# Do you know Company Value? It's Depend on Accounting Disclosure and Performance Environment: Evidence from Indonesian Country

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*Abstract*

*This research is important to do to find out the factors that affect the firm value. Therefore, researchers want to examine the effect of ADCE and environmental performance on firm value. Researchers used the 2016 GRI standards to measure environmental performance. The results of this study are expected to add/strengthen empirical evidence regarding legitimacy theory and the triple bottom line concept as well as deepen knowledge about what factors can affect firm value, which can be used as additional references for research. in the future and hopes to add to the company's initiatives in preserving the environment. This study provides the following conclusions accounting disclosure Carbon emissions have a negative effect on firm value and environmental performance has a positive effect on firm value. This means that if the environmental performance of a company is getting better, it can increase the value of the company because investors will give a positive response by buying company shares so that it can increase share prices which have implications for increasing company value. For the government, if ADCE is made as a regulation, what must be considered is to provide a third party as a verifier in the calculation of carbon emissions so that the ADCE disclosed by the company can be trusted. For companies, if they want to disclose carbon information voluntarily, it is better to choose which information should be disclosed.*

*Keywords: Accounting Disclosures for Carbon Emissions, environmental performance, firm value*

## 1.  INTRODUCTION

Many investors assume that the value of the company is derived from the company's profits and assets, investors only consider profits and assets as the main indicators of valuation. Today's business development requires investors to look at it from a different perspective. One of the other things that investors consider can come from the concern and disclosure of the surrounding environment from the financial statements.

The threat of global warming has now become an issue that must be immediately addressed by various countries, both in the political and economic fields. Changes in extreme weather are one of the many impacts of global warming, which are mainly caused by human activities related to industrialization in economic development and carried out on a large scale resulting in massive Greenhouse Gas (GHG) emissions (Choi, Lee, & Psaros, 2013). Seventy-five percent of GHG emissions are dominated by carbon dioxide ($CO_2$) emissions (Abbasi & Riaz, 2016). The largest carbon-emitting countries in the world based on the BP Statistical Review of World Energy in 2020 are dominated by developed countries, namely China (27.8%), the United States (15.2%), India (7.3%), Japan (3.4%), South Korea (2.1%), Iran (1.9%) and Saudi Arabia (1.7%) (Amin, Dogan, & Khan, 2020).

Environmental issues related to global warming led the United Nations (UN) to convene the United Nations Framework Convention on Climate Change (UNFCCC), which resulted in the Kyoto Protocol agreement in 1997, which obliges developed countries to reduce decarbonization (carbon release) by an average of 5% below the 1999 emission level. Indonesia also participated in this agreement by ratifying the Kyoto Protocol through Law no. 17/2004, making PERPRES No. 61 of 2011, and strengthened by PERPRES No. 71 of 2011 (Hardiyansah, Agustini, & Purnamawati, 2021; Purnomo, 2013).

The impact of the Kyoto Protocol is the emergence of accounting disclosures about carbon emissions produced by companies. One of the non-profit organizations that help companies around the world to measure, manage and disclose carbon emissions is the Carbon Disclosure Project (CDP) (Luo, 2019). Accounting disclosures for Carbon Emissions (ADCE) by companies in Indonesia are still voluntary because there is no mandatory regulation, so companies that take the initiative to disclose ADCE are still very limited. The ADCE measurement in this study used the ADCE index by Choi et al. (2013)

ADCE can encourage companies to carry out Corporate Social Responsibility (CSR), in line with the triple bottom line concept by Elkington (1998), in which the company's success is not only measured using profit, but includes 3 elements, namely Profit or profit, Planet or environment, and People (3P). One of the company's goals related to profit is to maximize the value of the company. The value of the company is a reference to see whether the company is good or not in the future, which can be seen from the ups and downs of stock prices (Kusuma & Dewi, 2019). Most companies spend time managing the number of shareholders in their company because companies believe that market profits can be obtained if they manage to attract the right shareholders (Yung & Jian, 2017). Brigham and Houston explain that efforts to increase company value are considered important to maximize wealth and increase shareholder welfare (Susianti & Yasa, 2013). Therefore, the value of the company can be one of the references for investors to make decisions in investing (Kusuma & Dewi, 2019). The measurement of firm value in this study uses Tobin's q formula by Chung dan Pruitt (1994).

Several studies have been conducted to evaluate and prove the factors that can affect firm value, namely ADCE and environmental performance. Hardiyansah et al. (2021) and Saka & Oshika (2014) in their research prove that ADCE has a positive effect on firm value, meaning that ADCE disclosure can increase firm value. However, in contrast to the research results of Matsumura et al. (2014) that ADCE has a negative effect on firm value. Regarding environmental performance, Kusuma & Dewi (2019) prove that environmental performance can increase

company value, in line with legitimacy theory which states that companies are not only responsible to stakeholders, but also the environment. Thus, if the company manages its environment well, stakeholders can have more confidence in the company and increase the value of the company.

Environmental performance is currently the most efficient way to reduce carbon emissions and is the most important component in the concept of a sustainable economy (Ang, Mu, & Zhou, 2010). In 2015, there was a case that shocked many countries, namely the case of manipulating exhaust emissions produced by cars made by the Volkswagen Group (VW) in Germany. According to the New York Times, in May 2014 researchers at the University of West Virginia conducted emissions testing on highways. The tests were carried out on 2 VW cars of different types, both equipped with a 2-liter turbocharger and a 4 cylinder diesel engine. Researchers found that one car emits carbon emissions as much as 40 times the permissible limit in America (Guilbert Gates, 2017). BBC News explained that VW admitted to cheating on their emissions test in California, United States. As a result, their shares fell about a third of their initial price. In addition, they have to set aside 4.8 billion euros for worldwide recalls of VW cars and still have to pay fines for any vehicle that violates the standards. The losses felt by VW were not only financial losses but also social losses, namely the destruction of public trust in VW (Hotten, 2015). Therefore, companies need to implement environmental performance so that they do not experience losses such as the case of the Volkswagen Group and can increase the value of the company.

Environmental performance assessment in Indonesia has used a program called PROPER (Company Performance Rating Program) since 2002, which was created by the government through the Ministry of Environment (Kusuma & Dewi, 2019). However, in this study, the company's environmental performance was assessed through a sustainability report regarding the Global Report Initiative (GRI) Standard 2016, because previous studies using PROPER measurements encountered problems, namely a large number of eliminated samples. GRI is an independent international organization that assists other organizations in communicating the responsibilities and impacts of the organization's operations on the surrounding environment to stakeholders. In 2000 GRI launched its first guideline, GRI 1, then in 2002 launched GRI G2, in 2006 launched GRI G3, in 2013 launched GRI G4, and in 2016 launched the 2016 GRI Standard for sustainability reporting. GRI continues to undergo updates to remain relevant to use today (GRI).

Based on the phenomena that have been described previously, it shows that this research is important to do to find out the factors that affect the firm value. Therefore, researchers want to examine the effect of ADCE and environmental performance on firm value. Researchers used the 2016 GRI standards to measure environmental performance. As far as researchers know, it is still difficult to find research that measures environmental performance using the 2016 GRI standard, usually measured using PROPER or if anyone uses GRI, the 2013 GRI G4 output is used.

Based on the description above, the researcher wrote "Do you know Company Value? It's dependent on Accounting Disclosure and Performance Environment: Evidence from Indonesian Country. The results of this study are expected to add/strengthen empirical evidence regarding legitimacy theory and the triple bottom line concept as well as deepen knowledge about what factors can affect

firm value, which can be used as additional references for research in the future and hopes to add to the company's initiatives in preserving the environment.

## 2.    LITERATURE REVIEW AND HYPOTHESIS DEVELOPMENT
### 2.1.  Legitimacy Theory

Dowling dan Pfeffer (1975) define legitimacy theory as an organization's effort to build harmony between organizational activities and the norms adopted by the society in which the organization is a part. Legitimacy theory is a system-oriented theory. In this perspective, the organization is assumed to be able to be influenced and influence the community around the organization Deegan (2002).  Insight into legitimacy theory is reviewed and developed from political economy theory.

Mathews (2000) legitimacy theory is closely related to the concept of the social contract. When people think that the organization violates the social contract, the existence of the organization is threatened. For example, the community perceives that the organization has operated using a method that is opposed by the community, then the community can revoke the organization's "contract" so that it cannot continue its operations. This is because the organization does not have rights to existing resources and is even considered not to have the right to exist. The organization exists if the community considers the organization legitimate and the community is willing to provide available resources to the organization.

Deegan (2002) concludes that the motivation of managers to disclose is not because of a sense of responsibility, but because they want to change people's views of the organization. Therefore, this legitimacy strategy may be used by organizations to make a negative contribution to continue operating. In addition, legitimacy theory is based on managers' perceptions of the social contract, so the perceptions of each manager will be different and have implications for the different legitimacy strategies used by managers. Legitimacy theory also has problems with predictive accuracy. However, whatever the problem, legitimacy theory provides information that can be used for the decision-making process.

### 2.2.  Triple Bottom Line

The triple bottom line was first coined by Elkington (1998). Triple bottom line is a concept for measuring company performance which consists of 3Ps, namely profit, planet, and people. Profit can be measured through financial statements, namely in the earnings-per-share section. In addition, economic capital is needed to maintain a sustainable business. Companies must be able to maintain human resources and knowledge capital so as not to move to other companies. Planet, this field has received a lot of attention from various parties. The natural resource capital used by the company depends on how the company can preserve the environment because there are limited natural resources. In addition, some countries require companies that produce carbon emissions to report their emissions. People, human resources can be in the form of health, skills, and education. The community is a very important stakeholder in supporting the company's sustainability. Therefore, companies must make a positive contribution to society.

### 2.3.  Accounting Disclosure - Carbon Emission

Currently, entities that contribute to producing carbon emissions are required to understand and publish the carbon emissions they produce (Choi et al., 2013). Therefore, in 1998 there was an agreement by various countries called the Kyoto

Protocol on efforts to reduce carbon emissions. In the same year, Japan enacted the Act regarding measures to tackle global warming. It became the world's first law to tackle global warming and provided a framework. After that, the law was amended and introduced as the world's first carbon emission reporting scheme. The purpose of this amendment is to encourage organizations to measure the carbon emissions produced and the efforts made to reduce carbon emissions (Saka & Oshika, 2014). In Indonesia, ADCE disclosure is still voluntary. ADCE disclosure information is presented in the environmental responsibility report, this is stated in the Statement of Financial Accounting Standards (PSAK, 2009) No. 1 paragraph 12 states "Entities may also present, separately from financial statements, reports on the environment and value-added statements, especially for industries where environmental factors play an important role and for industries that consider employees as a group of users of reports that plays an important role. These additional reports are outside the scope of Financial Accounting Standards". Based on the statement, the entity has no obligation to disclose ADCE.

Disclosure of carbon emissions is the riskiest disclosure than other voluntary disclosures (Krishnamurti & Velayutham, 2018). This is because ADCE disclosure is uncertain, meaning that the level of carbon emissions produced cannot be determined with certainty, only using estimates. Second, carbon emissions can be a factor in the decline in company value. Third, if there is a manipulated disclosure that is later revealed it will harm the company and become a risk of litigation (Matsumura, Prakash, & Vera-Munoz, 2014). Fourth, there are adverse consequences such as costs arising from ADCE disclosure, prompting the government to investigate the company and then prosecute it, providing competitors with information about the company's sustainability strategy, and can get a negative response from the environmental community (Peters & Romi, 2014). Fifth, carbon risk may not be fully understood by both companies and investors (Chapple, Clarkson, & Gold, 2013). Therefore decarbonization (carbon removal) can affect firm value (Krishnamurti & Velayutham, 2018).

Although voluntary disclosure of carbon emissions is very risky, ADCE disclosure has benefits (Krishnamurti & Velayutham, 2018). This is because disclosing ADCE, is a signal from the company to be committed to protecting the environment by reducing carbon emissions (Al-Tuwaijri, Christensen, & Hughes, 2004). Second, with ADCE disclosure companies can build a good reputation in the eyes of the public (Barnea & Rubin, 2010). Third, stakeholders are increasingly focused on climate change risks, so they tend to support companies that are proactive in reducing global warming (Cotter & Najah, 2012). Fourth, companies can reduce asymmetric information so that they can stabilize stock prices and can also attract investors to be willing to invest in the company (Krishnamurti & Velayutham, 2018).

## 2.4. Environmental Performance

Environmental efficiency and energy efficiency have now become the 2 main pillars in realizing sustainable development. Sustainable Development Goal 13 (SDG13) aims to "take urgent action to combat climate change and its impacts". Climate change occurs because of the release of carbon dioxide ($CO_2$) throughout the world and is considered an urgent matter and even a risk for sustainable development (Matsumoto, Makridou, & Doumpos, 2020). This has demanded the government to enact a law that obliges every company to reduce decarbonization.

However, in developing countries, the agency that regulates environmental issues has several problems such as lack of funds, expertise, and even human resources in environmental conservation (Mungai, Ndiritu, & Rajwani, 2020). As for companies, this kind of law only adds costs (Arimura, Darnall, Ganguli, & Katayama, 2016). Therefore, improving environmental performance has attracted attention at local and global levels because it is the most cost-effective way (Ang et al., 2010).

## 2.5. The value of the company

Shareholders may have different preferences and interests in a company, but in the standard economic literature, it is assumed that the company's goal is to maximize profits (Lahmandi-Ayed & Laussel, 2018). Salvatore (2005) explains that the company that was founded as the main goal of maximizing the wealth or value of the company (Profita & Ratnaningsih, 2016). Several indicators can be used to measure the value of the company, the first is by looking at the volatility of stock prices. The company is considered to have a high value if the share price is also high (Kusuma & Dewi, 2019). Second, it can be measured using tangible assets and intangible assets (Konar & Cohen, 2001). Third, investors' views on the company's success in managing matters related to profitability (Hardiyansah et al., 2021).

Simamora (2014) explains that company owners need managers who are skilled in increasing company value. So the role of managers is considered important in managing the business to run effectively and efficiently to improve company performance. Then good company performance can increase investor perception of the company so that it can increase company value (Profita & Ratnaningsih, 2016). Several factors can increase company value, namely ADCE disclosure and environmental performance (Hardiyansah et al., 2021; Kusuma & Dewi, 2019). Meanwhile, managerial optimism can reduce the firm value (Ben Mohamed, Garoui, & Naoui, 2020).

## 2.6. Hypothesis Development

### 2.6.1. The Effect of Carbon Emission Disclosure on Company Value

Based on the legitimacy theory developed by Deegan (2002) states that the motivation of managers to disclose reports related to environmental and social aspects is to gain legitimacy and partisanship from the community so that people can recognize the existence of the organization and are willing to provide community resources to the organization. Research by Hardiyansah et al. (2021), Zuhrufiyah and Anggraeni (2019), Saka and Oshika (2014), and Yan, Li, Huang, dan Li (2020) prove that ADCE has a positive effect on firm value. However, in contrast to the research results of Matsumura et al. (2014) and Aggarwal dan Dow (2011) that ADCE has a negative effect on firm value. Based on these studies producing conclusions that are not consistent, then the researcher proposes the following hypothesis.

H1: Accounting Disclosure Carbon Emission Affects Company Value

### 2.6.2. The Effect of Environmental Performance on Company Value

The triple bottom line concept that was first proposed by Elkington (1998) explains that companies do not only focus on profit but also on the planet and people, so companies must be able to preserve the environment in which the

company operates. Several previous studies have proven that environmental performance can have a positive influence on firm value, namely research conducted by Kusuma & Dewi (2019) and Melinda & Wardhani (2020), and the results of research conducted by Konar & Cohen (2001) prove that companies with poor environmental performance can have a negative and significant effect on firm value. Meanwhile, research conducted by Lee et al. (2015) proves that environmental performance has a negative effect on firm value. Based on these studies, there are still inconsistencies in the research results, so the researcher proposes the second hypothesis as follows.

H2: Environmental Performance Affects Company Value

## 3. METHODS

The population in this study are companies listed on the Indonesia Stock Exchange (IDX) in 2016-2020. The reason for choosing this population is because researchers need an annual report to analyze the value of the company and a sustainability report to analyze ADCE and environmental performance published by the company. The data used is secondary data in the form of annual reports obtained by researchers through the IDX website accessed at http://www.idx.co.id and sustainability reports obtained through the websites of each company.

### 3.1. Types and Definitions of Operational Variables

#### 3.1.1. *Accounting Disclosure Carbon Emission*

According to Guo, Zha, Lee, and Tang (2020) ADCE is a collection of company information about the level of carbon emissions produced in the past, in the form of qualitative and quantitative data, and can be used by investors to make decisions. Choi et al. (2013) in their research has developed the ADCE index which is used to measure ADCE, so the researcher also uses this index to measure ADCE in this study. The ADCE index contains 18 different indicators, for companies that disclose carbon information according to the index are given a score of 1, while companies that do not disclose carbon information are given a score of 0. The ADCE calculation formula is as follows.

$$ADCED\iota = \frac{SumADCEt}{ADCEMax}$$

Information:
ADCEt        : ADCE disclosure by company in one year
SumADCEt   : Total ADCE disclosure score of the company in one year
ADCEMax    : Number of disclosure indicators in the ADCE index

#### 3.1.2 Environmental Performance

The definition of environmental performance is still considered ambiguous based on existing studies, but some researchers conclude that the definition provided by ISO is generally accepted (Johnstone, 2020). According to ISO, environmental performance is defined as the result of measuring the organization's management in environmental aspects (Matsumoto et al., 2020).

The measurement of environmental performance in this study uses the 2016 GRI standard and only uses environmental indicators consisting of 30 items. Companies that disclose environmental performance information according to the

GRI index are given a score of 1, while companies that do not disclose are given a score of 0. The formula for calculating environmental performance is as follows.

$$KLt = \frac{SumKLt}{GRIMax}$$

Information:
KLt        : Company's environmental performance in one year
SumKLt    : Total score of the company's environmental performance disclosure in one year
GRIMax    : Number of environmental indicators in the 2016 GRI standard

### 3.1.3 Company Value

Firm value according to Belo et al. (2019) is the investor's perception of the company's performance results, usually seen from the volatility of the company's stock price. Firm value is measured using Tobin's q formula developed by Chung dan Pruitt (1994) as follows.

$$Q = \frac{EMV + D}{TA}$$

Information:
Q    : Firm value
EMV  : Equity Market Value
D    : Total liabilities
TA   : Total assets
EMV  : Year-end share price × year-end number of ordinary shares.

### 3.2 Data Analysis Methods and Techniques

The method used to analyze the data in this study is Structural Equation Modeling-Partial Least Square (SEM-PLS) processed using SmartPLS software version 3.3.3. The descriptive statistical analysis method is used to describe each variable that has been analyzed statistically, namely ADCE variables, environmental performance, and firm value. The purpose of this test is to make the data easier to understand by the reader so that the research results can be conveyed properly. The outer model analysis is done by looking at the construct reliability and validity values and discriminant validity. This study uses a single item (there is one indicator that makes up each construct) as shown in Figure 3.1, therefore in this analysis, only discriminant validity needs to be assessed. Discriminant validity function to ensure that each construct is unique and different from other constructs (Hair, Risher, Sarstedt, & Ringle, 2019). The outer model and construct in this study are conceptually very similar, so the Heterotrait-Monotrait Ratio (HTMT) threshold used is 0.90, meaning that if the HTMT is less than 0.90 then the construct has good validity (Henseler, Ringle, & Sarstedt, 2015). The inner model analysis is used to see the relationship between variables, how much the dependent construct can be influenced by the independent construct. This can be seen in the value of R square (R2), the value of 0.25 indicates that the model is weak, the value is 0.50 is moderate, and the value is 0.75 is strong (Wong, 2013).

Hypothesis testing using the SEM-PLS method. The reasons for using the SEM-PLS method to predict the relationship between variables, research data using secondary data, and having a small sample (Hair et al., 2019). This test is done by evaluating the p-value. If the p-value is less than 0.05 then the proposed hypothesis is supported, otherwise, if the p-value is greater than 0.05, it means that the hypothesis is not supported. Meanwhile, to determine the positive or negative direction, use the original sample value. If the original sample is positive, then the direction is positive, and vice versa.

## 4. RESULTS AND DISCUSSION

### 4.1. Description of Research Data

This study uses data obtained from the annual reports and sustainability reports of companies listed on the Stock Exchange using the purposive sampling method so that 18 companies meet predetermined criteria. The study was conducted for the years 2016-2020, so the number of samples was 72.

### 4.2. Descriptive Statistical Analysis

Table 4.2 presents the results of descriptive statistical analysis processed using SmartPLS 3.3.3.

**Table 1.** Descriptive statistics

|      | N  | Min   | Max   | *Mean* | Std. Deviation |
|------|----|-------|-------|--------|----------------|
| ADCE | 72 | 0,062 | 0,781 | 0,369  | 0,175          |
| KL   | 72 | 0,034 | 0,633 | 0,341  | 0,155          |
| NP   | 72 | 0,656 | 2,647 | 1,237  | 0,352          |

Based on table 4.2 there are 72 samples. The Accounting Disclosure Carbon Emission variable has a minimum value of 0.062 and a maximum value of 0.781, meaning that the sample of companies in this study at least made ADCE disclosures of 0.062 (1 item of disclosure) and a maximum of 0.781 (14 items of disclosure). The average value of 0.369 means that the number of disclosure items made by the company in this study is an average of 6 items of disclosure. For the standard deviation, the value is 0.175.

The environmental performance variable has a minimum value of 0.034 and a maximum value of 0.633, meaning that the environmental performance carried out by the company in this study is the worst if it is expressed in numbers of 0.030 and the best environmental performance of 0.633 because the closer to number 1 means the better the company's performance. The mean value of 0.331 means that the average company has a poor environmental performance. For the standard deviation, the value is 0.155.

The variable value of the company has a minimum value of 0.650 and a maximum value of 2.64, meaning that the company seen by investors has the worst performance result of 0.650, while the company that has the best performance result is 2.64. The average value of 1.227 means that the average company performance is good. For the standard deviation of 0.352.

**4.3. Model Analysis**

**4.3.1. Analysis of Outer Model**

The outer model analysis is done by analyzing the value of discriminant validity. Several values can be used, in this study, the ratio of HTMT used is as follows.

**Table 2.** Discriminant Validity Results

| Heterotrait-Monotrait Ratio (HTMT) | | | |
| --- | --- | --- | --- |
| | ADCE | KL | NP |
| Accounting Disclosure Carbon Emission (ADCE) | | | |
| Environmental Performance (KL) | 0,521 | | |
| Firm Value (NP) | 0,164 | 0,132 | |
| | R square | R Square Adjusted | |
| Firm value | 0,088 | 0,051 | |

Based on table 4.3 the value of KL NP is 0.521, the value of NP ADCE is 0.164, and the value of NP KL is 0.132. Based on all these values, the magnitude is less than 0.90, then all constructs have good validity. The table above also shows the results of the R square of 0.088. This means that the ADCE variable and environmental performance can affect the firm value by 8.8%, while the remaining 91.2% is influenced by variables outside this study. In addition, 8.8% is a model that is classified as weak because the effect is less significant (Wong, 2013).

**4.3.2. Hypothesis test**

**Table 3.** *Direct Effect Test Results*

| | Original Sample | P-Values | Conclusion |
| --- | --- | --- | --- |
| ADCE → Y | -0,292 | 0,033 | Significant |
| KL → Y | 0,271 | 0,041 | Significant |

Table 4.4 presents the results of the direct effect test; the aim is to determine the effect of the independent variable on the dependent variable. shows that the independent variable can influence the dependent variable. The P-Values for ADCE is 0.033 with an original sample of -0.292. This means that ADCE has a

negative effect on firm value because the P-Values value is less than 0.05 and the original sample value is negative. While environmental performance has a P-Values value of 0.041 with an original sample value of 0.271, this indicates that environmental performance has a positive effect on firm value because the P-Values value is less than 0.05 and the original sample value is positive.

## 4.4. Discussion

### 4.4.1. Effect of Accounting Disclosure Carbon Emission on Firm Value

The results show that ADCE has a negative effect on firm value, so hypothesis one is supported, this result is in line with the research of Matsumura et al. (2014) and Lee et al. (2015). This means that companies that disclose their carbon emissions widely and in detail can reduce the value of the company, this happens because investors view ADCE as bad news and raise concerns if the costs incurred to overcome global warming are greater than the perceived benefits (Hsu & Wang, 2013). In addition, the reason investor's view ADCE as a risk and not an opportunity is that the current market response to ADCE is still considered unprofitable. Therefore, managers should be able to choose which information to disclose in ADCE by considering the extent of investor awareness of global warming (Lee et al., 2015). Meanwhile, according to Matsumura et al. (2014) when investors evaluate a company's performance, they analyze the company's carbon information and carbon performance, but the carbon information is most likely not in line with investors' expectations, causing the company's value to fall. So it can be concluded that investors penalize companies that disclose ADCE (Matsumura et al., 2014).

This phenomenon raises questions about why companies disclose their carbon emissions. According to Matsumura et al. (2014), although investors punish companies that disclose ADCE, investors punish even more severely companies that do not disclose ADCE. According to Lee et al. (2015) the company realizes that carbon disclosure will become a mandatory regulation in the future, therefore the company implements a strategy by disclosing emission information through various media, one of which is through sustainability reports and carried out regularly. This strategy aims to avoid a drastic decline in stock prices if ADCE has become a regulation. If the government wants to make ADCE a regulation, it is important to pay attention to uniformity and verification in the disclosure of carbon information so that ADCE issued by companies can be more reliable in making decisions (Matsumura et al., 2014).

### 4.4.2. Effect of Environmental Performance on Company Value

The results show that environmental performance has a positive effect on firm value, so hypothesis two is supported. The results of this study are consistent with the research conducted by Yadav et al. (2016), Melinda & Wardhani (2020), and Kusuma & Dewi (2019). If a company has better environmental performance, it can increase the value of the company, and vice versa, a company with poor environmental performance will decrease the value of the company. This happens because companies that provide good environmental performance results every year, can have implications for the company's reputation which continues to increase and is known as a company that actively contributes to environmental conservation so that it can increase intangible assets, namely the company's image so that such companies usually have consumers with high loyalty.

Therefore, investors are willing to buy company shares even though they have to pay a higher price (Yadav et al., 2016).

According to Amato and Amato (2012) companies with good environmental performance can have a positive impact on company value because investors value the company by buying company shares. In addition, some investors buy company shares to anticipate a positive response from consumers to the company's product offerings. However, environmental performance and company value are also related to the quality of management. A good manager acts in the long-term interest of the company, therefore the manager chooses to use strategies that are profitable in the long term, such as mitigating environmental pollution and social responsibility (Al-Tuwaijri et al., 2004). Based on the description above, it can be concluded that this research is in line with the triple bottom line concept, namely that the company does not only focus on increasing profits but also on preserving the environment.

## 5. CONCLUSION

Based on the explanation of the hypothesis test in the previous section, this study provides the following conclusions: (1) accounting disclosure Carbon emissions have a negative effect on firm value. This means that if the ADCE disclosed by a company is more extensive and detailed, it can reduce the value of the company because investor's view ADCE as a risk and not an opportunity and (2) environmental performance has a positive effect on firm value. This means that if the environmental performance of a company is getting better, it can increase the value of the company because investors will give a positive response by buying company shares so that it can increase share prices which have implications for increasing company value.

This study has several limitations in that the sample that meets the research criteria is very limited because there are still few companies that voluntarily publish sustainability reports and disclose ADCE. In addition, this study uses content analysis, so when analyzing ADCE and environmental performance there is a possibility that the researchers made mistakes in giving scores because there are many indicators that need to be analyzed in the sustainability report.

Based on the results of the study and the limitations above, the authors provide suggestions that can be given to several parties including the government, companies, and further research. For the government, if ADCE is made as a regulation, what must be considered is to provide a third party as a verifier in the calculation of carbon emissions so that the ADCE disclosed by the company can be trusted. For companies, if they want to disclose carbon information voluntarily, it is better to choose which information should be disclosed. In addition, it is recommended for companies to disclose carbon information voluntarily to prevent a drastic decline in stock prices once ADCE has become a regulation. For further research, if you use the content analysis method, it should be done with other people or you can find a research assistant, to reduce subjectivity and errors in scoring. In addition, because ADCE and environmental performance have a very low influence on firm value, further researchers can add other variables such as social performance and financial performance.

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