

ANALYSIS OF THE DETERMINANTS OF FIRM VALUE
(A Study of LQ45 Indonesian Company Listed in 2015-2017)



THESIS

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FACULTY OF ECONOMICS
UNIVERSITAS ISLAM INDONESIA
YOGYAKARTA
2019

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Presented as partial fulfillment of the requirements to obtain the
Bachelor Degree in Accounting from International Program, Faculty
of Economics, Universitas Islam Indonesia

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ABSTRACT

The purpose of this research is to investigate and analyse the influence of environmental disclosure, firm size, leverage, and profitability toward firm value. The population of this research is LQ45 Indonesian company listed in Indonesia Stock Exchange (IDX) from 2015-2017. The selection of the LQ45 Indonesian companies is due to the LQ45 is an index whose business activities have most liquid stocks in Indonesia Stock Exchange (IDX). The research sample consists of 28 companies meeting the sampling criteria by purposive sample. Firm value measurement (price earnings ratio) is used as dependent variable. While, environmental disclosure (CSR index in environmental field), firm size (natural logarithm of assets), leverage (debt to equity ratio), and profitability (return on assets) are used as independent variables. This research uses descriptive statistics, test of classical assumption, regression analysis, and hypothesis test for data testing and analysis. The result of this research shows that the environmental disclosure, leverage and profitability does not have significant influence on firm value. While, firm size has a significant influence on firm value. Moreover, environmental disclosure, firm size, leverage and profitability all simultaneously have influence on firm value.

Keywords: Environmental Disclosure, Firm Size, Leverage, Profitability, Firm Value, Indonesia Stock Exchange, LQ45 Index

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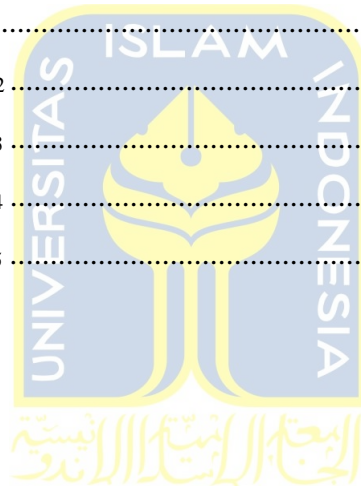
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CHAPTER I

INTRODUCTION

1.1 BACKGROUND OF THE RESEARCH

The world is now facing the globalisation era. Globalisation is a new era of world phase that should be faced whether like or not. In this era, there are almost no borders between countries. Globalisation also implies that countries are becoming more integrated into the multinational economy, increasing people's interaction, information exchanges, technology transformations, and convergence in a cultural activity (Chang, 2015). However, globalisation has a negative effect on the global economy. Because everything is globalised, there would be some countries that could not compete with other countries. Therefore, the economic discrepancy would appear affecting economic growth, whether crisis or something else. Environmental issues have become an essential topic in the global economy when globalised as observers such as WALHI (Wahana Lingkungan Hidup Indonesia), Greenpeace, and IUCN (International Union for Conservation of Nature), as well as growing environmental regulations aiming to create environmental protection life and sustainable development. The performance of company managers is expected not only to maximise the value of the company, but also to have a business in the context of concern for the environment, such as reducing greenhouse emissions, minimising environmental pollution, and using alternative renewable energy (Sulkowski, 2010). According to the United Nations (2018), the last decade has been marked by weak growth, high investor uncertainty,

and periodic surges in the global financial market. When the fragility associated with the crisis and the adverse effects of shocks gradually subside, the world economy continues to strengthen until the end of 2016. Global economic activity, which has experienced a moderate increase, was extended until 2017. However, the economy nowadays could also be affected by natural resources. During the 20th century, energy consumption significantly increased. About 80% of world energy consumption is supported by the extraction of fossil fuels in the form of oil, coal, and gas (Planas & Florent, 2012). Other non-renewable resources exploited by humans are underground minerals such as precious metals which are mainly used in industrial commodity production (McNicoll & Geoffrey, 2007). Another significant component of environmental degradation is the depletion of the resource of fresh water on Earth. The Intergovernmental Panel on Climate Change (2007) stated that most of Earth's water resources are salt water. Only 2.5% is a source of fresh water. About 70% of the planet's fresh water is frozen in the form of Antarctic and Greenland ice sheets, leaving 30% (equal to only 0.7% of the world's total water resources) available for consumption. Of the remaining 0.7%, around 87% is allocated for agricultural purposes. These statistics illustrate the problem of significant water scarcity facing the world. Water scarcity is defined as inventory per capita of less than 1700 m³ / year. Oki and Kanae (2006) stated that water scarcity is expected to become an ever-increasing problem in the future for various reasons. First, the distribution of precipitation in space and time is very uneven, leading to tremendous temporal variability in water resources worldwide.

On the other side, Indonesia's economy has recorded average growth that has tended to be stable over the past few decades. With Indonesia becoming increasingly industrialised and integrated into the global economy, considerable structural changes have taken place so far. In recent years, the steady pace of economic expansion has been accompanied by a decline in output volatility and relatively good inflation stability. Along with its economic industrialisation, the openness of Indonesian trade has increased over the past half-century. Indonesia's economy is widely expected to continue to grow at a robust pace over the next decade along with substantial infrastructure spending plans over the next few years and favourable demographics. However, as elsewhere in developing countries, policy implementation will be a significant challenge in realising the country's growth plan. These conditions drive some countries to create rules to regulate business entities in doing their business activities. It is because companies do not just operate in a market. They do also work within a culture, a local community, and a political system. Companies have an impact on social development where they work. Therefore, they have responsibilities that go beyond value creation. Continuous commitment by businesses to contribute to economic development while improving the quality of life of workers and their families as well as communities, in general, is defined as Corporate Social Responsibility (CSR) (World Business Council, 1998). CSR is a matter of clarifying what this responsibility entails and how it could best be fulfilled. In a globalised world, many challenges could only be met through active cooperation with leading economic actors. According to Investopedia.com, so that the company could be socially

responsible, the company must first be responsible for itself and its shareholders. Often, companies that use CSR programs have expanded their business to the point where they could give back to the community. The commitment and concern of the environment carried out by the company on an ongoing basis could be used as a useful marketing tool for products produced by the company. This could be proven by the behaviour of people who are now becoming more selective in choosing the products they will buy. People tend to buy products produced by companies that care about the environment or implement corporate social responsibility (Kusumadilaga, 2010). Thus, CSR, especially in environmental disclosures, is the primary strategy of large companies. Besides, the more visible and successful a company is, the higher the responsibility for setting standards of ethical behaviour for colleagues, competition, and industry.

Besides, financial leverage means the use of borrowed money to increase production volume, sales, and earnings (Pandey, 2008). It is measured as ratio total debt to total equity, the higher the amount of debt, the higher the financial leverage. Over the past few decades, the influence of profitability and leverage has attracted considerable attention related to financial decision making. To survive and thrive in a competitive environment, companies must work to achieve the cheapest ways to implement their investment plans. The company also needs to maximise company value and shareholder wealth. When a company has financial needs, internal and external funds could be used to make ends meet. However, if private funds are used, cash dividends will decrease. An increase in debt might increase the shareholder agent relationship by limiting the waste of managers to free cash

flows, improving monitoring, increasing the pressure to do related to the potential for bankruptcy, and the possibility of the majority of outstanding shares held by management.

In brief, firm value is an economic concept that reflects the value of a business. This is a value that a business has at a particular time. Theoretically, firm value is the amount of money that must be paid to take over a company or business. Just like assets, a firm value could be determined based on book value or market value. Firm value is usually in line with firm size. A large company will usually have widespread shares. This benefits the company but will make the shares less controlled/dominated by certain parties.

On the other hand, shares owned by small companies are usually only distributed in small areas. This happens because large companies tend to take risks in selling their shares to maintain the need for sales growth. The total assets owned by the company indicate the size of the company. The larger firm size, the easier it is to get internal or external funding sources, which will affect the value of the company itself. Also, profitability shows the company's capacity to generate profits from its resources, so that it could theoretically affect the firm value.

Nowadays, paying more attention to social and environmental aspects are important because the image of the company would be influenced, whether positive or negative. The company presence is like a double-edged sword in their social environments. In one side, companies are providing goods and services needed by society, but on the other side, their activities could harm people who live around

the company. If people think the company did not pay attention to social aspects and environment and did not give a direct contribution, also they exposed the negative impact of the operation of a company, it will cause the people's resistance against corporate or social upheaval (Susanti, Marietza, & Indriani, 2012). Implementation of environmental disclosure is expected to have a positive impact on improving the firm value that in the future, it may improve earnings and number of investors. Existing theories, which are usually used to explain the relationship between environmental disclosure and company performance, still contain the opposite meaning. Thus, the results of this study are expected to contribute to the clarity of the theory, which supports the relationship between environmental disclosure and company performance.

1.2 PROBLEM FORMULATIONS

Following the background of the research explained, the following is problems that aimed to be answered and solved by this research:

1. Does environmental disclosure have an effect on firm value?
2. Does firm size have an effect on firm value?
3. Does leverage have an effect on firm value?
4. Does profitability have an effect on firm value?
5. Do environmental disclosure, firm size, leverage, and profitability have an effect simultaneously on firm value?

1.3 RESEARCH OBJECTIVES

Under the problem formulations of the research, the objectives of this research are:

1. Analyse the effect of environmental disclosure on firm value.
2. Analyse the effect of firm size on firm value.
3. Analyse the effect of leverage on firm value.
4. Analyse the effect of profitability on firm value.
5. Analyse the effect of environmental disclosure, firm size, leverage, and profitability simultaneously on firm value.

1.4 RESEARCH CONTRIBUTIONS

This research provides three major contributions. First, through this research, the researcher provides information about the effect of environmental disclosure, firm size, leverage, and profitability on firm value. Second, this research would provide a new empirical study about the effect of environmental disclosure, firm size, leverage, and profitability on firm value in LQ45 Indonesian companies. Third, the researcher, through this research, would give benefits and information to the following users:

1. Investor and users of the financial statements

This research provides information about the influence of environmental disclosure, firm size, leverage, and profitability on firm value implemented by the

company so that it could be used as a consideration before deciding the shareholder to invest.

2. Company Management

The information from this study is aimed to help management in understanding more about the role of environmental disclosure, firm size, leverage, and profitability practices to enhance company management.

3. Further Researchers

This information provided in this research is expected to provide a proper understanding about the effect of environmental disclosure, firm size, leverage, and profitability on firm value and to provide information that could be used for the development of further research in this study area.

1.5 SYSTEMATIC OF WRITING

This research consists of five chapters. One and the other chapters have different explanations. The five chapters are as follow:

CHAPTER I: INTRODUCTION

This chapter explains the problem and motivation of the research. It also provides a summary of prior research on the same field of study. Furthermore, this chapter outlines the purpose and specific objectives of the research. The general description of the study as the outline of the foundation of thought consists of a background of the research, problem formulations, research objectives, research contributions, and systematic of writing.

CHAPTER II: LITERATURE REVIEW AND HYPOTHESIS DEVELOPMENT

This chapter points the review based on previous research studies concerning specific theories. It consists of a theoretical review, a correlation between variables, prior research, hypotheses, and conceptual framework.

CHAPTER III: RESEARCH METHOD

This chapter explains the method used in conducting the research. The method includes a type of research, research sampling, data selection, research variables, and data analysis method.

CHAPTER IV: DATA ANALYSIS AND DISCUSSIONS

This chapter would focus on describing and explaining the research findings. It includes a general explanation of the research sample, statistical analysis, hypothesis testing, regression result, and discussion.

CHAPTER V: CONCLUSIONS AND RECOMMENDATIONS

This chapter explains about conclusion, limitations, and recommendations for further research.

CHAPTER II

LITERATURE REVIEW AND HYPOTHESIS DEVELOPMENT

2.1 THEORETICAL REVIEW

2.1.1 Stakeholder Theory

Edward Freeman (1984) identified groups of stakeholders in the company. The traditional view of the company considers that shareholders are the only thing that matters to the company. The company has a binding fiduciary obligation to fulfil their need that is increasing the value for the shareholders. However, the stakeholders' theory argues that not only shareholders are the important thing in the company, but also there are employees, customers, supplier, financier, society, government, et cetera that should be considered (Freeman, 2001). The existence of a company is to maximise the wealth of the stakeholders. In one of his latest publications, Freeman added a new principle. He states that the consideration of the stakeholders' perspective and their activities are also critical to be taken into the management. Freeman (2006) said that all the mentioned principles are known as normative stakeholder theory. Normative stakeholder theory contains theories of how managers and stakeholders should act and should view the purpose of the organisation. Besides, there are also descriptive stakeholder theory and instrumental stakeholder theory. Descriptive stakeholder theory is concerned with how managers and stakeholders behave and how they view their actions and roles, while instrumental stakeholder theory deals with how managers should act if they

want to flourish and work for their interests. According to Ghazali and Chariri (2007), stakeholder theory explains that not only an entity that operates the company for its interests, but also it must also give benefits for stakeholders. Bramono (2008) stated that the emphasis of stakeholder theory is on company decision making that is considering the needs and interests of all parties related to the activity company.

2.1.2 Agency Theory

Agency theory assumes that all individuals act according to their interests. So, there will be a conflict of interest between owners and agents. It is because agents possibly do not always act under the interests of the principal, thus triggering the agency cost. Being the agent is assumed to receive satisfaction in the form of financial compensation and the terms that accompany the relationship (Jensen and Meckling, 1976). Michael Johnson, a professor from Harvard University, believes that the company's management as "agents" for shareholders, which will act with full awareness of its interest.

2.1.3 Signalling Theory

Signalling theory underlies the voluntary disclosure to provide information to outside parties. The boost was due to the asymmetry of information between management and external parties (Rustiarini, 2010). Information asymmetry will appear when some parties know more information than other parties. The manager has complete information about the company's activities, while shareholders have minor information. The disclosures are needed to reduce information asymmetry;

more the information disclosed will inform more to outside parties. Signalling theory is about signals or signs to the outside parties by the company to enhance shareholder value (Yuniasih and Wirakusuma, 2007).

2.1.4 Neoclassical Theory

Friedman (1970) in Lujun (2010) states that there is a trade-off between "being green" and being a competitive company. The purpose of the statement reveals that every environmental protection activity will reduce economic success. Pollution reduction is estimated to result in increased costs; in other words, there is a reduction in economic success for environmental protection activities.

2.2 ENVIRONMENTAL ACCOUNTING

The background of the importance of environmental accounting requires the awareness of companies or organisations that have used environmental benefits in the form of natural resources. The intended use of the environment is to enhance their business in sustainable environmental conservation, especially industries that are directly related to the use of non-renewable natural resources. From various environmental problems indirectly in the long term could affect the position and financial condition of the company. Environmental accounting as a part of the field of accounting science is increasingly being discussed along with increasing public awareness and concern for the environment. Environmental accounting is projected in aiming to:

1. In addition, to be a concern for the management in developing an environmental management strategy, it will also be a concern for the

- company's external stakeholders (stakeholders). The attention of external parties to environmental accounting is to look at the company's efforts to achieve good environmental quality and reduce environmental pollution
2. It is used by the public and the government to assess the company's compliance with environmental law
 3. It has a function to bridge the company's interests with stakeholder interests, namely by providing information to stakeholders (especially investors and creditors) regarding the company's overall environmental performance in reporting.

2.3 VARIABLES EXPLANATION

2.3.1 Environmental Disclosure as Independent Variable

Environmental disclosure is one of three parts in corporate social responsibility disclosure. The other two are economic and social disclosure. Several proposed definitions of corporate social responsibility are available, but often they are difficult to understand because of unclear or vague. As companies grow and become international, the stakeholders may give more pressure. Freeman (1984) argues that the firms must satisfy their stakeholders because the stakeholders are the key to run business activities that will affect performance and others. Pelozo & Shang (2011) use three different categories to determine Corporate Social Responsibility (CSR) activities, namely philanthropy, business practices, and product-related. They argue that generalisation of Corporate Social Responsibility (CSR) activities is not easy as there is a broad variety of Corporate

Social Responsibility (CSR) activities included in different measures. According to The World Business Council for Sustainable Development (WBCSD), Corporate Social Responsibility is defined as commitment in business practice to participate in sustainable economic development, through collaboration with employees and their families, their society, community, and the general public to improve their quality of life that is beneficial for themselves and for business development.

There is widespread uncertainty about why companies are involved in this type of activity, which is a result of asymmetric information problems (McWilliams et al., 2006). The power of stakeholders, mainly customers, may play an essential role in companies' decision-making. Stakeholders often focus on environmental issues to improve the performance and take responsibility for it. It drives them to act against irresponsible activities in environmental issues. The value of Corporate Social Responsibility (CSR) could be found in several strategic areas. As McWilliams et al. (2006) suggest, Corporate Social Responsibility (CSR) may be seen as a strategic investment. Burke & Logsdon (1996) stated that CSR is considered strategic when generating substantial business-related benefits to the company, especially by supporting core business activities and thus contributing to the company's effectiveness in completing its mission. They identified five different dimensions of corporate strategy needed for company success, which is centrality, specificity, proactivity, volunteerism, and visibility. These are used for assessment of how Corporate Social Responsibility (CSR) activities could add value to a firm.

2.3.1.1 Environmental Disclosure in CSR Phenomenon and Prospect

Corporate Social Responsibility (CSR) is a term that has existed since the 1960s. This could be traced further into the past. However, only in recent years, Corporate Social Responsibility (CSR) appear to surface again. It nowadays becomes the company's performance disclosure tool. Corporate Social Responsibility (CSR) itself could provide many benefits for the company. It has proliferated, but the benefits in a permanent place in business are still debated. Corporate Social Responsibility (CSR) has not been a sure thing. Corporate Social Responsibility (CSR) still has not found its consistent point to be something that must be revealed by a company. Nevertheless, competitive pressures have prompted many companies to consider Corporate Social Responsibility (CSR) because it could not be denied that Corporate Social Responsibility (CSR) probably could add value to the company.

Corporate Social Responsibility (CSR) is worth considering thoroughly. Moreover, the world is currently entering the era of global warming, where several phenomena that will endanger humans in the future have begun to occur. This encourages people to campaign with messages that encourage the public to be "go green". Companies are increasingly involved in charitable activities and are more aware of the impact of their activities as a whole, especially on the environment. All of these are just a few examples of the influence of the spread of Corporate Social Responsibility (CSR) in the world today.

2.3.2 Firm Size as Independent Variable

Company size is an indicator that describes the size of a company that could be measured from the total assets of a company. According to Haninun and Nurdiawansyah (2014), the size of the company is a scale that is used to determine the size of an enterprise, and this is based on specific indicators such as total assets, log size, the value of stocks, total employment, sales, and market capitalisation. Large company size shows that the company is experiencing good growth.

2.3.3 Leverage as Independent Variable

When deciding to develop its potential, the company will need substantial capital, and the capital could come from debt or equity. Debt has two crucial advantages. First, the interest paid could be a tax deduction. Second, creditors will get a fixed amount of return, so that shareholders do not have to share profits if the business goes very well. Theoretically, companies will receive a benefit from debt because interest payments are not taxed. It could increase the value of the company. So, management tends to invest free cash in perspective projects or pay dividends to shareholders. Besides, banks usually apply financial conditions to borrower companies (for example, the debt to fixed assets ratio). Management is intended to fulfil these requirements, and those other improvements are from industries with unrelated activities that could be obtained by management and which do not positively affect company value (Blanchard et al., 1994). Agency cost hypothesis shows that increasing leverage causes a decrease in debt agency costs (Jensen and Meckling, 1976).

2.3.4 Profitability as Independent Variable

In order to carry out its operations, an entity must be in a profitable condition. It is because of the reason that the company will be challenging to attract investor without any profit. Companies that have high profitability figures will attract investors so that they will affect the value of the company.

2.3.5 Firm Value as Dependent Variable

The company's primary objective is to increase the value of a firm. The value will continually increase if a company notices the dimension of economics, socials, and environmental while they operate the business. Maximising firm value is essential for a company because it means increasing the wealth of shareholders as well. Company value is the investor's perception of the success of a company. That is reflected in the company's stock price. The increase in stock prices shows investor confidence in the company, so they are willing to pay more by aiming for higher returns (Damodaran, 2002).

2.4 CORRELATION BETWEEN VARIABLES

2.4.1 Environmental Disclosure on Firm Value

The company will have more value if they consistently disclose social responsibility. It is because society will consider the existence of the company. This condition may give benefits to the company, including the value. According to Murtini (2008), if the company could maximise benefits for stakeholders, it will bring satisfaction to stakeholders who will increase the value of the company. The

number of environmental disclosure will reflect the environmental disclosure index according to the Global Reporting Initiative (GRI). It is calculated by dividing the indicator disclosed by total environmental disclosure required by GRI. While referring to Damodaran (2002), the value of a company is the total assets owned. It consists of the market value of share and liabilities. The measurement of a company value could be done through many indicators, e.g., Tobin's Q, Price Earnings Ratio (PER), Price to Book Value (PBV), et cetera.

2.4.2 Firm Size on Firm Value

Large company size indicates that the company is experiencing good growth. Companies with substantial growth will quickly enter the capital market. It is because investors capture positive signals for companies that have substantial growth so that a positive response reflects an increase in company value. So, the researcher chooses a firm size to be investigated deeper to find the fact from proper analysis.

Agency theory describes the relationship between agents and principals. Where the manager as an agent must be able to run a company with a variety of the best decision making to increase the wealth of the principal, namely shareholders. However, sometimes the shareholders could not supervise all decisions and activities carried out by managers so that it will become a threat if what is done by the manager is not for the welfare of shareholders but their welfare. Quality financial statement information could help in making decisions such as for investors and potential investors. Investment decisions or contract decisions that

are based on poor quality earnings could lead to mistakes in wealth transfers because it will give a weak signal. Firms with considerable growth will easily enter the capital market because investors capture positive signals so that a positive response reflects the increasing firm value.

2.4.3 Leverage on Firm Value

Debt policy could be linked to company value, where debt policy is a company policy about how far a company uses debt financing. The Trade-off theory explains that the higher the company is funding debt, the greater their risk for financial difficulties because of paying too much-fixed interest for debtholders each year with uncertain net income (bankruptcy cost of debt). High debt could be associated with better company performance. That will be achieved by avoiding bankruptcy. If cash is available to management, shareholders may prefer to get dividends. As a result, high dividends are expected from companies with managers employed outside (Damodaran, 2010).

2.4.4 Profitability on Firm Value

Profitability could lead the firm to be more valued because the firm with higher profitability will attract more investors to invest in the firm. Investors will consider the prospect of the firm. If profitability consistently improves, the prospect of a firm will be affected. So that value of a firm is also affected. Profitability is a barometer of the company's capacity to generate profits from its resources. According to Mardiyati (2012), profitability has a significant positive effect on firm value. High profit will indicate good company prospects so that it

could trigger investors to participate in increasing stock demand. If the demand for shares increases, then the value of the company will increase.

2.4.5 Simultaneously on Firm Value

In theory, environmental disclosure, firm size, leverage, and profitability each could affect firm value. All independent variables will be investigated one by one, whether it has an effect on the firm value or not. Then, the researcher will gather all of the independent variables and investigate its effect simultaneously. Theoretically, all independent variables gathered will affect firm value.

2.5 BASIS OF DETERMINING VARIABLES

In this research, independent variables used are environmental disclosure, firm size, leverage, and profitability. Environmental disclosure, firm size, leverage, and profitability are used because of some recommendations from prior researches. It stated that further research is suggested to investigate other factors which lead to firm size and environmental disclosure. While leverage and profitability are based on prior research to investigate whether it has a different result or not.

2.6. PRIOR RESEARCH

There are many types of research on the relationship between corporate social responsibility and the firm value. The results of previous research show inconsistent results. Harjoto and Jo (2007) found that the disclosure of corporate social responsibility has a positive effect on corporate value. The results are consistent with research from Kusumadilaga (2010) and Singh, Sethuraman, and

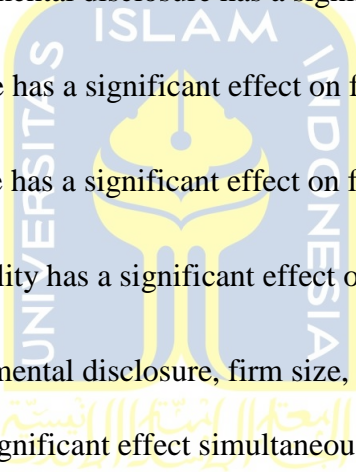
Lam (2017). Moreover, different results found by other researchers. Nurlela & Islahuddin (2008) found that corporates social responsibility will affect the firm value if only there is an interaction between corporate social responsibility and management ownership toward firm value. Management ownership affects firm value, while there is no effect of an association of corporate social responsibility on firm value. Mulyadi (2012), in his research titled “Impact of Corporate Social responsibility toward Firm Value and Profitability”, found out no evidence of the effect of corporate social responsibility towards the firm value, as well as between corporate social responsibility and profitability.

Under the research conducted by Putu, Moeljadi, Djumahir, and Djazuli (2014) titled by “Factors Affecting Firms Value of Indonesia Public Manufacturing Firms” stated that larger firm could increase firm value. The consistent result could be known from research conducted by Bestaningrum (2015), capital structure and firm size simultaneously have a significant effect on firm value. While partially, capital structure has no significant effect on firm value, and firm size has a significant effect on firm value.

In the field of leverage, Putri and Fidiana (2017) found that the debt policy not significant effect on firm value. Massie et al. (2018) found that leverage does not significantly influence firm value. Under the signalling theory, companies that have positive equity and particular debt indicates that the management of funding for operational activities was excellent. It would be a positive signal for investors because they believe in investing in the company. It is expected they will also get the maximum revenue.

Furthermore, Pertiwi et al. (2016) and Rosada and Idayati (2017) found that profitability has a significant effect on firm value. Under the signalling theory, companies with high profitability will be good at managing resources to generate income to be received in the form of dividends. The investors will be interested in owning shares of the company, so the stock price increases. It will increase firm value.

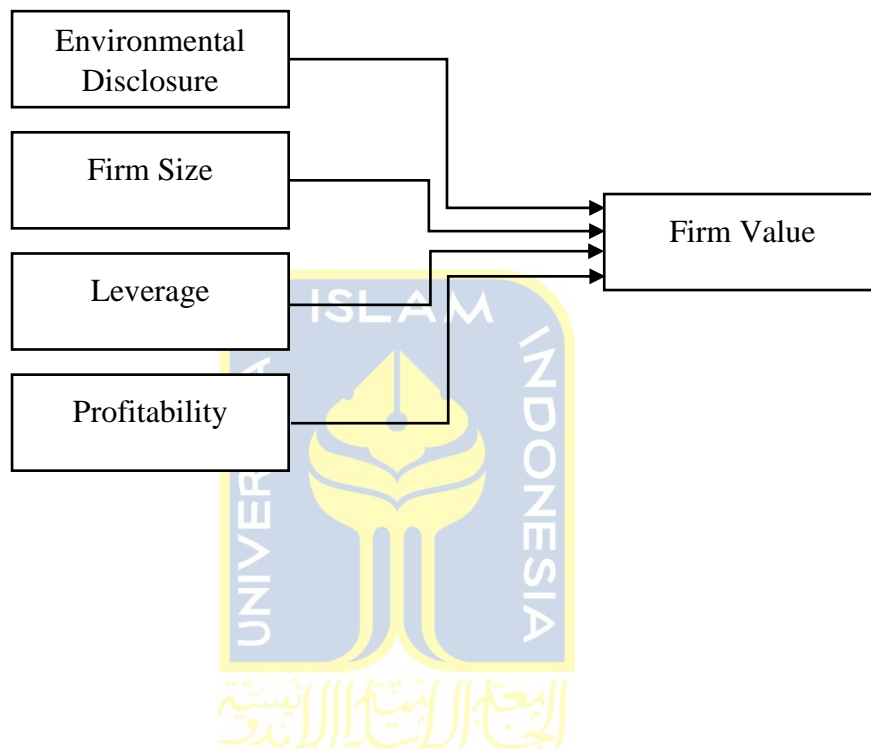
2.7. HYPOTHESES

- 
- H₁: Environmental disclosure has a significant effect on firm value.
- H₂: Firm size has a significant effect on firm value.
- H₃: Leverage has a significant effect on firm value.
- H₄: Profitability has a significant effect on firm value.
- H₅: Environmental disclosure, firm size, leverage, and profitability have a significant effect simultaneously on firm value.

2.8. CONCEPTUAL FRAMEWORK

Figure 2.1 shows the conceptual framework of this research.

Figure 2.1 Conceptual Framework



CHAPTER III

RESEARCH METHOD

3.1 DATA AND SAMPLE COLLECTION

This study is empirical research and is classified as a quantitative approach. This study will conduct several formulas to test the hypotheses with an appropriate statistical method.

3.1.1 Data Collection Method

The data source that is used in this study is secondary data from the annual report of the companies. The annual report is used because of the limitation that not all companies have disclosed a sustainability report. Data collection technique in this study is obtained by using the documentation method by using SPSS 23 software in the data processing.

3.1.2 Population and Sample Collection Method

The population of this research is constituents of LQ45 Indonesian companies listed in Indonesia Stock Exchange (IDX) during the fiscal year 2015 until 2017. According to Indonesia-Investments, LQ45 consists of 45 companies that its stocks meet some specific criteria. These stocks are among the most liquid stocks traded in Indonesia Stock Exchange (IDX). In China, this sort of index is the Hang-Seng Index from the Hong Kong Stock Exchange. The LQ45 index is adjusted twice a year (February and August). Firms must fulfil the criteria in order to be compatible to be included in the LQ45 index. The criteria are:

- being listed on the Indonesia Stock Exchange (IDX) for at least three months
- being in the top 60 in terms of market capitalisation (for the last 12 months)
- being ranked in top 60 stocks based on transaction value on the regular market (for the last 12 months)
- having good and reasonable financial condition and prospect

However, to do proper research, the researcher found 28 companies which are suitable with the criteria determined as the samples of this research. The sampling collection method was done by purposive sampling method by considering the specific characteristics with the following criteria:

1. The company should be listed in Indonesia Stock Exchange (IDX)
2. The company should continuously be listed in LQ45 index for six periods during 2015-2017
3. The company should state its currency in Rupiah (IDR)
4. The company should provide reports with complete data for the measurement of the variables during 2015-2017
5. The company's data should be free from an outlier in 2015-2017

3.2 RESEARCH VARIABLES

3.2.1 Dependent Variable

According to businessdictionary.com, dependent variables are factors changed by the effect of associated factors called independent variables. In research,

it is the variable whose behaviour under controlled conditions (that are allowed to change in an organised manner) is studied.

3.2.1.1 Firm Value (Y)

Firm value could be interpreted as the ability of the firm to maximise its stakeholders' wealth. It is the perception of the investor to the success of a firm. The share price could reflect this. The share price will increase in line with the trust of the investors to the firm. So that the investors tend to have the willingness to pay more with expecting a higher return in the future. The firm value could be measured by the total assets owned because it consists of both liabilities and the market value of a share. Several parameters might be used to measure firm value, such as Price Earnings Ratio (PER), Price to Book Value (PBV), and Tobin's Q. In this research, Price Earnings Ratio (PER) is chosen as an indicator of firm value. According to Sujoko and Soebiantoro (2007) in Sri Hermuningsih (2009), company value is an investor's perception of the level of success of the company that is closely related to its stock price. High stock prices make the value of the company high, and increase market confidence not only at current company performance but also on future corporate prospects. The closing price is generally a reference of stock price used, and the stock price is used when shares are on trading on the market (Fakhrudin and Hadiano, 2001). According to Tandelilin (2007), PER is a comparison between the company's stock price and earnings per share in shares. PER is a function of changes in the ability of profits expected in the future. The higher the PER, the higher the possibility of the company to grow

so that it could increase the value of the company. Based on the recommendation from prior research, in measuring firm value, Mayati and Sari (2018) who previously used Tobin's Q recommended that price earnings ratio (PER) or price book value (PBV) may be used for further research. The formula is as follow:

$$\text{Price Earnings Ratio (PER)} = \frac{\text{Share Price}}{\text{Earnings per Share}}$$

3.2.2 Independent Variable

According to businessdictionary.com, independent variables are factors that influence other related factors called dependent variables. In research, it is a controlled condition (which is allowed to change systematically) whose influence on the behaviour of the dependent variable is further studied.

3.2.2.1 Environmental Disclosure (X_1)

Environmental Disclosure is measured by giving a score to environmental disclosure information items from the annual report. It is merely by giving score 1 (one) to the information disclosed on the annual report while giving score 0 (zero) if there is no information disclosed on the annual report. The score will be accumulated as the number of items disclosed in the formula used. Environmental disclosure from Corporate Social Responsibility Index (CSRI) is calculated by comparing the number of items disclosed by the firm with the number of disclosure

items required by Global Reporting Initiative (GRI) which includes 34 items.

Environmental disclosure is formulated as follow:

$$\text{Environmental Disclosure} = \frac{\text{The Number of Items Disclosed}}{\text{Items Required by GRI (34)}} \times 100$$

3.2.2.2 Firm Size (X_2)

Firm size is an indicator of a condition or a characteristic of a firm. Moreover, there are several parameters to determine firm size. Ghozali (2006) mentioned that firm size could be measured from total firm assets. It is because total assets is a great value that could reflect the firm size. It could be simplified by transforming total assets into natural logarithms as follow:

$$\text{Firm Size} = Ln (\text{Total Assets})$$

3.2.2.3 Leverage (X_3)

According to Kasmir (2012), leverage is the ratio used to determine how much the company could pay all its obligations. Leverage ratio is used to measure the number of funds supplied by the owner of the company in proportion to funds obtained from the company's creditors. Based on experts, many ratios are used in leverage calculations, such as Debt to Asset Ratio (DAR) and Debt to Equity Ratio (DER). However, in this study, the ratio used is the debt to equity ratio (DER).

DER is the ratio used to assess debt with equity. This ratio is useful for knowing the number of funds provided by the borrower (the creditor) with the owner of the company. In other words, this ratio serves to find out its capital, which is used as collateral for a debt.

$$\text{Debt to Equity Ratio (DER)} = \frac{\text{Total Debt}}{\text{Total Equity}}$$

3.2.2.4 Profitability (X_4)

Profitability is an indicator used to measure the ability of a firm in generating profit. There are several parameters to measure profitability, which are return on asset (ROA) and return on equity (ROE). However, this research will use return on asset (ROA) as a parameter to measure the profitability of the firm in accordance with Harvard Business Review's statement that return on asset (ROA) could improve a better view of the business fundamentals, including the use of assets. Based on the recommendation from prior research, in measuring profitability, Mayati and Sari (2018) who previously used return on equity (ROE) recommended that return on asset (ROA) may be used for further research. Return on asset (ROA) is the ratio that indicates how profitable a firm is relative to its total asset, which is formulated as follow:

$$\text{Return on Asset (ROA)} = \frac{\text{Net Income}}{\text{Total Assets}}$$

3.3 RESEARCH MODEL

The purpose of this research is to investigate the effect of environmental disclosure, firm size, leverage, and profitability on firm value. To see this effect, the model formed in this study consisted of four models:

$$Y = \alpha + \beta_1 X_1 + \beta_2 X_2 + \beta_3 X_3 + \beta_4 X_4 + e$$

Description:

Y : Firm Value (Price Earnings Ratio)

α : Constant

$\beta_1 - \beta_4$: Coefficient of Regression

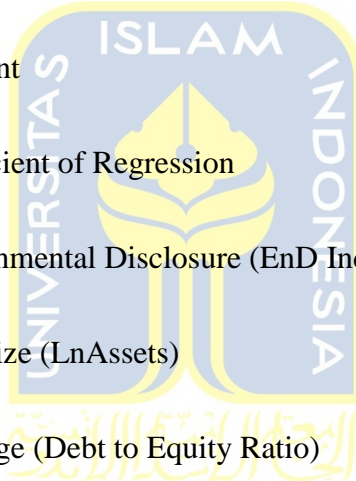
X_1 : Environmental Disclosure (EnD Index)

X_2 : Firm Size (LnAssets)

X_3 : Leverage (Debt to Equity Ratio)

X_4 : Profitability (Return on Assets)

e : Residual Error



3.4 ANALYSIS METHOD

3.4.1 Descriptive Statistic

A descriptive statistic is a tool used to give a description or profile of sample data gathered on data collection in the study. It consists of a minimum,

maximum, mean, standard deviation, and variance. The data that will be analysed are variables in this research.

3.4.2 Test of Classical Assumption

3.4.2.1 Normality Test

Normality test is to test whether the residual variable has a normal distribution or not. This test will be using Kolmogorov-Smirnov and Probability Plot.

3.4.2.2 Autocorrelation Test

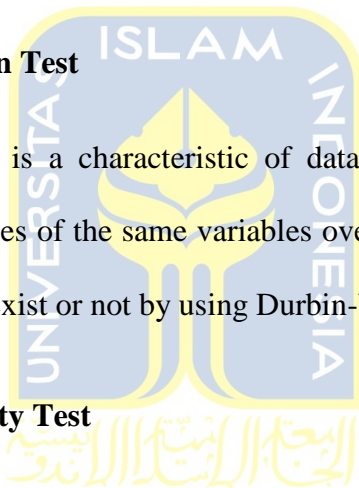
Autocorrelation is a characteristic of data which shows the degree of similarity between values of the same variables over successive time intervals. It will be tested whether exist or not by using Durbin-Watson.

3.4.2.3 Multicollinearity Test

Multicollinearity test aims to test whether the regression model found no correlation between independent variables. It will be tested by using Tolerance and VIF.

3.4.2.4 Heteroscedasticity Test

Heteroscedasticity test aims to test whether the regression model of the residual variance inequality occurred one observation to another observation. Scatterplot will be the result of the test.

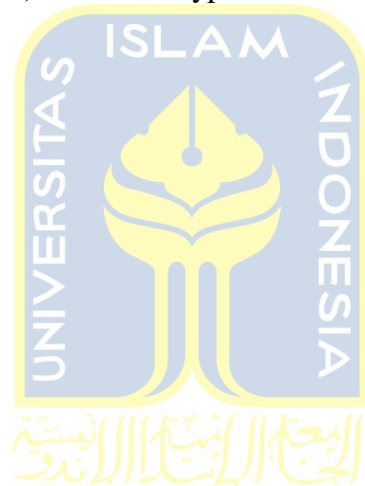


3.4.3 Coefficient of Determination

The coefficient of determination (R^2) is used to measure how much the ability of independent variables to explain the dependent variable. The coefficient of determination value is between zero and one.

3.4.4 Hypothesis Testing

Hypothesis testing is to test an assumption regarding a population parameter and depends on the data and reason for the analysis. It will use Multiple Linear Regression (MLR) to test the hypotheses.



CHAPTER IV

DATA ANALYSIS AND DISCUSSION

4.1 GENERAL EXPLANATION OF RESEARCH OBJECT

The research focused on studying LQ45 Indonesian companies listed in Indonesia Stock Exchange (IDX) from 2015 to 2017. The currency used is the Indonesian Rupiah (IDR). Based on purposive sampling method, there are ten (10) companies inconsistent between periods, three (3) companies do not state its currency in Rupiah (IDR), and five (5) companies have outlier between 2015 and 2017.

According to Ghozali (2006), there are four causes of data outliers. Those are:

1. Error in data entry.
2. There is a failure to specify the missing value in the program computer.
3. Outliers are not members of the population taken as a sample.
4. Outliers come from populations taken as samples, but the distribution of variables in the population has extreme value and not normally distributed.

In this research, the cause of outliers is the fourth number that is outliers come from populations taken as samples, but the distribution of variables in the population has extreme value and not normally distributed. Detection of outliers could be done by determining the boundary values that will be categorised as outlier data by converting data values into standardized scores or commonly called

z-scores (Ghozali, 2011). So, there are 28 sample companies out of 45 listed companies which are in a total of 84 sample data because of three (3) years period studied. The criteria of sampling were as follow:

Table 4.1 Research Sample in Total

A.	The company listed in LQ45 Index	45
B.	The company not listed in LQ45 for six periods 2015-2017	(10)
C.	Company's currency stated not in Rupiah (IDR)	(3)
D.	Outlier found in the company	(4)
E.	Total companies passed	28
F.	Companies multiplied by period research conducted (3 years)	84

Source: Secondary data processed, 2019.

Based on the result of sample selection, this study uses 84 data as samples to find out the determinants of firm value by analysing environmental disclosure, firm size, leverage, and profitability as independent variables (a study of LQ45 Indonesian companies) from 2015 to 2017.

4.2 DESCRIPTIVE STATISTIC

Descriptive statistics are used to describe data that is seen from the mean, standard deviation, maximum, and minimum values (Ghozali, 2011). Before testing, the data will be presented in the form of descriptive statistics that are used to provide an overview of the research variable data. In this research, the data is as follow:

Table 4.2 Descriptive Statistic Result

	N	Minimum	Maximum	Mean	Std. Deviation
EnD Index	84	.00	79.41	38.6551	18.49563
LnAsset	84	29.15	34.66	31.5408	1.43336
DER	84	.15	6.76	1.6786	1.79248
ROA	84	1.41	33.32	7.8864	6.09881
PER	84	5.12	48.23	20.7706	9.08308

Source: Secondary data processed using SPSS 23, 2019.

Based on table 4.2, some of the following could be explained as:

A. Environmental Disclosure Index

The value of minimum environmental disclosure is at Media Nusantara Citra Tbk. in 2015 with a value of 0.00. It shows that the company has the lowest environmental activity and disclosure compared to other LQ45 companies. While the maximum value of environmental disclosure is in Semen Indonesia (Persero) Tbk in 2016 with a value of 79.41. It shows that the company has the highest activity and disclosure regarding the environment compared to other LQ45 companies. The average value of environmental disclosure in the LQ45 companies studied is equal to 38.6551. It could be interpreted that the average company that conducts environmental activities and expresses it into environmental disclosure according to the environmental index in the annual report is 38.66% of the total

sample. The standard deviation of the environmental disclosure variable is 18.49563. It is smaller than the average value so that it indicates that environmental disclosure data is homogeneous.

B. Firm Size (LnAssets)

The minimum value of company size is at Surya Citra Media Tbk in 2015 with a calculation result of 29.15 with an asset value of IDR4,565,963,576,000 which indicates that the company has the lowest assets compared to other companies. Bring the maximum value of company size to Bank Rakyat Indonesia (Persero) Tbk in 2017 with the calculation of 34.66 with an asset value of IDR1,126,248,442,000,000, which means that the company has the highest assets compared to other companies. The average value of company size in this research is 31.5408 with IDR160,853,285,020,376, which means most LQ45 companies in Indonesia are large companies because they have a high value of company size and based on Law No. 8 of 2008 concerning MSMEs large companies have total assets above IDR10M. With the standard deviation value of the variable company size smaller than the average value of 1.43336, so it could be concluded that the company size data is homogeneous.

C. Leverage (DER)

The minimum leverage value is found in Indocement Tunggal Prakasa Tbk in 2016 with a calculation result of 0.15, which means the company has the lowest debt compared to equity among the sample companies. While the maximum value of leverage in this study is owned by Bank Rakyat Indonesia (Persero) Tbk in 2016

with the calculation of 6.76. The average value of leverage in the LQ45 companies studied is 1.6786. For the standard deviation, which is 1.79248, it has a larger amount than the average value, so it could be concluded that the leverage data is heterogeneous.

D. Profitability (ROA)

The minimum profitability value is found in Bank Mandiri (Persero) Tbk in 2016 with a calculation result of 1.41, which means the company could receive the lowest profit among the sample companies. While Surya Citra Media Tbk owns the maximum value of profitability in this study in 2015 with the calculation of 33.32. The average value of profitability in the LQ45 companies studied is 7.8864. The value could be interpreted that the level of the company's ability to generate profits is 7.89% of total assets. For the standard deviation, which is 6.09881, the value of the profitability variable is smaller than the average value, so it could be concluded that the profitability data is homogeneous.

E. Firm Value (PER)

From descriptive statistical analysis, it is known that the minimum value of PER is 5.12. It comes from Tambang Batubara Bukit Asam (Persero) Tbk in 2015. While Adhi Karya (Persero) Tbk in 2016 has the maximum value of PER with 48.23. The average value of PER variable is 20.7706 with a standard deviation value of 9.08308. The value of standard deviation is smaller than PER value, which means that the data is homogeneous.

4.3 TEST OF CLASSICAL ASSUMPTION

4.3.1 Normality Test

In this study, the Kolmogorov-Smirnov statistical test is used to find out whether the residuals were normally distributed or not. A hypothesis is made to carry out normality testing, namely:

H_0 : The residual data is normally distributed

H_1 : The residual data is not normally distributed.

Based on data processing using SPSS, the results of Kolmogorov-Smirnov are obtained as follows:

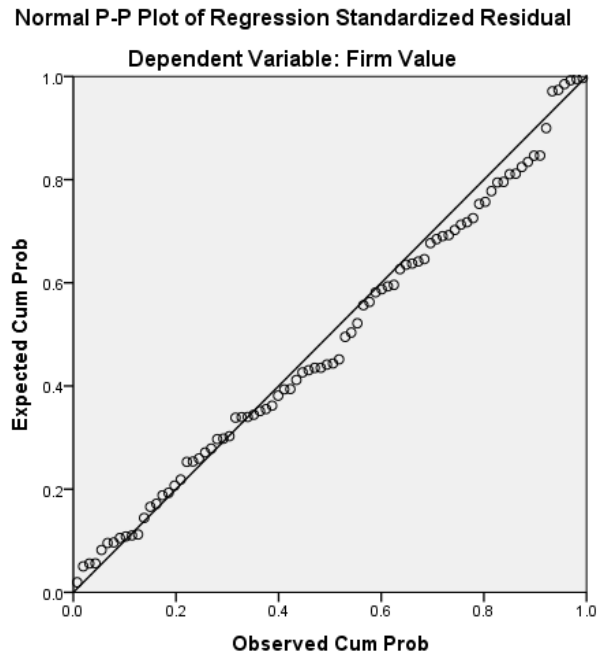
Table 4.3 Kolmogorov-Smirnov Test

	Unstandardized Residual
N	84
Test Statistic	0.073
Asymp. Sig. (2-tailed)	0.200

Source: Secondary data processed using SPSS 23, 2019.

From table 4.3, it is known that the value of significance is 0.200. It means that the significance value is above 0.05. So, H_0 is accepted, or in other words, residual data is normally distributed. This result is reinforced by testing using probability plots. It is used to observe the distribution of data. If the distribution of the plot is around the diagonal line, or in other words following the diagonal line flow, then the data is normally distributed.

Figure 4.1 Probability Plot of Regression



Source: Secondary data processed using SPSS 23, 2019.

From figure 4.1, it is known that the distribution of plots follows the diagonal line or distributed around the diagonal line. It means that the data indicated by plots on a probability plot are normally distributed.

4.3.2 Autocorrelation Test

The Durbin-Watson test is used in this study to detect the presence of autocorrelation. The hypothesis used to test the presence of autocorrelation using the Durbin Watson test is:

H₀: There is no autocorrelation

H₁: There is autocorrelation

Table 4.4 Durbin-Watson Autocorrelation Test

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Durbin-Watson
1	.383	.147	.104	8.60013	1.924

Source: Secondary data processed using SPSS 23, 2019.

Decision-making about the presence or absence of autocorrelation is based on the value generated from data processing by using SPSS. H_0 's decision is accepted (there is no autocorrelation) if the d value (Durbin-Watson value) resulted from data processing is statistically at the value between the upper limit (d_u) and four minus the upper limit ($4-d_u$) or $d_u < d < 4-d_u$. From the result of statistical data processing using SPSS, d value is 1.924. This value is then compared with the Durbin-Watson table value using a significance value of 5%. The number of independent variables symbolised by k value is four independent variables. The number of samples in this study denoted by n is 84 samples. Based on the Durbin-Watson table by Savin and White, d_u value is 1,743 so that $4-d_u$ is 2.257. Because the value of d is more than d_u and less than $4-d_u$ ($1,743 < 1.924 < 2,257$), then H_0 is accepted that means there is no autocorrelation between residuals from one observation to another observation.

4.3.3 Multicollinearity Test

Multicollinearity is a very high intercorrelation condition between the independent variables. Therefore, it is a type of disturbance in the data, and if it

presents in the data, statistical conclusions made about data may not be reliable. To detect multicollinearity, it could be done by observing the tolerance values and the Variance Inflation Factor (VIF) values. The results are presented by the table below.

Table 4.5 Multicollinearity Test

Model	Collinearity Statistics	
	Tolerance	VIF
Environmental Disclosure	.872	1.146
Firm Size	.377	2.651
Leverage	.367	2.724
Profitability	.684	1.463

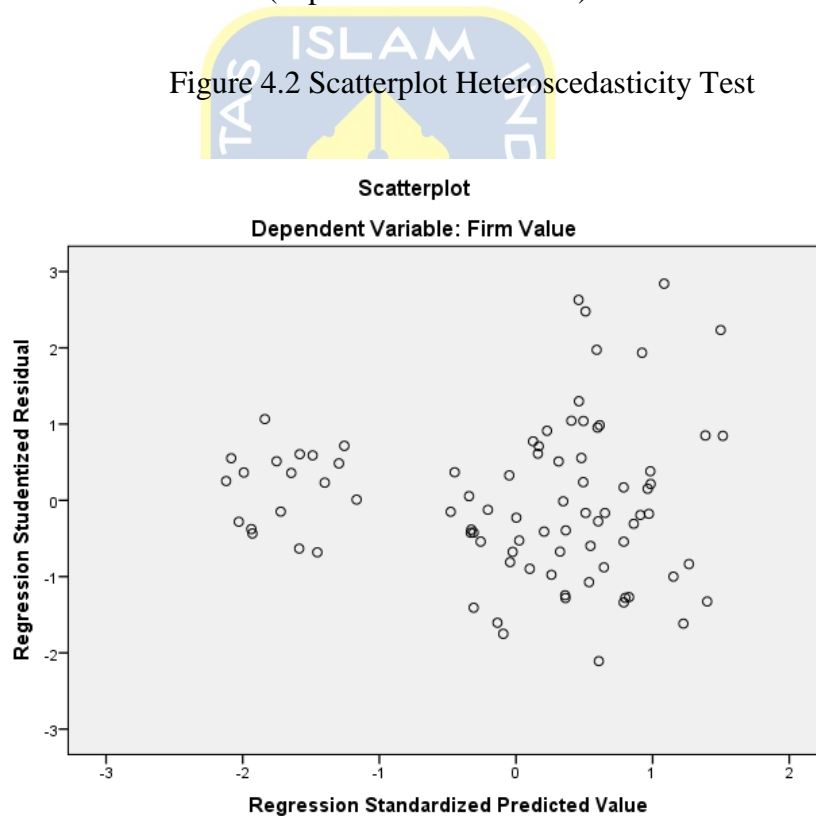
Source: Secondary data processed using SPSS 23, 2019.

The value generally used to indicate the existence of multicollinearity is by using tolerance value and VIF (Variance Inflation Factor) value. If tolerance value is less than 0.1 ($\text{tolerance} < 0.1$) and VIF value is more than 10 ($\text{VIF} > 10$), so multicollinearity does exist. Following table 4.5, all independent variables have tolerance value more than 0.1 ($\text{tolerance} > 0.1$) and VIF value less than 10 ($\text{VIF} < 10$). It means that all four independent variables (environmental disclosure, firm size, leverage, and profitability) meet the criteria of free from multicollinearity. So, there is no multicollinearity in this regression model.

4.3.4 Heteroscedasticity Test

Heteroscedasticity test is the test to figure out whether, in the regression model, variance inequality occurs from residuals of observations to other observations. The figure below is the result of heteroscedasticity test by looking at the plot between the predictions of the dependent variable (ZPRED) and its residual (SRESID). This test is to detect the presence or absence of a particular pattern on the scatterplot chart between SRESID and ZPRED where the Y-axis is Y predicted, and the X axis is the residual (Y prediction – Y actual) that has been studentized.

Figure 4.2 Scatterplot Heteroscedasticity Test



Source: Secondary data processed using SPSS 23, 2019.

By looking at Figure 4.3 above, it could be seen that there is no clear pattern. There the plots spread above and below 0 on the Y-axis. It could be concluded that heteroscedasticity does not occur in this regression model.

4.4 COEFFICIENT OF DETERMINATION

The coefficient of determination (R^2) is used to measure how much the ability of independent variables to explain the dependent variable. The coefficient of determination value is between zero and one. It means that the ability of independent variables to explain the dependent variable has a limitation. The coefficient of determination value that is close to one means that the independent variables support almost all the information that is needed to predict the variation of the dependent variable. The value of determination is determined by the R square (R^2). Based on statistical data processing, R square shows:

Table 4.6 Coefficient of Determination Result

R	R Square	Adjusted R Square	Std. Error of the Estimate
.383	.147	.104	8.60013

Source: Secondary data processed using SPSS 23, 2019.

Based on table 4.6 above, it is known that the coefficient of determination value (R Square) is 0.147. This R Square value of 0.147 comes from the squaring of the coefficient of correlation value or "R", which is 0.383×0.383 (0.383^2) equals to 0.147. The amount of coefficient of determination (R Square) is 0.147 or equal to 14.7%. This number implies that the environmental disclosure (X_1), firm size

(X_2), leverage (X_3), and profitability (X_4) simultaneously influence the firm value (Y) of 14.7%. While the rest of it, which is 85.3% ($100\% - 14.7\% = 85.3\%$), is influenced by other variables not examined (outside of this regression equation). Furthermore, the smaller value of the coefficient of determination (R Square) means that the influence of independent variables (X) towards the dependent variable (Y) is less reliable.

4.5 HYPOTHESIS TESTING

Based on the results of the classic assumption test that has been carried out, it could be concluded that the data in this study fulfils the BLUE (Best Linear Unbiased Estimator) criteria which were indicated by normally distributed data, free of autocorrelation, absence of multicollinearity and no heteroscedasticity. Therefore, the data has met the requirements to use a multiple linear regression model. Here is the result of the regression output that has been processed by using SPSS 23.

Table 4.7 ANOVA Regression Output F-test

	Sum of Squares	df	Mean Square	F	Sig.
Regression	1004.671	4	251.168	3.396	.013 ^b
Residual	5843.020	79	73.962		
Total	6847.692	83			

Source: Secondary data processed using SPSS 23, 2019.

Table 4.8 Regression Output T-test

	B	Std. error	Beta	t	Sig.
(Constant)	108.506	32.398		3.349	.001
Environmental Disclosure	.000	.055	.001	.007	.994
Firm Size	-2.733	1.072	-.431	-2.549	.013
Leverage	.020	.869	.004	.023	.982
Profitability	-.200	.187	-.134	-1.069	.288

Source: Secondary data processed using SPSS 23, 2019.

In this research, table 4.7 and 4.8 will be the basis to test hypotheses and to determine whether the hypothesis is accepted or not. There is one hypothesis that will be explained in table 4.7. So that table 4.8 will describe four hypotheses.

4.5.1 Test of Hypothesis 1 (H₁)

Table 4.9 T-test for H₁

	B	Std. error	Beta	t	Sig.
Environmental Disclosure	.000	.055	.001	.007	.994

Source: Secondary data processed using SPSS 23, 2019.

The first hypothesis of this study states that environmental disclosure has a significant effect on firm value. The results presented in table 4.9 show that the value of t count is 0.007 with the significance of 0.994, whose significance value is larger than the significance level (α) = 5% or 0.05. It turns out that p-value

0.994 > 0.05. These results indicate that environmental disclosure has no significant effect on firm value. Thus, H₁ is not accepted.

4.5.2 Test of Hypothesis 2 (H₂)

Table 4.10 T-test for H₂

	B	Std. error	Beta	t	Sig.
Firm Size	-2.733	1.072	-.431	-2.549	.013

Source: Secondary data processed using SPSS 23, 2019.

The second hypothesis of this study mentions that firm size has a significant effect on firm value. The results presented in table 4.10 show that the value of t count is -2.549 with a significance of .013 whose significance value is smaller than the significance level (α) = 5% or 0.05. It turns out that p-value 0.013 < 0.05. These results indicate that environmental disclosure has a significant effect on firm value. Thus, H₂ is accepted.

4.5.3 Test of Hypothesis 3 (H₃)

Table 4.11 T-test for H₃

	B	Std. error	Beta	t	Sig.
Leverage	.020	.869	.004	.023	.982

Source: Secondary data processed using SPSS 23, 2019.

The third hypothesis of this study states that leverage has a significant effect on firm value. The results presented in table 4.11 show that the value of t count is 0.023 with the significance of 0.982, whose significance value is larger than the significance level (α) = 5% or 0.05. It turns out that p-value 0.982 > 0.05. These

results indicate that environmental disclosure has no significant effect on firm value. Thus, H₃ is not accepted.

4.5.4 Test of Hypothesis 4 (H₄)

Table 4.12 T-test for H₄

	B	Std. error	Beta	t	Sig.
Profitability	-.200	.187	-.134	-1.069	.288

Source: Secondary data processed using SPSS 23, 2019.

The fourth hypothesis of this study states that profitability has a significant effect on firm value. The results presented in table 4.12 show that the value of t count is -1.069 with a significance of 0.288 whose significance value is larger than the significance level (α) = 5% or 0.05. It turns out that p-value $0.288 > 0.05$. These results indicate that environmental disclosure has no significant effect on firm value. Thus, H₄ is not accepted.

4.5.5 Test of Hypothesis 5 (H₅)

F test shows whether all the independent variables included in the model have a mutual influence on the dependent variable. This test is to find out whether the model implemented in this study is a model that is feasible (fit) or not.

Table 4.13 F-test for H₅

	Sum of Squares	df	Mean Square	F	Sig.
Regression	1004.671	4	251.168	3.396	.013

Source: Secondary data processed using SPSS 23, 2019.

According to the results of statistical calculations, it is known that F-count is 3.396 with a significance of 0.013. It is because the significance value is smaller than 5% or 0.05. It turns out that p-value $0.013 < 0.05$. It could be concluded that the fit model. In other words, these results indicate that the independent variables, which are environmental disclosure, firm size, leverage, and profitability simultaneously, have a significant effect on firm value. Thus, H_5 is accepted.

4.6 DISCUSSION

1. Relationship of environmental disclosure to firm value

This research stated that H_1 : *Environmental disclosure has a significant effect on firm value*. The result shows that the significance value of environmental disclosure is 0.994, which is more than 0.05 level of significance. It means that hypothesis one is rejected. The results of testing the first hypothesis show that environmental disclosure does not have a significant effect on firm value. The more information disclosed by the company will not increase firm value. However, there is still a possibility that environmental disclosure will be in consideration for investors to invest.

2. Relationship of firm size to firm value

This research stated that H_2 : *Firm size has a significant effect on firm value*. The result shows that the significance value of firm size is 0.013, which is smaller than 0.05 level of significance. It means that hypothesis two is accepted. The results of testing the second hypothesis show that the firm size has a significant effect on firm value. The higher the size of a company, the more significant the impact it

will have. So that companies that have a large size will be more attractive related to the firm value will also be higher.

3. Relationship of leverage to firm value

This research stated that H_3 : *Leverage has a significant effect on firm value.*

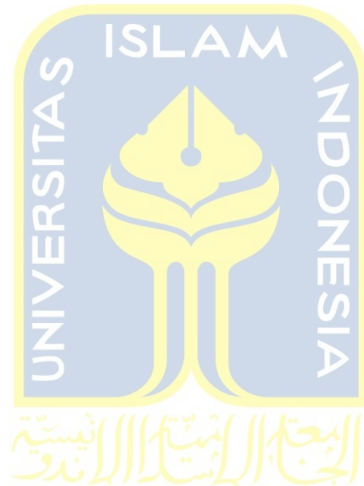
The result shows that the significance value of leverage is 0.982, which is more than 0.05 level of significance. It means that hypothesis three is rejected. The results of testing the third hypothesis show that the variable leverage does not have a significant effect on firm value. The possibility is that although leverage may be what investors' concern, the amount is considerable. If leverage increases to operate a business, and the income from it could pay out the leverage. So, leverage does not directly affect the firm value.

4. Relationship of profitability to firm value

This research stated that H_4 : *Profitability has a significant effect on firm value.* The result shows that the significance value of profitability is 0.288, which is larger than 0.05 level of significance. It means that hypothesis four is rejected. The results of testing the fourth hypothesis show that the variable profitability does not have a significant effect on firm value. It might be due to profitability is what investors do not concern. In this study, companies used as sample are from LQ45 Index, which all companies are large companies that its effect of profitability does not occur in LQ45 companies.

5. Relationship of environmental disclosure, firm size, leverage and profitability to firm value

This research stated that H_5 : *Environmental disclosure, firm size, leverage, and profitability have a significant effect simultaneously on firm value*. The result shows that the significance value of 0.013, which is smaller than 0.05 level of significance. It means that hypothesis five is accepted. The results of testing the fifth hypothesis show that all independent variables, which are environmental disclosure, firm size, leverage, and profitability simultaneously have a significant effect on firm value.



CHAPTER V

CONCLUSIONS AND RECOMMENDATIONS

5.1 CONCLUSIONS

This research is conducted to determine whether environmental disclosure, firm size, leverage, and profitability have an effect on firm value. In order to do proper research, the researcher found 28 companies which are suitable with the criteria determined as the samples of this research. The research focused on studying LQ45 Indonesian companies listed in Indonesia Stock Exchange (IDX) from 2015 to 2017. This research used secondary data that is gathered from the annual report of the company and other data from the Indonesia Stock Exchange (IDX). Based on purposive sampling method, there are ten (10) companies inconsistent between periods, three (3) companies do not state its currency in Rupiah (IDR), and five (5) companies have outlier between 2015 and 2017. So, there are 28 sample companies out of 45 listed companies, which is in a total of 84 sample data because of three (3) years period studied. This research is tested by using classical assumption testing and analysed by Multiple Linear Regression (MLR) using SPSS 23.

The dependent variable in this research is firm value, which is measured by Price Earnings Ratio (PER). There are four independent variables which are environmental disclosure that is measured by EnD index, firm size that is measured by the natural logarithm of assets, leverage that is measured by Debt to Equity Ratio (DER) and profitability that is measured by Return on Assets (ROA).

Based on the result of research, three of the independent variables (environmental disclosure, leverage, and profitability) showed significance value that is more than the significance level of 5%. It means that those do not have significant impacts on firm value. While two results (firm size and all independent variables simultaneously) show that significance value is less than the significance level of 5%, it means that it has a direct impact on firm value. This conclusion supports several studies used as the basis of this research.

5.2 RESEARCH LIMITATIONS

The scope of this study is limited in proving the effect of environmental disclosure, firm size, leverage, and profitability on firm value. Moreover, the scope of study is also limited with the selection of the LQ45 Indonesian companies is due to the LQ45 is an index whose business activities have the most liquid stocks in Indonesia. The researcher wants to find a relationship to the acquisition of natural resources so that it has a high risk of damage and pollution to the surrounding environment in maintaining their assets liquid. Therefore, this study only focuses to determine the extent to which the LQ45 Indonesian companies undertake maintenance and protection on the environment related to profits obtained directly from nature in its business activities. The year of the study was conducted is limited three years from 2015 to 2017. Because, through this research, it is expected that indirectly could provide information about whether there is an increase in performance and environmental disclosures that should be done by the company.

5.3 RESEARCH RECOMMENDATIONS

Based on the results obtained in this research, the recommendations that are suggested for the future researcher are:

1. Future research is suggested to use Corporate Social Responsibility (CSR) as an independent variable instead of Environmental Disclosure towards firm value.
2. Future research is expected to use Corporate Governance as a single independent variable through four proxies of indicator; Independent Commissioner (IC), Institutional Ownership (IO), Board Size (BS) and Audit Committee (AC) in addition to Corporate Social Responsibility (CSR).
3. Future research is recommended to use more independent variable such as type of industry, stock return, current ratio, and others.
4. Future research may add other dependent variables besides firm value so that there will be two dependent variables.
5. Future research is expected to add mediating variable whether moderating or intervening variable.
6. Future research is suggested to enlarge sample size to provide a better understanding.
7. Future research is recommended to expand the time series to obtain more data with a minimum of five years of observation.
8. Further research may involve other parties in determining the extent of disclosure as material for re-examination.

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APPENDICES

Appendix 1:

List of LQ45 Companies 2015-2017

1	AALI	Astra Agro Lestari Tbk.
2	ADHI	Adhi Karya (Persero) Tbk.
3	ADRO	Adaro Energi Tbk.
4	AKRA	AKR Corporindo Tbk.
5	ANTM	Aneka Tambang (Persero) Tbk.
6	ASII	Astra International Tbk.
7	ASRI	Alam Sutera Realty Tbk.
8	BBCA	Bank Central Asia Tbk.
9	BBNI	Bank Negara Indonesia (Persero) Tbk.
10	BBRI	Bank Rakyat Indonesia (Persero) Tbk.
11	BBTN	Bank Tabungan Negara (Persero) Tbk.
12	BMRI	Bank Mandiri (Persero) Tbk.
13	BMTR	Global Mediacom Tbk.
14	BSDE	Bumi Serpong Damai Tbk.
15	CPIN	Charoen Pokphand Indonesia Tbk.
16	CTRA	Ciputra Development Tbk.
17	EXCL	XL Axiata Tbk.
18	GGRM	Gudang Garam Tbk.
19	ICBP	Indofood CBP Sukses Makmur Tbk.
20	INCO	Vale Indonesia Tbk.
21	INDF	Indofood Sukses Makmur Tbk.
22	INTP	Indocement Tunggul Prakasa Tbk.
23	ITMG	Indo Tambangraya Megah Tbk.
24	JSMR	Jasa Marga (Persero) Tbk.
25	KLBF	Kalbe Farma Tbk.
26	LPKR	Lippo Karawaci Tbk.
27	LPPF	Matahari Department Store Tbk.
28	LSIP	PP London Sumatra Indonesia Tbk.
29	MNCN	Media Nusantara Citra Tbk.
30	MPPA	Matahari Putra Prima Tbk.
31	PGAS	Perusahaan Gas Negara (Persero) Tbk.
32	PTBA	Tambang Batubara Bukit Asam (Persero) Tbk.
33	PTPP	PP (Persero) Tbk.
34	PWON	Pakuwon Jati Tbk.
35	SCMA	Surya Citra Media Tbk.

36	SILO	Siloam International Hospital Tbk.
37	SMGR	Semen Gresik (Persero) Tbk.
38	SMRA	Summarecon Agung Tbk.
39	SSMS	Sawit sumbermas Sarana Tbk.
40	TBIG	Tower Bersama Infrastructure Tbk.
41	TLKM	Telekomunikasi Indonesia (Persero) Tbk.
42	UNTR	United Tractors Tbk.
43	UNVR	Unilever Indonesia Tbk.
44	WIKA	Wijaya Karya (Persero) Tbk.
45	WSKT	Waskita Karya (Persero) Tbk.
46	SRIL	Sri Rejeki Isman Tbk.
47	WTON	Wijaya Karya Beton Tbk.
48	ELSA	Elnusa Tbk.
49	BUMI	Bumi Resources Tbk.
50	PPRO	PP Properti Tbk.
51	BJBR	BPD Jawa Barat dan Banten Tbk.
52	BRPT	Barito Pacific Tbk.
53	HMSP	H. M. Sampoerna Tbk.
54	MYRX	Hanson International Tbk.

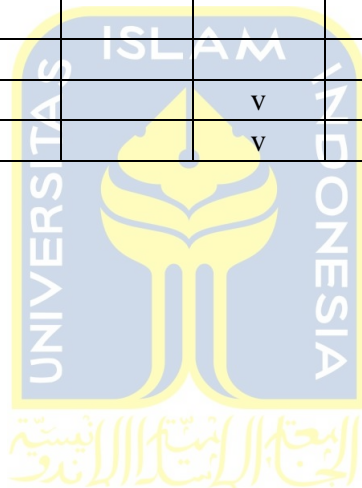


Appendix 2:

Selection of Companies Consistently Exists during the Period

		2015		2016		2017	
		Feb-Jul	Aug-Jan	Feb-Jul	Aug-Jan	Feb-Jul	Aug-Jan
1	AALI	v	v	v	v	v	v
2	ADHI	v	v	v	v	v	v
3	ADRO	v	v	v	v	v	v
4	AKRA	v	v	v	v	v	v
5	ANTM	v		v	v	v	v
6	ASII	v	v	v	v	v	v
7	ASRI	v	v	v	v	v	
8	BBCA	v	v	v	v	v	v
9	BBNI	v	v	v	v	v	v
10	BBRI	v	v	v	v	v	v
11	BBTN	v	v	v	v	v	v
12	BMRI	v	v	v	v	v	v
13	BMTR	v	v	v	v		v
14	BSDE	v	v	v	v	v	v
15	CPIN	v	v	v	v	v	
16	CTRA	v					
17	EXCL	v	v			v	v
18	GGRM	v	v	v	v	v	v
19	ICBP	v	v	v	v	v	v
20	INCO	v	v	v	v	v	v
21	INDF	v	v	v	v	v	v
22	INTP	v	v	v	v	v	v
23	ITMG	v	v				
24	JSMR	v	v	v	v	v	v
25	KLBF	v	v	v	v	v	v
26	LPKR	v	v	v	v	v	v
27	LPPF	v	v	v	v	v	v
28	LSIP	v	v	v	v	v	v
29	MNCN	v	v	v	v	v	v
30	MPPA	v	v	v	v		
31	PGAS	v	v	v	v	v	v
32	PTBA	v	v	v	v	v	v
33	PTPP	v	v	v	v	v	v
34	PWON	v	v	v	v	v	v
35	SCMA	v	v	v	v	v	v
36	SILO	v	v	v	v		

37	SMGR	v	v	v	v	v	v
38	SMRA	v	v	v	v	v	v
39	SSMS	v	v	v	v	v	v
40	TBIG	v	v	v			
41	TLKM	v	v	v	v	v	v
42	UNTR	v	v	v	v	v	v
43	UNVR	v	v	v	v	v	v
44	WIKA	v	v	v	v	v	v
45	WSKT	v	v	v	v	v	v
46	SRIL		v	v	v	v	v
47	WTON		v				
48	ELSA				v	v	
49	BUMI					v	v
50	PPRO					v	v
51	BJBR						v
52	BRPT						v
53	HMSP			v	v	v	v
54	MYRX			v	v	v	v



Appendix 3:

List of Company after Selection

1	AALI	Astra Agro Lestari Tbk.
2	ADHI	Adhi Karya (Persero) Tbk.
3	ADRO	Adaro Energi Tbk.
4	AKRA	AKR Corporindo Tbk.
5	ASII	Astra International Tbk.
6	BBCA	Bank Central Asia Tbk.
7	BBNI	Bank Negara Indonesia (Persero) Tbk.
8	BBRI	Bank Rakyat Indonesia (Persero) Tbk.
9	BBTN	Bank Tabungan Negara (Persero) Tbk.
10	BMRI	Bank Mandiri (Persero) Tbk.
11	BSDE	Bumi Serpong Damai Tbk.
12	GGRM	Gudang Garam Tbk.
13	ICBP	Indofood CBP Sukses Makmur Tbk.
14	INCO	Vale Indonesia Tbk.
15	INDF	Indofood Sukses Makmur Tbk.
16	INTP	Indocement Tunggul Prakasa Tbk.
17	JSMR	Jasa Marga (Persero) Tbk.
18	KLBF	Kalbe Farma Tbk.
19	LPKR	Lippo Karawaci Tbk.
20	LPPF	Matahari Department Store Tbk.
21	LSIP	PP London Sumatra Indonesia Tbk.
22	MNCN	Media Nusantara Citra Tbk.
23	PGAS	Perusahaan Gas Negara (Persero) Tbk.
24	PTBA	Tambang Batubara Bukit Asam (Persero) Tbk.
25	PTPP	PP (Persero) Tbk.
26	PWON	Pakuwon Jati Tbk.
27	SCMA	Surya Citra Media Tbk.
28	SMGR	Semen Indonesia (Persero) Tbk.
29	SMRA	Summarecon Agung Tbk.
30	SSMS	Sawit sumbermas Sarana Tbk.
31	TLKM	Telekomunikasi Indonesia (Persero) Tbk.
32	UNTR	United Tractors Tbk.
33	UNVR	Unilever Indonesia Tbk.
34	WIKA	Wijaya Karya (Persero) Tbk.
35	WSKT	Waskita Karya (Persero) Tbk.

Appendix 4:

List of Company Meeting Purposive Sampling Criteria

1	AALI	Astra Agro Lestari Tbk.
2	ADHI	Adhi Karya (Persero) Tbk.
3	AKRA	AKR Corporindo Tbk.
4	ASII	Astra International Tbk.
5	BBCA	Bank Central Asia Tbk.
6	BBNI	Bank Negara Indonesia (Persero) Tbk.
7	BBRI	Bank Rakyat Indonesia (Persero) Tbk.
8	BMRI	Bank Mandiri (Persero) Tbk.
9	BSDE	Bumi Serpong Damai Tbk.
10	GGRM	Gudang Garam Tbk.
11	ICBP	Indofood CBP Sukses Makmur Tbk.
12	INDF	Indofood Sukses Makmur Tbk.
13	INTP	Indocement Tunggul Prakasa Tbk.
14	JSMR	Jasa Marga (Persero) Tbk.
15	KLBF	Kalbe Farma Tbk.
16	LPKR	Lippo Karawaci Tbk.
17	LSIP	PP London Sumatra Indonesia Tbk.
18	MNCN	Media Nusantara Citra Tbk.
19	PTBA	Tambang Batubara Bukit Asam (Persero) Tbk.
20	PTPP	PP (Persero) Tbk.
21	PWON	Pakuwon Jati Tbk.
22	SCMA	Surya Citra Media Tbk.
23	SMGR	Semen Indonesia (Persero) Tbk.
24	SSMS	Sawit sumbermas Sarana Tbk.
25	TLKM	Telekomunikasi Indonesia (Persero) Tbk.
26	UNTR	United Tractors Tbk.
27	WIKA	Wijaya Karya (Persero) Tbk.
28	WSKT	Waskita Karya (Persero) Tbk.

Appendix 5:

Environmental Disclosure Index Calculation

		2015	2016	2017
1	AALI	11	11	13
2	ADHI	6	11	8
3	AKRA	6	10	18
4	ASII	9	13	13
5	BBCA	15	14	8
6	BBNI	4	18	17
7	BBRI	14	13	15
8	BMRI	20	19	19
9	BSDE	9	11	13
10	GGRM	4	9	11
11	ICBP	19	21	20
12	INDF	19	18	23
13	INTP	12	16	18
14	JSMR	11	4	15
15	KLBF	18	15	11
16	LPKR	14	5	9
17	LSIP	12	4	14
18	MNCN	0	2	3
19	PTBA	19	19	24
20	PTPP	24	14	21
21	PWON	5	7	5
22	SCMA	4	3	4
23	SMGR	9	27	23
24	SSMS	8	9	7
25	TLKM	26	21	14
26	UNTR	16	20	21
27	WIKA	19	8	21
28	WSKT	15	13	13

Appendix 6:

Raw Data for Analysis 2015

		EnD (GRI)	FIRM SIZE (LnAssets)	LEVE- RAGE (DER)	PROFITA- BILITY (ROA)	FIRM VALUE (PER)
1	AALI	32.35	30.70	0.84	3.23	40.32
2	ADHI	17.65	30.45	2.25	2.77	16.43
3	AKRA	17.65	30.35	1.09	6.96	27.41
4	ASII	26.47	33.13	0.94	6.36	16.79
5	BBCA	44.12	34.02	5.60	3.03	18.02
6	BBNI	11.76	33.86	5.26	1.80	10.16
7	BBRI	41.18	34.41	6.76	2.89	10.99
8	BMRI	58.82	34.44	6.16	2.32	10.51
9	BSDE	26.47	31.22	0.63	6.53	16.19
10	GGRM	11.76	31.78	0.67	10.16	16.44
11	ICBP	55.88	30.91	0.62	11.01	26.18
12	INDF	55.88	32.15	1.13	4.04	15.31
13	INTP	35.29	30.95	0.16	15.76	18.86
14	JSMR	32.35	31.23	1.97	3.59	24.51
15	KLBF	52.94	30.25	0.25	15.02	30.87
16	LPKR	41.18	31.35	1.18	2.48	44.61
17	LSIP	35.29	29.81	0.21	7.04	14.45
18	MNCN	0.00	30.30	0.51	8.82	22.34
19	PTBA	55.88	30.46	0.82	12.06	5.12
20	PTPP	70.59	30.58	2.74	4.42	25.35
21	PWON	14.71	30.56	0.99	7.46	18.93
22	SCMA	11.76	29.15	0.34	33.32	29.75
23	SMGR	26.47	31.27	0.39	11.86	14.96
24	SSMS	23.53	29.57	1.30	8.42	33.11
25	TLKM	76.47	32.74	0.78	14.03	20.21
26	UNTR	47.06	31.75	0.57	4.52	16.41
27	WIKA	55.88	30.61	2.60	3.59	25.97
28	WSKT	44.12	31.04	2.12	3.46	21.63

Appendix 7:

Raw Data for Analysis 2016

		EnD (GRI)	FIRM SIZE (LnAssets)	LEVE- RAGE (DER)	PROFITA- BILITY (ROA)	FIRM VALUE (PER)
1	AALI	32.35	30.82	0.38	8.73	21.14
2	ADHI	32.35	30.63	2.69	1.57	48.23
3	AKRA	29.41	30.39	0.96	6.61	22.65
4	ASII	38.24	33.20	0.87	6.99	22.28
5	BBCA	41.18	34.15	4.97	3.05	18.95
6	BBNI	52.94	34.03	5.52	1.89	10.01
7	BBRI	38.24	34.54	5.84	2.61	11.4
8	BMRI	55.88	34.58	5.38	1.41	16.86
9	BSDE	32.35	31.28	0.57	5.32	21.87
10	GGRM	26.47	31.77	0.59	10.60	20.04
11	ICBP	61.76	30.99	0.56	12.56	26.48
12	INDF	52.94	32.04	0.87	6.41	16.11
13	INTP	47.06	31.04	0.15	12.84	13.51
14	JSMR	11.76	31.61	2.27	3.37	18.04
15	KLBF	44.12	30.35	0.22	15.44	31.28
16	LPKR	14.71	31.45	1.07	2.69	18.75
17	LSIP	11.76	29.88	0.24	6.27	32.7
18	MNCN	5.88	30.29	0.50	10.41	13.02
19	PTBA	55.88	30.55	0.76	10.90	20.54
20	PTPP	41.18	31.07	1.89	3.69	31.26
21	PWON	20.59	30.66	0.88	8.61	15.55
22	SCMA	8.82	29.20	0.30	31.35	26.57
23	SMGR	79.41	31.42	0.45	10.25	13.94
24	SSMS	26.47	29.60	1.07	8.26	44.72
25	TLKM	61.76	32.82	0.70	16.24	20.42
26	UNTR	58.82	31.79	0.50	7.98	19.01
27	WIKA	23.53	31.08	1.46	3.86	39.54
28	WSKT	38.24	31.75	2.66	2.95	27.78

Appendix 8:

Raw Data for Analysis 2017

		EnD (GRI)	FIRM SIZE (LnAssets)	LEVE- RAGE (DER)	PROFITA- BILITY (ROA)	FIRM VALUE (PER)
1	AALI	38.24	30.85	0.39	7.89	13.5
2	ADHI	23.53	30.98	3.83	1.82	13.02
3	AKRA	52.94	30.45	0.86	7.75	21.17
4	ASII	38.24	33.32	0.89	7.84	17.8
5	BBCA	23.53	34.25	4.68	3.11	23.16
6	BBNI	50.00	34.20	5.79	1.94	13.56
7	BBRI	44.12	34.66	5.73	2.58	15.48
8	BMRI	55.88	34.66	5.22	1.91	18.09
9	BSDE	38.24	31.46	0.57	11.24	6.65
10	GGRM	32.35	31.83	0.58	11.62	22.32
11	ICBP	58.82	31.08	0.56	11.21	27.34
12	INDF	67.65	32.11	0.88	5.85	16.06
13	INTP	52.94	30.99	0.18	6.44	43.45
14	JSMR	44.12	32.00	3.31	2.64	23.37
15	KLBF	32.35	30.44	0.20	14.76	33.39
16	LPKR	26.47	31.67	0.90	1.51	13.52
17	LSIP	41.18	29.91	0.22	8.72	11.36
18	MNCN	8.82	30.34	0.54	10.41	12.27
19	PTBA	70.59	30.72	0.59	20.68	6.33
20	PTPP	61.76	31.36	1.93	4.13	11.26
21	PWON	14.71	30.78	0.83	8.67	17.62
22	SCMA	11.76	29.31	0.22	24.47	24.87
23	SMGR	67.65	31.52	0.61	4.17	29.16
24	SSMS	20.59	29.90	1.37	8.22	18.15
25	TLKM	41.18	32.92	0.77	16.48	20.21
26	UNTR	61.76	32.04	0.73	9.33	17.84
27	WIKA	61.76	31.45	2.12	2.97	11.57
28	WSKT	38.24	32.21	3.30	4.29	7.73

Appendix 9:

Descriptive Statistics using SPSS 23

	N	Minimum	Maximum	Mean	Std. Deviation
Environmental Disclosure	84	.00	79.41	38.6551	18.49563
Firm Size	84	29.15	34.66	31.5408	1.43336
Leverage	84	.15	6.76	1.6786	1.79248
Profitability	84	1.41	33.32	7.8864	6.09881
Firm Value	84	5.12	48.23	20.7706	9.08308
Valid N (listwise)	84				

Appendix 10:

One-Sample Kolmogorov-Smirnov Test using SPSS 23

		Unstandardized Residual
N		84
Normal Parameters ^{a,b}	Mean	.0000000
	Std. Deviation	8.39034171
Most Extreme Differences	Absolute	.073
	Positive	.073
	Negative	-.046
Test Statistic		.073
Asymp. Sig. (2-tailed)		.200 ^{c,d}

a. Test distribution is Normal.

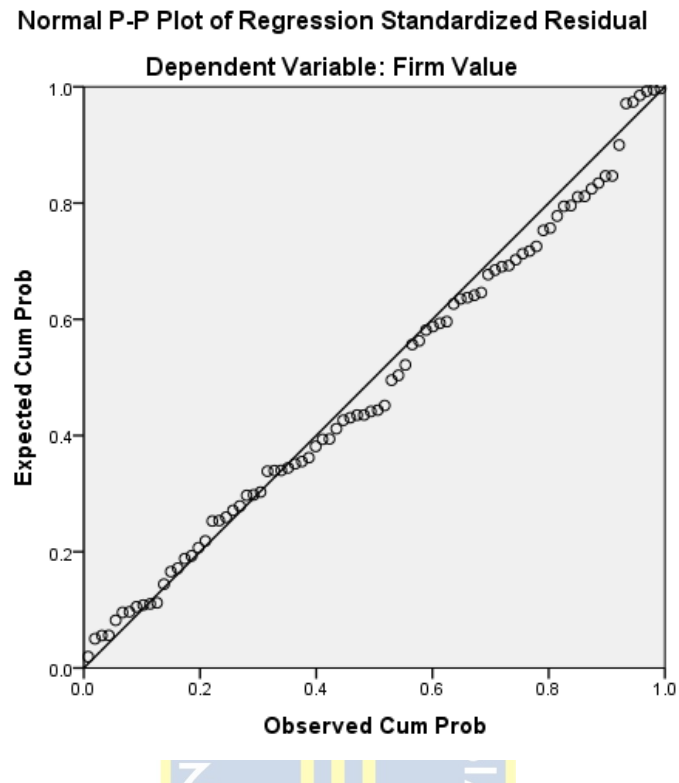
b. Calculated from data.

c. Lilliefors Significance Correction.

d. This is a lower bound of the true significance.

Appendix 11:

Normal Probability Plot using SPSS 23



Appendix 12:

Durbin-Watson Test using SPSS 23

Model Summary^b

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Durbin-Watson
1	.383 ^a	.147	.104	8.60013	1.924

a. Predictors: (Constant), Profitability, Environmental Disclosure, Firm Size, Leverage

b. Dependent Variable: Firm Value

Appendix 13:

Tolerance and VIF Value using SPSS 23

Coefficients^a

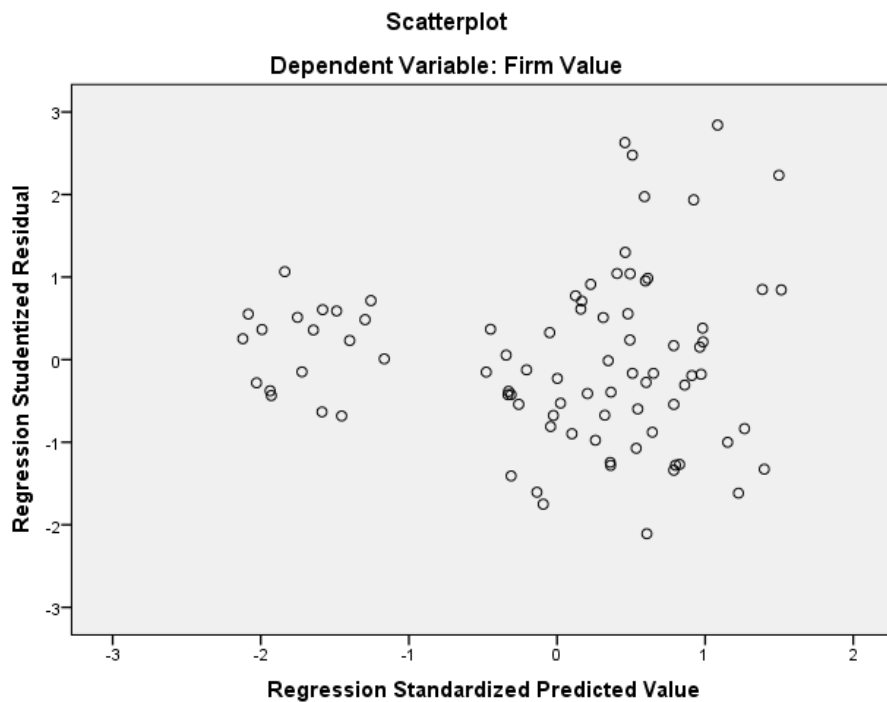
Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.	Collinearity Statistics	
		B	Std. Error	Beta			Tolerance	VIF
1	(Constant)	108.506	32.398		3.349	.001		
	Environmental Disclosure	.000	.055	.001	.007	.994	.872	1.146
	Firm Size	-2.733	1.072	-.431	-2.549	.013	.377	2.651
	Leverage	.020	.869	.004	.023	.982	.367	2.724
	Profitability	-.200	.187	-.134	-1.069	.288	.684	1.463

a. Dependent Variable: Firm Value



Appendix 14:

Scatterplot using SPSS 23



Appendix 15:

Coefficient of Determination using SPSS 23

Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.383 ^a	.147	.104	8.60013

a. Predictors: (Constant), Profitability, Environmental Disclosure, Firm Size, Leverage

Appendix 16:

F-Test ANOVA using SPSS 23

ANOVA^a

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	1004.671	4	251.168	3.396	.013 ^b
	Residual	5843.020	79	73.962		
	Total	6847.692	83			

a. Dependent Variable: Firm Value

b. Predictors: (Constant), Profitability, Environmental Disclosure, Firm Size, Leverage

Appendix 17:

T-Test using SPSS 23

Coefficients^a

Model	Unstandardized Coefficients		Standardized Coefficients	t	Sig.
	B	Std. Error	Beta		
1 (Constant)	108.506	32.398		3.349	.001
Environmental Disclosure	.000	.055	.001	.007	.994
Firm Size	-2.733	1.072	-.431	-2.549	.013
Leverage	.020	.869	.004	.023	.982
Profitability	-.200	.187	-.134	-1.069	.288

a. Dependent Variable: Firm Value

