selembar kertas yang menerangkan bahwa pemilik kertas tersebut memiliki perusahaan yang menerbitkan surat berharga tersebut. Porsi kepemilikan ditentukan dengan seberapa besar penyertaan yang ditanamkan di perusahaan tersebut."

Darmadji and Fakhruddin (2001) also said that the stock is formed in a piece of paper. Owning this paper means owning the company who issued it. The ownership proportion is defined by how big the investment is.

Generally, stock is differed into two types, based on its ownership, which are common stock and preferred stock (Darmadji and Fakhruddin, 2001). Typically, individual owns and trades the common stock. The common stockholder may have more rights and privilege. However it will get dividend after the preferred stockholder since the preferred stock dividend has to be paid regularly. The preferred stock refers to as the combination of bond and common stock since it will get the interest regularly. The dividend of preferred stock is fixed, so does the price. However, there is only about 5% of company’s capital that is raised through preferred stock (Mishkin and Stanley, 2006). The preferred dividend is not tax-deductible to the company. Thus, it is costly to the company.

2.3 Financial Statement

Any investors would like to know about the performance of company they owned. They could find it out in the financial statement. Investors can compile and analyze some information in it, like the earnings growth, liquidity ratio, profitability
Financial statement is the annual report that shows the financial report, the elaboration about the existing performance, and the prospect in the future (Weston and Brigham, 1990).

According to Baar (2003), financial statement is the way to report financial information about the business or organization. The information can be used by the people within the company and other people outside the company, including investors, bankers, and other parties.

Baar (2005) concluded the 3 most common types of financial statements are:

a. Balance Sheet

Balance sheet shows the company’s financial health at one particular point in time. The balance sheet equation: Asset = Liabilities + Equity

![Sample of Balance Sheet](www.wisc-online.com)
b. **Cash Flow Statement**

Cash flow statement shows the cash in and cash out in a particular time. This statement reflects when the cash is received, when it is paid out, and what is left afterward to carry over to the following month. Investors used to see the “Ending Cash Balance”. They could see the trend of growing or maintaining throughout the year.

![Sample of Cash Flow Statement](source: www.wisc-online.com)

<table>
<thead>
<tr>
<th>REVENUE AND EXPENSES CASH ON HAND</th>
<th>January</th>
<th>February</th>
<th>March</th>
<th>April</th>
<th>May</th>
<th>June</th>
<th>July</th>
<th>August</th>
<th>September</th>
<th>October</th>
<th>November</th>
<th>December</th>
</tr>
</thead>
<tbody>
<tr>
<td>Cash to Cash Investments</td>
<td>$3</td>
<td>-243</td>
<td>418</td>
<td>676</td>
<td>6,536</td>
<td>6,447</td>
<td>4,724</td>
<td>4,850</td>
<td>4,496</td>
<td>4,482</td>
<td>6,539</td>
<td></td>
</tr>
<tr>
<td>Cash to Cash balance</td>
<td>$3</td>
<td>-243</td>
<td>418</td>
<td>676</td>
<td>6,536</td>
<td>6,447</td>
<td>4,724</td>
<td>4,850</td>
<td>4,496</td>
<td>4,482</td>
<td>6,539</td>
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</tr>
<tr>
<td><strong>Total Cash</strong></td>
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<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
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<td></td>
</tr>
<tr>
<td>Cash to Sales</td>
<td>$5,000</td>
<td>$5,500</td>
<td>$5,000</td>
<td>$4,000</td>
<td>$5,500</td>
<td>$6,000</td>
<td>$6,500</td>
<td>$6,000</td>
<td>$5,500</td>
<td>$6,000</td>
<td>$5,500</td>
<td></td>
</tr>
<tr>
<td>Cash to Paid</td>
<td>$5,000</td>
<td>$5,500</td>
<td>$5,000</td>
<td>$4,000</td>
<td>$5,500</td>
<td>$6,000</td>
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<td>$6,000</td>
<td>$5,500</td>
<td>$6,000</td>
<td>$5,500</td>
<td></td>
</tr>
<tr>
<td>Add/Receivables</td>
<td>$0</td>
<td>$50</td>
<td>$50</td>
<td>$50</td>
<td>$50</td>
<td>$50</td>
<td>$50</td>
<td>$50</td>
<td>$50</td>
<td>$50</td>
<td>$50</td>
<td></td>
</tr>
<tr>
<td>Investment Income</td>
<td>$100</td>
<td>$100</td>
<td>$100</td>
<td>$100</td>
<td>$100</td>
<td>$100</td>
<td>$100</td>
<td>$100</td>
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</tr>
<tr>
<td><strong>Total cash</strong></td>
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</tr>
<tr>
<td><strong>Total cash income</strong></td>
<td>$850</td>
<td>$850</td>
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<td>$850</td>
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<td>$850</td>
<td>$850</td>
<td>$850</td>
<td>$850</td>
<td>$850</td>
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</tr>
<tr>
<td>Add/(--)</td>
<td>$2,200</td>
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<td>$2,200</td>
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<td>$2,200</td>
<td>$2,200</td>
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</tr>
</tbody>
</table>

**Figure 2.2 Sample of Cash Flow Statement**

Source: www.wisc-online.com

c. **Income Statement**

In the income statement, people could see how the company is doing over a period of time. It shows how the revenues taken in, the expenses and what income is left over. Sometimes, it is called Profit or Loss Statement. From the income statement, investors can see whether the company gets gains or loss during the specific period.

Investors likely are interested in the income statement, especially part that deals with the operating of the company. Investors are able to know the revenues and expenses of the company.
2.6 Earnings Response Coefficient (ERC)

The reaction of market response to the earnings released by company can be measured with the ERC. Ball and Brown (1968) in Hapsari (2012) can identify and analyze the market response toward the earnings information using the ERC.

Scott (2003) also stated that ERC could measure how much stock returns in response to earnings figures reported by the companies issuing those securities. The proportion of ERC is depended on how strong the response that reflects from the earnings information. Therefore, ERC is the proxy that can measure the earning quality (Collins et al, 1984). Furthermore, the qualified earnings is the earning that contain of little perception disruption and can reflect the real financial performance of the company (Chandrarin, 2001)
Investors definitely have set their expectations on the returns before it is announced by company. When the annual earnings announced, there will be good news if the actual earnings is higher than the expectation. Then, investors will revise upward their expectation toward the earnings and performance of companies and followed by buying the stock of company (Hapsari, 2012). The other hand, as the actual earnings is lower than the expectation, it is bad news. Investors will revise downward and decide to sell the stock.

As the stock is bought and sold, the price of stock will change and create a movement. The increasing and decreasing of stock price will be accumulated in the Cumulative Abnormal Return (CAR), which will become the proxy to measure the earnings quality through ERC.

2.7 Abnormal Return

NASDAQ (www.nasdaq.com/investing/glossary/) defined abnormal return as the component of the return that is not due to systematic influences (market-wide influences). In other words, the abnormal return is the difference between the actual return and normal return which is the expected return from market movements (normal return). According to Jogiyanto (2008), abnormal return is the difference between the excess return and normal return.

However, abnormal return is not always positive, it could also be negative. The abnormal return will generate a positive when the actual return is higher than the expected return. For example, the actual return is $10 billion, while the expected return is $9.75billion. Then, the abnormal return will be $250 million. On the other hand, when the expected earnings will grow 8% and the actual return grows only 5%, then this would generate a negative abnormal return of 3%.

In this research, the abnormal return represents the stock return. The amount of stock return depends on the market response (represented by the ERC) and company’s earnings, which is represented by the unexpected return.
2.8 Unexpected Earnings

Unexpected earnings is used to be a surprise element for investors since it is the difference between actual earnings and expected earnings (Fan-fah, Mohd, and Nasir, 2008). The unexpected earnings got from the difference between the present earnings and the previous earnings (the benchmark for the expected earnings). Investors will react towards the surprise. The reaction can be seen in the stock price movement through the trading activity. The announcement of unexpected earnings will influence the market response. The market will response to the information by taking decision to buy or sell, then it will lead to stock price movement. Finally, the stock return will be got by calculating the stock price movement.

2.9 Earnings Persistency

Chandrarin (2003) defines the earnings persistency as the slope coefficient that measures the difference net income from this period and previous period. The earnings persistence is measured to got the expected future earnings which is implied by the earnings innovation in current earnings related to the stock price changing (Scott, 2009 in Hapsari, 2012)

Francis et al (2006) could say the same with Chandrarin (2003). Earnings persistency is the view that the higher earnings quality will warranty the sustainable earnings. When the value of earnings persistency close to 1 (one), the earnings persistency is high and shows the earnings quality is high. Meanwhile, the low value of earnings persistency (close to zero) shows the earnings quality is low because it is implied the highly transitory.

2.10 Firm Size

Firm size shows how big the firm is. It is showed from the total asset, total sales, or the average of total asset. To measure the economy of a firm, the total asset is the proxy for firm size (Susilawati, 2008) because researcher would like to measure the economic size of the company. According to Chaney and Jeter (1991) in
Susilawati (2008), the firm size has positive correlation with the ERC. Consistently, Mulyani et al (2007) also found in their research that firm size could be one of determinants factors on ERC. The big firm size will provide more information rather than small firm. Therefore, investors are likely to invest and believe in the big firm size.

2.11 Growth Opportunity

Growth Opportunity is the common element that usually seen when people analyze the company performance. According to Scoot (2009), a company with higher opportunity to grow will have more ability to generate higher earnings in the future because they have bigger opportunity to invest in the next period. It is actually the same proxy as the Earnings Growth. The Investor Glossary (www.investorglossary.com) defines Earnings Growth as the key indicator for measuring the company’s success and the driving force behind stock price appreciation.

In determining the Growth Opportunity, other researchers like Mulyani et al (2007) and Purnamasari (2012) used the Market to Book Ratio. Commonly it is stated in the financial statement as the Price to Book Value (PBV). Market to Book Ratio is common formula used by the securities analysts to determine whether a stock is overvalued or undervalued. The stock is overvalued when the market value, which is got from the market capitalization, is higher than the book value, which is got from the historical value of total asset and total liabilities. When a company is overvalued, the stock price could fall since the market perceives the stock price is too expensive. However, high Market to Book Ratio also reflects the greater expected future gains because the company feels responsible to achieve the market value. When the company is undervalued, it means the company has the opportunity to grow its stock price since the actual book value is higher than the market value. Thus, the Market to Book Ratio could be used as the proxy to measure the Growth Opportunity by assessing through the stock price.
Collins and Kothari (1989) found that Growth Opportunity have a positive influence on the ERC. Company with high growth will easily attract investors to invest in it. Because investor feel secure and confident that in the future they will gain more dividend as the company invest more. Higher demand on that stock will lead to increasing stock price.

2.12 Leverage

Leverage is the use of cost in order to increase the profitability. When company own high leverage, it means it has high debt. But, a highly leveraged corporate is not always seen as bad corporate. With high leverage, corporate can manage their financial by investing their debt and give higher return. However, if the corporate can not manage it well, a bankruptcy could be the end.

As been mentioned by Damodaran (2001), a company who has fixed cost relative to total costs is said to have high operating leverage. This company with high operating leverage will also have higher variability in operating income rather than the company who is producing a similar product with low operating leverage. As other things remaining equal, the higher variance in operating income will lead to a higher beta of the company with the high operating leverage.

There are two types of leverage ratio, which are:

a. Debt Ratio

This ratio expresses the proportion of total debt compared to the total asset. Higher percentage tends to lead to higher financial risk.

b. Debt to Equity Ratio

This ratio is the comparison between total debt and equity in the company’s financial. It shows the capability of equity to cover all debts.

To calculate the leverage, Paramu (2006) and Indrajaya et al. (2011) chose the Debt Ratio instead of Debt to Equity Ratio. Since the researcher needs to analyze the level of risk of the company, researcher decides to use the Debt Ratio.
When the leverage is high, it means the investors take the higher risk by owning the stock. Meanwhile, the rational investors used to avoid in holding risk (Kusumo, 2008). Therefore, when the leverage is higher, the ERC is going lower.

2.13 Liquidity

Liquidity is defined as how easy and fast the asset can be sold in its worth price (Bodie et al., 2005). It is the essential thing that investors observe in an organized financial market. Even, the stock exchange dare to hire the “market maker” (party who is willing to buy or sell whenever the public wants to sell or buy) in order to maintain the liquidity.

In fact, investors commonly are targeting on liquid company. They can see from the Bid-Ask Spread (BAS). The lower bid-ask spread, the more liquid the company is. The lowest score of bid-ask spread is zero (0), which is when the highest selling price is equal with the lowest buying price. It means that the stock is really interesting.

When the bid-ask spread is getting higher, liquidity of the company is going worse. It shows that investors do not really interest on it anymore. Then, investors used to sell it, which leads to the decreasing stock price.

To count the liquidity of company, Jang et al. (2005) use the Current Ratio, since it can shows:

a. The capability of company to cover its own current debt
b. The capability of company to sustain losses
c. The capability of company to provide the reserve fund.

Current ratio can be gotten by dividing the current asset with the current debt. Higher current ratio reflects the higher capability of company to pay out its debt. It leads to better quality of earnings. Thus, the more liquid leads to higher ERC.
### Table 2.1 Factors that Influencing the ERC on the Company Listed in IDX

<table>
<thead>
<tr>
<th>Researcher</th>
<th>Sri Mulyani, Nur Fadjrih Asyik, and Andayani</th>
</tr>
</thead>
<tbody>
<tr>
<td>Year</td>
<td>2007</td>
</tr>
<tr>
<td>Research Object</td>
<td>Manufacturing companies listed in IDX on 2000 – 2005</td>
</tr>
<tr>
<td>Total Sample</td>
<td>51 companies</td>
</tr>
<tr>
<td>Dependent Variable</td>
<td>ERC</td>
</tr>
<tr>
<td>Independent Variable</td>
<td>Earnings Persistency, Capital Structure (Leverage), Systematic Risk, Growth Opportunity, Firm Size, and Audit Quality</td>
</tr>
<tr>
<td>Research Instruments</td>
<td>Multiple Regression Analysis</td>
</tr>
</tbody>
</table>
| Research Result                   | 1. Earnings Persistency, Capital Structure, Systematic Risk, Growth Opportunity, Firm Size influence the ERC.  
2. There are no correlation between audit quality and ERC. |
Table 2.2  Effect of Audit Firm Size on the ERC

<table>
<thead>
<tr>
<th>Researcher</th>
<th>Riyatno</th>
</tr>
</thead>
<tbody>
<tr>
<td>Year</td>
<td>2007</td>
</tr>
<tr>
<td>Research Object</td>
<td>Listed company in IDX from 1999 – 2000</td>
</tr>
<tr>
<td>Total Sample</td>
<td>64 companies</td>
</tr>
<tr>
<td>Dependent Variable</td>
<td>ERC</td>
</tr>
<tr>
<td>Independent Variable</td>
<td>Audit Firm Size as the proxy of Audit Quality</td>
</tr>
<tr>
<td>Research Instruments</td>
<td>Multiple Regression Analysis</td>
</tr>
</tbody>
</table>
| Research Result  | 1. The audit Firm Size is influencing the ERC.  
|                   | 2. There is no significant difference of ERC between the firm audited by big audit firm size and the firm audited by small audit firm size. |
### Table 2.3 Examining The Determinant Factors of ERC

<table>
<thead>
<tr>
<th>Researcher</th>
<th>Christine Dwikarya Susilowati</th>
</tr>
</thead>
<tbody>
<tr>
<td>Year</td>
<td>2008</td>
</tr>
<tr>
<td>Research Object</td>
<td>Listed company in IDX from 2000 – 2005</td>
</tr>
<tr>
<td>Total Sample</td>
<td>38 manufacture companies and 34 non-manufacture companies</td>
</tr>
<tr>
<td>Dependent Variable</td>
<td>ERC</td>
</tr>
</tbody>
</table>

#### Independent Variable

1. **Structure-related variables:**
   - Firm Size, Leverage, Firm Age, Ownership Dispersion, and Inventory Method
2. **Performance-related variables:**
   - Profitability Ratio and Liquidity Ratio
3. **Market-related variables:**
   - Industry Type, Audit Type, and Register Status in IDX

#### Research Instruments

- Multiple Regression Analysis

#### Research Result

1. Two of structure variables (Firm Size and Ownership Dispersion) have positive influence on ERC.
2. ERC of non-manufacture companies (property real estate industry) is higher than ERC of manufacture companies (consumption industry).
Table 2.4  **Influence of Firm Size, Capital Structure, and Growth Opportunity on ERC**

<table>
<thead>
<tr>
<th>Researcher</th>
<th>Agus Sulistiyono</th>
</tr>
</thead>
<tbody>
<tr>
<td>Year</td>
<td>2010</td>
</tr>
<tr>
<td>Research Object</td>
<td>Manufacturing company listed in IDX from 2006-2008</td>
</tr>
<tr>
<td>Total Sample</td>
<td>33 companies</td>
</tr>
<tr>
<td>Dependent Variable</td>
<td>ERC</td>
</tr>
<tr>
<td>Independent Variable</td>
<td>Firm Size, Capital Structure, and Growth Opportunity</td>
</tr>
<tr>
<td>Research Instruments</td>
<td>Multiple Regression Analysis</td>
</tr>
<tr>
<td>Research Result</td>
<td>There is no significance influence of Firm Size, Capital Structure, and Growth Opportunity on ERC simultaneously and partially.</td>
</tr>
</tbody>
</table>
Table 2.5 Analyzing Influence of Financial Ratio on Stock Return for LQ45 Non-Banking Company

<table>
<thead>
<tr>
<th>Researcher</th>
<th>RM Gian Ismoyo Kusumo</th>
</tr>
</thead>
<tbody>
<tr>
<td>Year</td>
<td>2011</td>
</tr>
<tr>
<td>Research Object</td>
<td>Non-banking company that are consistently incorporated in LQ45 during 2009 – 2010</td>
</tr>
<tr>
<td>Total Sample</td>
<td>15 companies</td>
</tr>
<tr>
<td>Dependent Variable</td>
<td>Stock Return</td>
</tr>
<tr>
<td>Independent Variable</td>
<td>Profitability Ratio, Solvency Ratio, and Liquidity Ratio</td>
</tr>
<tr>
<td>Research Instruments</td>
<td>Multiple Regression Analysis</td>
</tr>
<tr>
<td>Research Result</td>
<td>There is no significant influence of financial ratio on stock return partially and simultaneously.</td>
</tr>
</tbody>
</table>
Table 2.6  Effect of Corporate Social Responsibility (CSR) Disclosure in Annual Report toward ERC

<table>
<thead>
<tr>
<th>Researcher</th>
<th>Pramudito Adisusilo</th>
</tr>
</thead>
<tbody>
<tr>
<td>Year</td>
<td>2011</td>
</tr>
<tr>
<td>Research Object</td>
<td>Manufacturing Company listed in IDX on 2009</td>
</tr>
<tr>
<td>Total Sample</td>
<td>39 companies</td>
</tr>
<tr>
<td>Dependent Variable</td>
<td>ERC</td>
</tr>
<tr>
<td>Independent Variable</td>
<td>CSR Disclosure</td>
</tr>
<tr>
<td></td>
<td>- Control Variable: Leverage, Growth, Profitability, and Firm Size</td>
</tr>
<tr>
<td>Research Instruments</td>
<td>1. Outlier Test</td>
</tr>
<tr>
<td></td>
<td>2. Multiple Regression Analysis</td>
</tr>
<tr>
<td>Research Result</td>
<td>1. There is negative influence of CSR Disclosure to ERC.</td>
</tr>
<tr>
<td></td>
<td>2. Leverage, Growth, and Profitability have no significant influence on ERC.</td>
</tr>
<tr>
<td></td>
<td>3. There is positive influence of Firm Size to ERC.</td>
</tr>
</tbody>
</table>
Table 2.7  Analysis Factors That Influence ERC

<table>
<thead>
<tr>
<th>Researcher</th>
<th>Rekyan Shinta Hapsari</th>
</tr>
</thead>
<tbody>
<tr>
<td>Year</td>
<td>2012</td>
</tr>
<tr>
<td>Research Object</td>
<td>Manufacturing company listed in IDX on 2004-2008</td>
</tr>
<tr>
<td>Total Sample</td>
<td>132 companies</td>
</tr>
<tr>
<td>Dependent Variable</td>
<td>ERC</td>
</tr>
<tr>
<td>Independent Variable</td>
<td>Firm Size, Beta Risk, Earnings Persistence, Growth Opportunities, Capital Structure, Board Composition, and Audit Quality</td>
</tr>
<tr>
<td>Research Instruments</td>
<td>Multiple Regression Analysis</td>
</tr>
</tbody>
</table>
| Research Result      | 1. Beta risk, growth opportunities, Capital Structure, and board composition give significant influence toward ERC.
2. There is no significant influence of Firm Size, earnings persistence, and audit quality on ERC. |
Table 2.8   Effect of Firm Size, Capital Structure, Accrual Quality, and Investment Opportunity Set (IOS) toward the Earnings Quality

<table>
<thead>
<tr>
<th>Researcher</th>
<th>Rizki Novianti</th>
</tr>
</thead>
<tbody>
<tr>
<td>Year</td>
<td>2012</td>
</tr>
<tr>
<td>Research Object</td>
<td>Manufacturing company listed in IDX from 2008-2009</td>
</tr>
<tr>
<td>Total Sample</td>
<td>31 companies</td>
</tr>
<tr>
<td>Dependent Variable</td>
<td>Earnings Quality</td>
</tr>
<tr>
<td>Independent Variable</td>
<td>Firm Size, Capital Structure, Accruals Quality, IOS</td>
</tr>
<tr>
<td>Research Instruments</td>
<td>Multiple Regression Analysis</td>
</tr>
</tbody>
</table>

Research Result

1. Simultaneously the whole variables influence the earnings quality.
2. Partially, only accruals quality and IOS have positive influence to earnings quality.
3. Partially, Firm Size and Capital Structure have no significant influence on earnings quality.
Table 2.9  Effect of Financial Risk on the ERC

<table>
<thead>
<tr>
<th>Researcher</th>
<th>Budi Artinah Nurhidayah</th>
</tr>
</thead>
<tbody>
<tr>
<td>Year</td>
<td>2012</td>
</tr>
<tr>
<td>Research Object</td>
<td>Listed banking company in IDX from 2003 – 2008</td>
</tr>
<tr>
<td>Total Sample</td>
<td>17 banks</td>
</tr>
<tr>
<td>Dependent Variable</td>
<td>ERC</td>
</tr>
<tr>
<td>Independent Variable</td>
<td>Credit Risk, Liquidity Risk, Solvency Risk, and Interest Rate Risk</td>
</tr>
<tr>
<td>Research Instruments</td>
<td>Multiple Regression Analysis</td>
</tr>
</tbody>
</table>
| Research Result | 1. Interest Rate risk gives significant influence to the ERC.  
2. Credit Risk, Liquidity Risk, Solvency Risk have no significant influence on the ERC. |
Table 2.10 Analyzing the Factors that Influencing the ERC

<table>
<thead>
<tr>
<th>Researcher</th>
<th>Isna Ardilla</th>
</tr>
</thead>
<tbody>
<tr>
<td>Year</td>
<td>2012</td>
</tr>
<tr>
<td>Research Object</td>
<td>Listed company in Jakarta Islamic Index from 2007 – 2010</td>
</tr>
<tr>
<td>Total Sample</td>
<td>32 companies</td>
</tr>
<tr>
<td>Dependent Variable</td>
<td>ERC</td>
</tr>
<tr>
<td>Independent Variable</td>
<td>Earnings Persistency, Capital Structure, Systematic Risk, Growth Opportunity, Firm Size, and Corporate Social Responsibility</td>
</tr>
<tr>
<td>Research Instruments</td>
<td>Multiple Regression Analysis</td>
</tr>
</tbody>
</table>
| Research Result  | 1. Earnings persistency and Systematic Risk has positive influence to the ERC.  
                         2. Firm Size has negative influence to ERC partially.  
                         3. Growth Opportunity, Capital Structure, and CSR have no influence to ERC. |
CHAPTER III

METHODOLOGY

3.1 Research Method

Researcher uses the quantitative analysis for this research. The research will find out the relations of each independent variable to dependent variable and the correlations of the whole independent variable to the dependent variable. Therefore, the research uses the quantitative analysis since type of correlation research is considered to use quantitative analysis (Walliman, 2001 in Clarke, 2005)

As Cooper and Schindler (2006) said,

“Quantitative research attempts precise measurement of something. It determines fact and figures.”

Through the measurement, the result will come as the answer to question that can be measured. The quantitative analysis researcher used to collect data which is measurable, factual and can be considered statistically. Cooper and Schindler also stated that the data is

“The participant responses that are coded, categorized, and reduced to numbers so that these data may be manipulated for statistical analysis”

Therefore, as the measurement of the independent variable, researcher used some ratios, like liquidity ratio, debt ratio, and market value equity to book value ratio. To figure out the ERC, researcher used the linear equations of CAR (Cumulative Absolute Returns).
3.2 Research Variables

3.2.1 Dependent Variable

The dependent variable of the research is ERC, which will define the response of earnings announcement by the firm. Relatively, high ERC shows the market views the earnings announcement as the containing informative news, while low ERC indicates the perception of a lack of informative news in the announcement (Wilson, 2005). To calculate ERC\(^1\), firstly researcher needs to find out the Cumulative Abnormal Return (CAR), Unexpected Return (UE), and Annual Return (AR).

\[
CAR_{it} = \alpha + \beta (UE_{it}) + e
\]

\(CAR_{it}\) = cumulative abnormal return

\(\alpha\) = benchmark rate

\(\beta\) = ERC

\(UE_{it}\) = unexpected earnings

\(e\) = random error

a. Cumulative Abnormal Return (CAR)

CAR is the financial term in describing and identifying the investment value (Soren Bagley, www.ehow.com). CAR describes the relationship of the expected value and the stock’s actual value. It is the proxy of the stock prices or market response (Cheng and Nasir, 2010 in Purnamasari et al, 2012). Based on Christian Funke (2008),

“CAR is the cumulative abnormal return for a five-day event window (-5,+5) around the announcement date.”

---

\(^1\) In order to calculate the regression, researcher used the Ms. Excel function. 
\(=\text{slope("Y data", "X data")}\)
\[ CAR_{it} = \sum_{t=-5}^{+5} AR_{it} \]

\[ AR_{it} = R_{it} - MR_{it} \]

\( CAR_{it} \) = CAR of \( i^{th} \) firm in a five-day event window around the announcement date

\( AR_{it} \) = abnormal return of \( i^{th} \) firm in day \( t \)

\( R_{it} \) = actual return of \( i^{th} \) firm in day \( t \)

\( MR_{it} \) = market return of \( i^{th} \) firm in day \( t \)

CAR is the dependent variable in the regression model which is needed to find the value of ERC. In order to get the amount of cumulative abnormal return, researcher needs to calculate the actual return and the market return.

i. Actual Return (AR)

The AR is measuring the closing stock price of 5 days before earnings announcement, the day of earnings announcement, and 5 days after earnings announcement. Mulyani et al. (2007) in Khristina P, Irene H., and Evelyn (2012) calculate the AR as:

\[ AR_{it} = \frac{P_{it} - P_{it-1}}{P_{it-1}} \]

\( AR_{it} \) = actual return of \( i^{th} \) firm in day \( t \)

\( P_{it} \) = closing stock price of \( i^{th} \) firm in day \( t \)

\( P_{it-1} \) = closing stock price of \( i^{th} \) firm in day \( t-1 \)
ii. Market Return (MR)

The MR is measuring the Jakarta Composite Stock Price Index (CSPI) or used to call JCI (Jakarta Composite Index), which in Bahasa is known as Index Harga Saham Gabungan (IHSG). The value of CSPI, which will be used, is on 5 days before the earnings announcement, the day of earnings announcement, and 5 days after the earnings announcement.

\[ MR_t = \frac{CSPI_t - CSPI_{t-1}}{CSPI_{t-1}} \]

\( MR_t \) = market return of day \( t \)

\( CSPI_t \) = composite stock price index of day \( t \)

\( CSPI_{t-1} \) = composite stock price index of day \( t-1 \)

b. Unexpected Earnings (UE)

According to Conroy, Eades, and Harris (2000), earnings surprise (specifically in Japan) significantly influences the stock prices. Earnings surprise occurs when the reported earnings deviates from the forecasted earnings. Therefore, UE may influence the ERC.

\[ UE_{it} = \frac{EAT_{it} - EAT_{it-1}}{|EAT_{it-1}|} \]

\( UE_{it} \) = unexpected earnings of \( i^{th} \) firm in year \( t \)

\( EAT_{it} \) = earnings after tax of \( i^{th} \) firm in year \( t \)

\( EAT_{it-1} \) = earnings after tax of \( i^{th} \) firm in year \( t-1 \)
3.2.2 **Independent Variable**

Independent variable is the element that defines the dependent variables. In order to standardize the calculation result, researcher decided to take the mean value of each independent variable as the value to be analyzed for the multiple regression analysis. The independent variables of the research are

a. Earnings Persistency

The capability of a firm to maintain and persist the future earnings that earn in current earnings is the Earnings Persistency. Lipe (1990) in Kiattikulwattana (2008) describes that

“Persistence as the time-series relationship between current period unexpected earnings and future earnings.”

Therefore, the persistency is estimated in time-series and also firm-by-firm. Collins and Kothari (1989) in Kiattikulwattana (2008) stated that the earnings persistence is positively related to stock prices because the greater persistence leads to bigger reaction to unexpected earnings.

According to Mulyani et al (2007), the Earnings Persistency\(^2\) is measured by this regression.

\[
EAT_{it} = \alpha + \beta (EAT_{it-1}) + e
\]

- \(EAT_{it}\) = earnings after tax of \(i^{th}\) firm in year \(t\)
- \(EAT_{it-1}\) = earnings after tax of \(i^{th}\) firm in year \(t-1\)
- \(\beta\) = Earnings Persistency
- \(e\) = random error

\(^2\) In order to calculate the regression, researcher used the Ms. Excel function. =slope("Y data", "X data")
b. Firm Size

Firm Size becomes the proxy in measuring how informative the earnings, since it assumes the big firm is more informative rather than the small firm. The Firm Size is measured by the natural logarithm (LN) of total asset (Mulyani, 2007). Since researcher measures the Firm Size based on its financial, the proxy for the Firm Size is the total asset. The amount of total asset is conversed through the LN.

\[ FZ = LN \left( TA_{it} \right) \]

- \( FZ \) = Firm Size
- \( TA_{it} \) = total asset of \( i^{th} \) firm in year \( t \)

\[ \]

c. Growth Opportunity

There is a positive relation between Growth Opportunity and ERC. Higher level of Growth Opportunity indicates the capability of the firm to strive in the future. As investors see this advantage, investors will be attracted to invest in that firm. In consequence, the ERC will go higher.

Based on Collins & Kothari (1989), researcher uses the Market to Book ratio to measure the level of Growth Opportunity. High Market to Book ratio reflects great expected future gain because of perceived Growth Opportunity.

\[ Market to Book \ ratio = \frac{Market \ Capitalization}{Book \ Value \ Equity} \]

\[ Book \ Value \ of \ Equity = Total \ Asset - Total \ Liabilities \]

Market Capitalization = market capitalization of \( i^{th} \) firm in the end of year \( t \)

Total Asset = total asset of \( i^{th} \) firm in year \( t \)

Total Liabilities = total liabilities of \( i^{th} \) firm in year \( t \)
d. Leverage


“Leverage is the sensitivity of the value of equity ownership with respect to changes in the underlying value of the firm.”

Debt ratio can estimate level of leverage (Rizki Novianti, 2012).

\[
\text{Leverage Ratio} = \frac{\text{Total Debt}}{\text{Total Asset}}
\]

Total Debt = total debt of \(i^{th}\) firm in year \(t\)
Total Asset = total asset of \(i^{th}\) firm in year \(t\)

Dhaliwal et al (1991) in Jang et al (2007) stated leverage has negative influence on ERC, since the high level of leverage refer to higher debt than asset. Therefore investor prefers not to invest in company with high level of leverage.

e. Liquidity

Current ratio is the model to measure the general Liquidity. Investors tend to elude from company with low current ratio, which is less than 1. Low current ratio relatively shows the net working capital is negative. It means the company is struggling to run the business in this short period. According to Saleem and Rehman (2011), current ratio is calculated by

\[
\text{Current Ratio} = \frac{\text{Current Asset}}{\text{Current Liabilities}}
\]

Current Asset = current asset of \(i^{th}\) firm \(in\) year \(t\)
Current Liabilities = current liabilities of \(i^{th}\) firm \(in\) year \(t\)
3.3 Research Instruments

3.3.1 Classical Assumption Test

a. Normality Test

A good regression model has to have normal distribution data or at least close to the normal distribution. Normal distribution data does not consist of error. The normality test checks whether the data has any error. There are 2 methods in detecting the normal distribution data, which are statistic analysis and graph analysis (Ghozali, 2011).

The graph analysis uses either the histogram or normal P-P plot. Researcher used the P-P (Percentage-Percentage) Plot for this research to test the normality data. The distribution data is normal if the data (shown by dots) is close to the diagonal line as the standard normal distribution. The P-P Plot can identify the outliers easily by seeing the dots that stands far from the diagonal line.

![P-P Plot – Normal Distribution](source: www.statistics.laerd.com)
b. Multicollinearity Test

The multicollinearity test is identifying the correlation between the independent variables in the regression model. In the regression model, there should be no correlation between each independent variable. It used to be called orthogonal (Ghozali, 2011). If one independent variable explained another independent variable, then it means the other independent variable changed to dependent variable and being regressed by the independent variable. Thus, it is not an orthogonal variable.

The multicollinearity can be seen from the Variance Inflation Factor (VIF) or Tolerance in the result of SPSS. Tolerance indicates the variability of the independent variable that is not explained or influenced by other independent variable. Thus, the low tolerance or high VIF will indicate the multicollinearity in the regression model. The constraint is Tolerance < 0.1 or VIF ≥10. However, the good regression should have value of Tolerance > 0.1 or VIF < 10 because it implies the regression doesn’t have any correlation between the explanatory variables.

c. Autocorrelation Test

According to Box and Jenkins (1976), the autocorrelation test is used to detect non-randomness data and identify the appropriate time series model (if the data are not random). Furthermore, Kusumo (2011) also stated that

“Uji autokorelasi bertujuan menguji apakah dalam model regresi linear ada korelasi antara kesalahan pengganggu pada periode t dengan kesalahan pengganggu pada periode sebelumnya (t-1). Autokorelasi muncul karena observasi yang berurutan sepanjang waktu berkaitan satu sama lain.”

It means autocorrelation test identifies the correlation between the residual on the period (t) and the previous period (t-1). The autocorrelation occurs since the continuing observation may relate one to another.

To identify the autocorrelation on the variables, researcher used the Durbin-Watson test. There are no autocorrelation if the value of Durbin-Watson (DW) test is more than -2 (DW > -2) and less than 2 (DW < 2).
d. Heteroscedasticity Test

The good regression model should be homocedastic. It means the residuals are approximately equal for dependent variable score. Thus, the variability in scores of independent variables is the same at all values of dependent variable. Meanwhile, the heteroscedasticity indicates the situation in which the error variance is different for different cases (Polhemus, 2005).

To identify the residual variance is constant or not, researcher used the Scatterplot. The heteroscedasticity will be showed if the data, which is represented by dots, will form in a specific shape (like wave shape or wide-to-narrow shape) in the scatter plot between the SRESID and ZPRED (Ghozali, 2006). The Y-axis represents the predicted Y, while the X-axis represents the residual. If there is no specific form or the data is scattered in the plot, it shows the homocedasticity.

![Figure 3.2 Scatter Plot of Homoscedasticity](source: www.dss.princeton.edu)

3.3.2 Multiple Regression Analysis

Regression analysis is the method to test the effects of independent variables on the dependent variable. The independent variable is the explanatory and commonly presented as $X_1$, $X_2$, $X_3$, and so on. The dependent variable is the Y as the response variable.
The multiple regression analysis is used for predicting the unknown value of variable (dependent variable) from the known value of two or more variables (independent variables).

The Multiple Regression Model

\[ \text{ERC} = \beta_0 + \beta_1 \text{EP} + \beta_2 \text{FZ} + \beta_3 \text{GO} + \beta_4 \text{LV} + \beta_5 \text{LQ} + e \]

ERC = earnings response coefficient
\( \beta_0 \) = interception
\( \beta_1, \beta_2, \beta_3, \beta_4, \beta_5 \) = regression coefficient
EP = Earnings Persistency
FZ = Firm Size
GO = Growth Opportunity
LV = Leverage
LQ = Liquidity
e = random error

3.3.3. Significance of Model

a. T-Test

According to Dajan (1994) in Kusumo (2011), the T-test can test the influence of independent variable on the dependent variable partially. The T-test will show the proportion of the independent variable in influencing the dependent variable which can be seen from the P-value on the result of SPSS.

Hypotheses:
\( H_0: \beta_1 = 0 \)
\( H_a: \beta_1 \neq 0 \)
With the level of significance of 5% ($\alpha = 0.05$), researcher will analyze the result as below (Kusumo, 2011):

1. The P-value $\geq 0.05$
   Researcher does not reject the $H_0$ because there is evidence that the independent variable does not have significance relation or influence on the dependent variable.

2. The P-value $< 0.05$
   Researcher rejects the $H_0$. It shows that the independent variable has significance influence on the dependent variable.

b. F-Test

To test and identify the appropriateness of the multiple regression model as a whole, researcher used the F-test. From the result in ANOVA table, it will show how big is the proportion of the whole independent variables’ influence to the dependent variable.

Hypotheses:

$H_0$: $\beta_1 = \beta_2 = \beta_3 = \beta_4 = \beta_5 = 0$

$H_a$: at least 1 slope term ($\beta_i$) $\neq 0$

The level of significance is 5% ($\alpha = 0.05$). If the P-value is higher than the significance level (P-value $> \alpha$), researcher will not reject the $H_0$ (Kusumo, 2011). It indicates no significant influences of the whole independent variables toward the dependent variable. Thus, it means the regression model is not appropriate to predict the dependent variable.

Meanwhile, when the P-value is less than the significance level (P-value $< \alpha$), researcher will reject the $H_0$ (Kusumo, 2011). Because it proves that the whole independent variables have significant influence on the dependent variable. The regression model can be used to determine the dependent variable.
c. Coefficient of Determination (Goodness of Test)

According to Ghazali et al. (2008), coefficient of determination (R²) can be used as the performance indicators. It measured how the independent variable explains the dependent variable.

The value of R² is between 0 and 1. Higher value of R² means higher performance of independent variable in describing the dependent variable. When value of R² is close to 0 (zero), the independent variable is hardly explained the dependent variable.

3.4 Sampling Design

The type of data research is the secondary data. Researcher will observe on the Financial Statement and Stock Exchange Trading of the manufacturing company. This data and information is obtained from the Indonesia Stock Exchange (www.idx.co.id), Yahoo Finance (www.finance.yahoo.com), Bloomberg Businessweek (www.investing.businessweek.com), the Wall Street Journal “Market Watch” (www.marketwatch.com), and Indonesia Capital Market Directory (ICMD). Then, the data will be processed through specific formula, before it is used for testing the hypothesis.

The research sample is the manufacturing company that is listed in Indonesia Stock Exchange (IDX) from 2006 – 2010. The method of data collecting is the non-probability sampling, specifically the purposive sampling. The sample will be eliminated by some criteria. Researcher only took the sample that meets the criteria, which are:

a. Included in the manufacture industry as the classification in Indonesia Capital Market Directory (ICMD).


c. Provided complete data and information, specifically the firm that provides these data:
- Closing stock price
- Earnings After Tax (EAT)
- Market Capitalization
- Total asset
- Total liabilities
- Current ratio
- Published date of earnings announcement

d. Published the financial statement, which is ended in December 31, and the amount expressed in Rupiah.

Table 3.1  Sampling Design

<table>
<thead>
<tr>
<th>Criteria</th>
<th>Total Amount</th>
</tr>
</thead>
<tbody>
<tr>
<td>Manufacture company listed in IDX from 2006 – 2010</td>
<td>166</td>
</tr>
<tr>
<td>Delisting company around 2006 – 2010</td>
<td>14</td>
</tr>
<tr>
<td>Company with incomplete data and information</td>
<td>100</td>
</tr>
<tr>
<td>Company does not express the amount in Rupiah</td>
<td>4</td>
</tr>
<tr>
<td>Sample of company</td>
<td>48</td>
</tr>
</tbody>
</table>

3.5 Testing the Hypothesis

Based on the research method above, researcher decides to test these hypotheses with

a. F-Test

$H_0$: Simultaneously, the independent variable (Earnings Persistency, Firm Size, Growth Opportunity, Leverage and Liquidity) does not influence significantly on the dependent variable (ERC).

$H_a$: Simultaneously, the independent variable (Earnings Persistency, Firm Size, Growth Opportunity, Leverage and Liquidity) influences significantly on the dependent variable (ERC).
b. T-Test
   Earnings Persistency
   \( H_0 \): Earnings Persistency does not influence ERC significantly.
   \( H_1 \): Earnings Persistency influences ERC significantly.

   Firm Size
   \( H_0 \): Firm Size does not influence the ERC significantly.
   \( H_3 \): Firm Size influences ERC significantly.

   Growth Opportunity
   \( H_0 \): Growth Opportunity does not influence ERC significantly.
   \( H_1 \): Growth Opportunity influences ERC significantly.

   Leverage
   \( H_0 \): Leverage does not influence ERC significantly.
   \( H_4 \): Leverage influences ERC significantly.

   Liquidity
   \( H_0 \): Liquidity does not influence ERC significantly.
   \( H_5 \): Liquidity influences ERC significantly.

3.6 Research Framework

   Before decided to do this research, researcher has observed and take a study on several research in the same field. Then, researcher found the major problem in the investment and decided to learn about the influence factors on ERC.

   Firstly, researcher search and collect the data. Then, eliminate the sample through the specific criteria. When the sample and data sample is completed, researcher calculates with the formula and prepares the value of each variable. Then, researcher analyze the regression with the SPSS. The first SPSS result shows an
extreme sample on the normality test result. Thus, researcher decides to make amendment on the data sample by cutting out that extreme sample. The research is analyzed again with the SPSS until the result is acceptable. Then, the SPSS result is analyzed by observing the trigger based on the SPSS result. Finally, researcher concludes the research result.

Figure 3.3 Research Framework
Source: self-constructed

3.7 Research Limitations

During the research, researcher decided to remove the data that is not normal. From the research data that will be regressed, researcher found that data of PT Jaya Pari Steel TBK (JPRS) is too extreme. It will impact badly to the regression result. Thus, researcher only took 47 samples from 48 companies.
CHAPTER IV

ANALYSIS AND INTERPRETATION OF RESULTS

4.1 Object Statistical Description

4.1.1 Sample Selection Result

The sample was once 48 companies. Then, researcher found one company has extreme value on its dependent and independent variables. To keep the normality data, researcher decided to take out the companies and have only 47 companies.

Table 4.1 Research Sample

<table>
<thead>
<tr>
<th>No</th>
<th>Company's Name</th>
<th>Code</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>PT Polychem Indonesia Tbk</td>
<td>ADMG</td>
</tr>
<tr>
<td>2</td>
<td>PT AKR Corporindo Tbk</td>
<td>AKRA</td>
</tr>
<tr>
<td>3</td>
<td>PT Alumindo Light Metal Industry Tbk</td>
<td>ALMI</td>
</tr>
<tr>
<td>4</td>
<td>PT Asahimas Flat Glass Tbk</td>
<td>AMFG</td>
</tr>
<tr>
<td>5</td>
<td>PT Asiaplast Industries Tbk</td>
<td>APLI</td>
</tr>
<tr>
<td>6</td>
<td>PT Arwana Citramulia Tbk</td>
<td>ARNA</td>
</tr>
<tr>
<td>7</td>
<td>PT Astra Otoparts Tbk</td>
<td>AUTO</td>
</tr>
<tr>
<td>8</td>
<td>PT Sepatu Bata Tbk</td>
<td>BATA</td>
</tr>
<tr>
<td>9</td>
<td>PT Indo Kordsa Tbk</td>
<td>BRAM</td>
</tr>
<tr>
<td>10</td>
<td>PT Berlina Tbk</td>
<td>BRNA</td>
</tr>
<tr>
<td>11</td>
<td>PT Darya-Varia Laboratoria Tbk</td>
<td>DVLA</td>
</tr>
<tr>
<td>12</td>
<td>PT Dynaplast Tbk</td>
<td>DYNA</td>
</tr>
<tr>
<td>13</td>
<td>PT Ever Shine Textile Industry Tbk</td>
<td>ESTI</td>
</tr>
<tr>
<td>14</td>
<td>PT Fajar Surya Wisesa Tbk</td>
<td>FASW</td>
</tr>
<tr>
<td>15</td>
<td>PT Titan Kimia Nusantara Tbk</td>
<td>FPNI</td>
</tr>
<tr>
<td>16</td>
<td>PT Gudang Garam Tbk</td>
<td>GGRM</td>
</tr>
<tr>
<td>17</td>
<td>PT HM Sampoerna Tbk</td>
<td>HMSP</td>
</tr>
<tr>
<td>18</td>
<td>PT Kageo Igar Jaya Tbk</td>
<td>IGAR</td>
</tr>
<tr>
<td></td>
<td>Company Name</td>
<td>Ticker</td>
</tr>
<tr>
<td>---</td>
<td>--------------------------------------</td>
<td>---------</td>
</tr>
<tr>
<td>19</td>
<td>PT Sumi Indo Kabel Tbk</td>
<td>IKBI</td>
</tr>
<tr>
<td>20</td>
<td>PT Indofarma (Persero) Tbk</td>
<td>INAF</td>
</tr>
<tr>
<td>21</td>
<td>PT Indal Aluminium Industry Tbk</td>
<td>INAI</td>
</tr>
<tr>
<td>22</td>
<td>PT Indofood Sukses Makmur Tbk</td>
<td>INDF</td>
</tr>
<tr>
<td>23</td>
<td>PT Indospring Tbk</td>
<td>INDS</td>
</tr>
<tr>
<td>24</td>
<td>PT Indocement Tunggal Prakasa Tbk</td>
<td>INTP</td>
</tr>
<tr>
<td>25</td>
<td>PT Kimia Farma (Persero) Tbk</td>
<td>KAEF</td>
</tr>
<tr>
<td>26</td>
<td>PT Kedawung Setia Industrial Tbk</td>
<td>KDSI</td>
</tr>
<tr>
<td>27</td>
<td>PT Kedaung Indah Can Tbk</td>
<td>KICI</td>
</tr>
<tr>
<td>28</td>
<td>PT Langgeng Makmur Industry Tbk</td>
<td>LMPI</td>
</tr>
<tr>
<td>29</td>
<td>PT Lionmesh Prima Tbk</td>
<td>LMSH</td>
</tr>
<tr>
<td>30</td>
<td>PT Lautan Luas Tbk</td>
<td>LTLS</td>
</tr>
<tr>
<td>31</td>
<td>PT Multistrada Arah Sasana Tbk</td>
<td>MASA</td>
</tr>
<tr>
<td>32</td>
<td>PT Pan Brothers Tex Tbk</td>
<td>PBRX</td>
</tr>
<tr>
<td>33</td>
<td>PT Prima Alloy Steel Tbk</td>
<td>PRAS</td>
</tr>
<tr>
<td>34</td>
<td>PT Roda Vivatex Tbk</td>
<td>RDTX</td>
</tr>
<tr>
<td>35</td>
<td>PT Supreme Cable Manufacturing &amp; Commerce Tbk</td>
<td>SCCO</td>
</tr>
<tr>
<td>36</td>
<td>PT Holcim Indonesia Tbk</td>
<td>SMCB</td>
</tr>
<tr>
<td>37</td>
<td>PT Semen Gresik (Persero) Tbk</td>
<td>SMGR</td>
</tr>
<tr>
<td>38</td>
<td>PT Selamat Sempurna Tbk</td>
<td>SMSM</td>
</tr>
<tr>
<td>39</td>
<td>PT Suparma Tbk</td>
<td>SPMA</td>
</tr>
<tr>
<td>40</td>
<td>PT Siantar Top Tbk</td>
<td>STTP</td>
</tr>
<tr>
<td>41</td>
<td>PT Mandom Indonesia Tbk</td>
<td>TCID</td>
</tr>
<tr>
<td>42</td>
<td>PT Surya Toto Indonesia Tbk</td>
<td>TOTO</td>
</tr>
<tr>
<td>43</td>
<td>PT Trias Sentosa Tbk</td>
<td>TRST</td>
</tr>
<tr>
<td>44</td>
<td>PT Ultra Jaya Milk Tbk</td>
<td>ULTJ</td>
</tr>
<tr>
<td>45</td>
<td>PT United Tractor Tbk</td>
<td>UNTR</td>
</tr>
<tr>
<td>46</td>
<td>PT Unilever Indonesia Tbk</td>
<td>UNVR</td>
</tr>
<tr>
<td>47</td>
<td>PT Voksel Electric Tbk</td>
<td>VOKS</td>
</tr>
</tbody>
</table>
4.1.2 Descriptive Statistic of Research Variables

Table 4.2 Descriptive Statistics Result

<table>
<thead>
<tr>
<th>Descriptive Statistics</th>
<th>Mean</th>
<th>Std. Deviation</th>
<th>N</th>
</tr>
</thead>
<tbody>
<tr>
<td>ERC</td>
<td>0.03462</td>
<td>0.079871</td>
<td>47</td>
</tr>
<tr>
<td>EP</td>
<td>0.49787</td>
<td>0.910133</td>
<td>47</td>
</tr>
<tr>
<td>FZ</td>
<td>27.97811</td>
<td>1.361749</td>
<td>47</td>
</tr>
<tr>
<td>GO</td>
<td>1.74223</td>
<td>3.462731</td>
<td>47</td>
</tr>
<tr>
<td>LV</td>
<td>0.48255</td>
<td>0.189126</td>
<td>47</td>
</tr>
<tr>
<td>LQ</td>
<td>2.12191</td>
<td>1.665765</td>
<td>47</td>
</tr>
</tbody>
</table>

Source: SPSS 20.0

Descriptive Statistics is interpreting the characteristics of all data from each variable, either dependent variable (ERC) and independent variables (EP, FZ, GO, LV, LQ). The mean refers the average value of all data. Meanwhile, the standard deviation refers to value of unpredictability of a random data.

The dependent variable, ERC, has 0.035 of mean and 0.080 of standard deviation. It means the value of ERC could be 0.035 ± 0.079. The highest value of ERC is 0.114 and the lowest value of ERC is -0.044. Good company used to have high ERC. But, low or even minus ERC could happen if the earnings quality of the company is very low. Hence, the market does not trust and interest either on the stock or the emitter.

Earnings Persistency (EP) has mean 0.498 of mean with standard deviation 0.910. It means the value of EP could be 0.498 ± 0.910. The highest value of EP is 1.408 and the lowest value of EP is -0.412. The calculation of EP comes from the annual earnings. The annual earnings may be fluctuated. Although the current earnings is positive, the actual future earnings might be negative, or vice versa. Indeed, the EP may be negative when the company can not persist the present
earnings. However, investors prefer emitter with high EP because it gives lower risk for investors.

Firm Size (FZ) has mean 27.978 with standard deviation 1.362. It means the value of FZ could be 27.978 ± 1.362. The highest value of FZ is 29.340 and the lowest value of FZ is 26.616. FZ is absolutely positive since it is represented the proportion of the firm existence. Thus, it must not be negative. The low FZ refers to small firm, while high FZ refers to big firm.

GO has mean 1.742 with standard deviation 3.463. It means the value of GO could be 1.742 ± 3.463. The highest value of GO is 5.205 and the lowest value of GO is -1.721. The range of GO is quite far because the GO of each company is extremely different. Moreover, the company sometimes used the earnings to invest more. Thus, the GO may show negative value.

Leverage (LV) has mean 0.483 with standard deviation 0.189. It means the value of LV could be 0.483 ± 0.189. The highest value of LV is 0.672 and the lowest value of LV is 0.294. Company with high LV usually is very risky for investors. Because it seems the company has too many debt and low asset to cover it. However, high debt may refer to high operating cost, which will lead to higher operating income at the end. Meanwhile, investors commonly target on company with low LV since the risk is lower. In fact, the LV is rarely negative. Since the total asset is absolutely positive and the debt is rarely negative, thus the LV is mostly higher than zero (0).

Liquidity (LQ) has mean 2.122 with standard deviation 1.666. It means the value of LQ could be 2.122 ± 1.666. The highest value of LQ is 3.788 and the lowest value of LQ is 0.456. Higher LQ will attract investor to invest more, while lower LQ commonly is not so interesting. The LQ is similar with the LV. It is mostly positive since the total asset and total liability is rarely negative.
4.2 Classic Assumption Test

4.2.1 Normality Test

The normal P-P Plot shows the distribution data is normal. It can be seen that the data, which is shown by dots, is close to the diagonal line. It is also seen from the plot that there are no outliers, since there are no data stands extremely far from the diagonal line.

Figure 4.1 Normality P-P Plot
Source: SPSS 20.0
4.2.2 Multicollinearity Test

Table 4.3 Multicollinearity Test Result

<table>
<thead>
<tr>
<th>Model</th>
<th>Unstandardized Coefficients</th>
<th>Standardized Coefficients</th>
<th>t</th>
<th>Sig.</th>
<th>Collinearity Statistics</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>B</td>
<td>Std. Error</td>
<td>Beta</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>1</td>
<td>(Constant)</td>
<td>.037</td>
<td>.216</td>
<td>.173</td>
</tr>
<tr>
<td></td>
<td>2</td>
<td>EP</td>
<td>.053</td>
<td>.011</td>
<td>.605</td>
</tr>
<tr>
<td></td>
<td>3</td>
<td>FZ</td>
<td>.003</td>
<td>.008</td>
<td>-.050</td>
</tr>
<tr>
<td></td>
<td>4</td>
<td>GO</td>
<td>-.007</td>
<td>.003</td>
<td>-.300</td>
</tr>
<tr>
<td></td>
<td>5</td>
<td>LV</td>
<td>.051</td>
<td>.069</td>
<td>.122</td>
</tr>
<tr>
<td></td>
<td>6</td>
<td>LQ</td>
<td>.019</td>
<td>.008</td>
<td>.396</td>
</tr>
</tbody>
</table>

a. Dependent Variable: ERC

Source: SPSS 20.0

A good regression model should not have multicollinearity. The multicollinearity identifies the correlation between each independent variable in the regression model. The table 4.2 shows all tolerance of independent variables is higher than 0.1 and all VIF of independent variables is lower than 10. It is the evidence that the regression model has no multicollinearity.

4.2.3 Autocorrelation Test

Table 4.4 Autocorrelation Test Result

<table>
<thead>
<tr>
<th>Model Summary</th>
</tr>
</thead>
<tbody>
<tr>
<td>Model</td>
</tr>
<tr>
<td>-------</td>
</tr>
<tr>
<td>1</td>
</tr>
</tbody>
</table>

a. Predictors: (Constant), LQ, EP, GO, FZ, LV
b. Dependent Variable: ERC

Source: SPSS 20.0
To identify the autocorrelation, researcher used the Durbin-Watson (DW) test. When the value of DW is between -2 to 2, it indicates no autocorrelation. Table 4.3 shows the DW is 1.736. Thus, the regression has no autocorrelation.

4.2.4 Heteroscedasticity Test

The scatterplot shows the dots is scattered around the plot. It means the residuals are approximately equal for dependent variable score. Thus, the regression model has no heteroscedasticity.
### 4.3 Regression Analysis Result

#### 4.3.1 T-test

**Table 4.5 T-test Result**

<table>
<thead>
<tr>
<th>Model</th>
<th>Unstandardized Coefficients</th>
<th>Standardized Coefficients</th>
<th>t</th>
<th>Sig.</th>
<th>Collinearity Statistics</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>B</td>
<td>Std. Error</td>
<td>Beta</td>
<td></td>
<td>Tolerance</td>
</tr>
<tr>
<td>(Constant)</td>
<td>.037</td>
<td>.216</td>
<td></td>
<td>.173</td>
<td>.863</td>
</tr>
<tr>
<td>EP</td>
<td>.053</td>
<td>.011</td>
<td>.605</td>
<td>4.767</td>
<td>.000</td>
</tr>
<tr>
<td>FZ</td>
<td>-.003</td>
<td>.008</td>
<td>-.050</td>
<td>-.390</td>
<td>.699</td>
</tr>
<tr>
<td>GO</td>
<td>-.007</td>
<td>.003</td>
<td>-.300</td>
<td>-2.414</td>
<td>.020</td>
</tr>
<tr>
<td>LV</td>
<td>.051</td>
<td>.069</td>
<td>.122</td>
<td>.750</td>
<td>.457</td>
</tr>
<tr>
<td>LQ</td>
<td>.019</td>
<td>.008</td>
<td>.396</td>
<td>2.521</td>
<td>.016</td>
</tr>
</tbody>
</table>

a. Dependent Variable: ERC  
Source: SPSS 20.0

The T-test result can be seen from table 4.4. Researcher takes the significance value of each independent variable from the column “Sig. The independent variable has significance influence on the dependent variable if the significance value is lower than the level of significance (α = 0.05).

The P-value of Earnings Persistence is 0.053 with the significance value of 0.000. Since the significance value is lower than 0.05, researcher rejects the null hypothesis (H₀). The Earnings Persistence gives significant influence on ERC.

The P-value of Firm Size is -0.003 with the significance value of 0.699. Since the significance value is higher than 0.05, researcher does not reject H₀. The Firm Size does not give significant influence on ERC.

The P-value of Growth Opportunity is -0.007 with the significance value of 0.021. Since the significance value is lower than 0.020, researcher rejects H₀. The Growth Opportunity gives significant influence on ERC.
The P-value of Leverage is 0.051 with the significance value of 0.457. Since the significance value is higher than 0.05, researcher does not reject $H_0$. The Leverage does not give significant influence on ERC.

The P-value of Liquidity is 0.019 with the significance value of 0.016. Since the significance value is lower than 0.05, researcher rejects $H_0$. The Liquidity gives significant influence on ERC.

From the SPSS output, researcher got the regression model like below:

$$ERC = 0.038 + 0.053EP – 0.003FZ – 0.007GO + 0.051LV + 0.019LQ$$

**ERC** = Earnings Response Coefficient  
**EP** = Earnings Persistency  
**FZ** = Firm Size  
**GO** = Growth Opportunity  
**LV** = Leverage  
**LQ** = Liquidity

In conclusion, the ERC is influenced significantly by Earnings Persistency, Growth Opportunity and Liquidity. Meanwhile, Firm Size and Leverage has significance value that is higher than the level of significance ($\alpha = 0.05$). It means Firm Size and Leverage may have influence on ERC, but not significantly.
4.3.2  F-test

Table 4.7  F-test Result

<table>
<thead>
<tr>
<th>Model</th>
<th>Sum of Squares</th>
<th>Df</th>
<th>Mean Square</th>
<th>F</th>
<th>Sig.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Regression</td>
<td>,139</td>
<td>5</td>
<td>,028</td>
<td>7,388</td>
<td>,000</td>
</tr>
<tr>
<td>Residual</td>
<td>,154</td>
<td>41</td>
<td>,004</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Total</td>
<td>,293</td>
<td>46</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

a. Dependent Variable: ERC  
b. Predictors: (Constant), LQ, EP, GO, FZ, LV  
Source: SPSS 20.0

From the ANOVA test or F test, researcher got the Significance (Sig.) is 0.000. As the constraint for F-test is less than 0.05, thus the regression model is qualified to analyze the determinant factors of ERC. The whole independent variables simultaneously influence the ERC. Therefore, researcher rejects \( H_0 \).

4.3.3  Coefficient of Determination

Table 4.8  R square Result

<table>
<thead>
<tr>
<th>Model</th>
<th>R</th>
<th>R Square</th>
<th>Adjusted R Square</th>
<th>Std. Error of the Estimate</th>
<th>Durbin-Watson</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>.688*</td>
<td>.474</td>
<td>.410</td>
<td>.061360</td>
<td>1.736</td>
</tr>
</tbody>
</table>

a. Predictors: (Constant), LQ, EP, GO, FZ, LV  
b. Dependent Variable: ERC  
Source: SPSS 20.0

To indicate the performance indicator of independent variables on the dependent variable, researcher took the value of Adjusted R square in the Model Summary test. The Adjusted R square is 0.410 and the standard error of the estimation is 0.061. It means 41% of dependent variable value is explained by the independent variables. The remaining (59%) is explained by other factors which are not tested in this research.
4.4 Interpretation of Result

ERC is measuring the market’s assessment through the market response of the information content of an earnings announcement. Large firm commonly has high ERC. According to Wilson (2005),

“A relatively high ERC indicates that the market views the earnings announcement as containing informative news, and a low ERC reflects the perception of a lack of informative news in the announcement.”

The higher ERC leads the market to believe and stand upon the earnings announcement. It shows investors or traders, as the market, interest with the stock and it will lead them to invest more. However, there are some factors that influencing the contents of the earnings information. These factors determine the earnings quality. Investors or traders should see and observe on these factors before they take decision to invest more or cut their investment.

4.4.1 The Influence of Earnings Persistency on ERC

The P-value of Earnings Persistency is 0.053 with the significance value of 0.000. It means Earnings Persistency has positive influence on the ERC. High level of Earnings Persistency convinces investors to buy more stock. It shows that the market interest with the stock and it heighten the ERC. Thus, researcher rejects the H₀ of T-test for Earnings Persistency and accepts the H₁.

The result is consistent from years ago. Research by Lipe and Kormendi (1987) in Mulyani (2007) found that higher Earnings Persistency leads to higher ERC. It means with high capability of company to persist the future earnings, it will attract the investors to invest more on that emitter since they trust the emitter will give them persist return in the future.
4.4.2 The Influence of Firm Size on ERC

The P-value of Firm Size is -0.003 and the significance of T-test is higher than level of significance ($\alpha = 0.05$). It means the Firm Size does not influence ERC significantly. Thus, researcher accepts $H_0$ of T-test for Firm Size.

It's constant with the research by Hapsari (2012) and Novianti (2012). They also found that Firm Size has no correlation with the ERC. According to Hapsari (2012), Firm Size does not influence significantly because it is likely used as proxy to calculate the growth and risk in measuring the firm characteristics.

4.4.3 The Influence of Growth Opportunity on ERC

The P-value Growth Opportunity is -0.007 with the 0.020 of significance. It means the Growth Opportunity gives negative significant influence on ERC. So, higher Growth Opportunity will lead to lower ERC. Thus, researcher rejects the $H_0$ of T-test for Growth Opportunity and accepts the $H_3$.

The result is contrast with the research by Mulyani et al (2007) and Hapsari (2012). They found that Growth Opportunity gives positive influence to ERC. This might be caused the intervention of management in earnings information (Jang et al, 2007). The management might mark down the amount of total asset or total liabilities to manipulate the market-to-book-value ratio. This case is called as agency problem. In order to impress the principal, the agent (management) publishes the earnings as the principal (investors or traders) expected.

Purnamasari (2012) appended high Growth Opportunity might be associated with high level of information asymmetric. Investors see the earnings surprise may become the indication of management intervention. So, investors doubt on the company with high Growth Opportunity, which means the earnings quality is low. Then, it leads to low ERC.
4.4.4 The Influence of Leverage on ERC

Based on the SPSS result, the P-value of Leverage is 0.051. Leverage has positive influence on the ERC. The result is contrary with Mulyani et al (2007) who stated that Leverage has negative influence on ERC because the higher Leverage means the company owns more debt than asset. It may seem too risky for investors, then investors do not really interest on emitter with high Leverage.

However, Jang et al (2007) stated that high Leverage may give high variability operating income. So, the income can be optimized more. Hence, the market may response positively to higher Leverage.

Indeed, the Leverage effect is not certain. It may not influence the ERC certainly. The research result supports it with the significance of 0.457. It becomes the evidence that Leverage does not significantly influence the ERC because the significance of T-test is higher than level of significance ($\alpha = 0.05$). Thus, researcher accepts the $H_0$ of T-test for Leverage.

4.4.5 The Influence of Liquidity on ERC

The P-value of Liquidity is 0.019 with the significance of 0.016. It shows that Liquidity significantly gives positive influence on the ERC. Company with high Liquidity will attract the market to invest more on it because the Liquidity ensures that the company has capability to cover the current liability with its current asset.

The result is consistent with research by Subiyantoro (1997) in Susilawati (2007). Subiyantoro (1997) said that higher Liquidity gives higher quality of the earnings information. Then, it will leads to higher response coefficient. Indeed, researcher rejects $H_0$ of T-test for Liquidity and accepts the $H_5$. 
4.4.6 Goodness of Fit

The ANOVA table shows the significance of F-test is 0.000. The result is lower than the level of significance ($\alpha = 0.05$). Thus, it gives evidence that simultaneously the whole independent variables (Earnings Persistency, Firm Size, Growth Opportunity, Leverage and Liquidity) give significant influence on the dependent variable (ERC). Indeed, researcher rejects $H_0$ of F-test.

The dependent variable can be wholly explained by independent variables when the value of R square is 1. The R square of this research is 0.474 while the adjusted R square is 0.410. The adjusted R square is the modification of R square that adjusts the number of variable in the model. Thus, the adjusted R square gives the more accurate proportion rather than the R square. Therefore, researcher decided to take the value of adjusted R square. It shows that the whole independent variables explain 41% of the dependent variable with the standard error of estimate of 0.061. The remaining is explained by other independent variables which are not tested in this research.

In conclusion, the regression model can be used since the significance of F-test is less than 0.05. But Earnings Persistency, Firm Size, Growth Opportunity, Leverage and Liquidity only explain 41% of ERC. It means that there must be other variables who explain the ERC and need to be put in the regression model until the ERC is fully explained by the influencing factors.
CHAPTER V

CONCLUSION AND RECOMMENDATION

5.1 Conclusion

The research result gives evidence that simultaneously whole independent variables have significant influence on the ERC. It proves that the information of Earnings Persistence, Firm Size, Growth Opportunity, Leverage and Liquidity is influencing significantly the market response on the earnings announcement.

However, the research found partially only three independent variables that give significant influence on the ERC. Earnings Growth has negative influence on the ERC. Thus, higher Earnings Growth leads to lower market response around the earnings announcement. The Earnings Persistency has positive influence on the ERC. High level of Earnings Persistency leads to higher market response around the earnings announcement. The Liquidity also has positive influence on ERC. High level of Liquidity leads to higher market response around the earnings announcement. Other two independent variables, which are Firm Size and Leverage, do not have significant influence on the ERC.

5.2 Recommendation

5.2.1 For Society

Researcher suggest people, especially investors, be aware with the earnings surprise since it may be the indication of management intervention. Investors may need to analyze the real growth opportunity and do not just rely on the financial
statement that is stated. Thus, in trading in the equity market, investors have to learn the fundamental of the company, not only the technical strategy of trading.

Researcher suggests investor or traders to observe and analyze the other determinant factors on the earnings response before investors or traders made decision on the stock, especially on the event of earnings announcement. Investors can analyze by using the ERC, since it shows the correlation between the company’s earnings and the stock price movement, which is describing the earnings response.

5.2.2 For Other Researchers

Research on ERC is likely testing the performance-related variables (liquidity, profitability ratio, etc) and structure-related variables (firm size, firm age, leverage, etc). Other researcher may take other determinants like the CSR disclosure, audit type, industry type, etc.

It is suggested to test the ERC by comparing different industry, like manufacture versus non-manufacture (agriculture, mining, etc). Thus, the research object is not company, but the industry. The research will have different purpose with this research. The purpose of research might be comparing the level of ERC in those industries.

5.2.3 For Company

Researcher suggests the company to inform and report the valid and reliable financial statement on the earnings announcement. Otherwise, the investors may not believe and interest in the company, which then can lower the stock price or even value of the company.