

CHAPTER I

INTRODUCTION

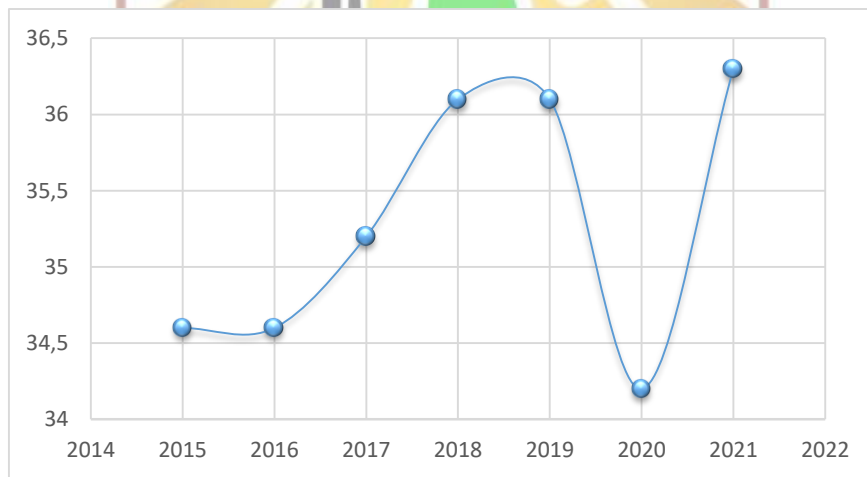
1.1 Research Background

Environmental pollution has become a debated trend in recent years, because economic development must be based on environmental protection (Gerged et al., 2021). Companies must take into account how their activities affect the environment, particularly how carbon emissions are affected (Bui et al., 2020). Stakeholder concern over getting more information about how firms are behaving in terms of carbon emissions is growing as a result (Saha et al., 2021). This increases the pressure on management to reveal more details about their environmental responsibilities, particularly the disclosure of carbon emissions (Baboukardos, 2017).

Global warming-related climate change is still a hot topic of discussion. The World Meteorological Organization revealed in the WMO Greenhouse Gas Bulletin that the amount of heat-trapping greenhouse gases in the atmosphere has hit a new record, with an annual growth rate above average, based on the findings of a monitoring analysis. There will still be a lot of greenhouse gases in the air in 2021, which will have an impact on air quality (Nullis, 2021). Indonesia's air quality, which has been continuously declining over the past 20 years and is currently ranked 20th out of all countries in the world with the poorest air quality, is described by the Air Quality Live Index (AQLI). Operating operations of firms whose exhaust emissions surpass the standard are one of the reasons for poor air quality. As a result, all

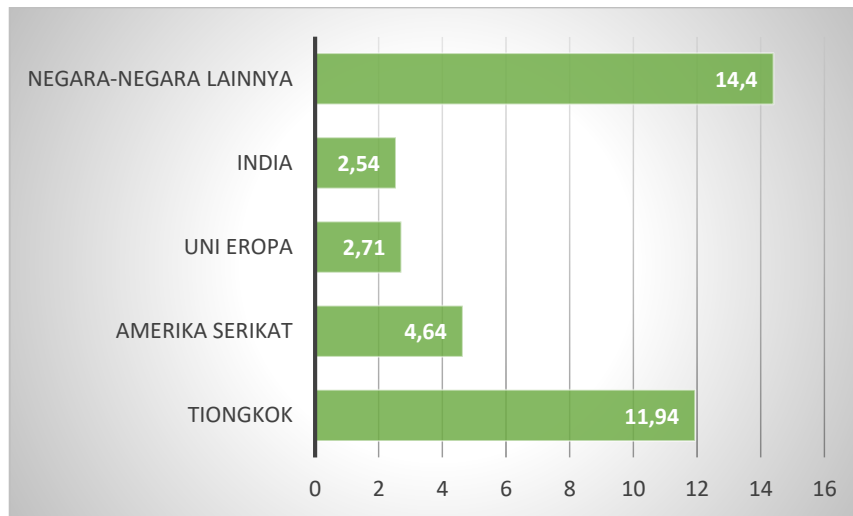
businesses that report exhaust emissions must also report carbon emissions in order to be held accountable for the changing environment (Situmorang, 2021).

Based on data from the International Energy Agency (IEA), substantial limits on community activities associated to the Covid-19 outbreak in several nations resulted in a drop in global carbon emissions in 2020. Though the pandemic is still active, global carbon emissions are expected to rise once more in 2021, surpassing previous records and reaching 36.3 gigatonnes of CO₂. In 2021, carbon emissions are expected to rise by around 6% compared to 2020, in tandem with the 5.9% growth of the global economy during the same time. According to the IEA, the global community needs to work toward reducing CO₂ emissions by 2022 and achieving zero emissions by 2050.



Source : International Energy Agency (IEA)

Figure 1.1
Carbon Emissions from Energy Combustion and Industrial Activities on a Global Scale



Source : *International Energy Agency (IEA)*

Figure 1.2
Largest Carbon Emission Country in 2021

The International Energy Agency (IEA) projects that China will account for the majority of ns of other nations. Global carbon emissions are expected to exceed 36.3 gigatons of CO₂ in total in 2021, global carbon emissions in 2021, with 11.94 gigatons of CO₂ released into the atmosphere. With 4.64 gigatons of CO₂ in carbon emissions, the United States is the next-largest contributor, followed by India with 2.54 gigatons and the European Union with 2.71 gigatons. In the meantime, 14.4 gigatons of CO₂ are produced annually by the total carbon emissiowhich will be a record high. There are several sectors that contribute to global greenhouse gas emissions. Data from Climate Watch indicates that the main source of greenhouse gas emissions is energy. This sector was able to produce 36.44 gigatons of carbon dioxide equivalent (Gt CO₂e) or 71.5% of total emissions in 2017. Carbon emissions from

the energy sector, namely emissions from burning oil, gas and coal, continue to increase on a global scale.

Table 1.1
10 Countries Producing the Largest Carbon Dioxide (CO₂) Emissions from the Energy Sector in the World (2022)

No.	Countries	Carbon Emissions (tons)
1	China	10.550.200.000
2	United States of America	4.825.800.000
3	India	2.595.800.000
4	Russia	1.457.500.000
5	Japan	1.065.700.000
6	Indonesia	692.970.000
7	Iran	667.400.000
8	Germany	634.900.000
9	Saudi Arabia	592.400.000

Source: Energy Institute data

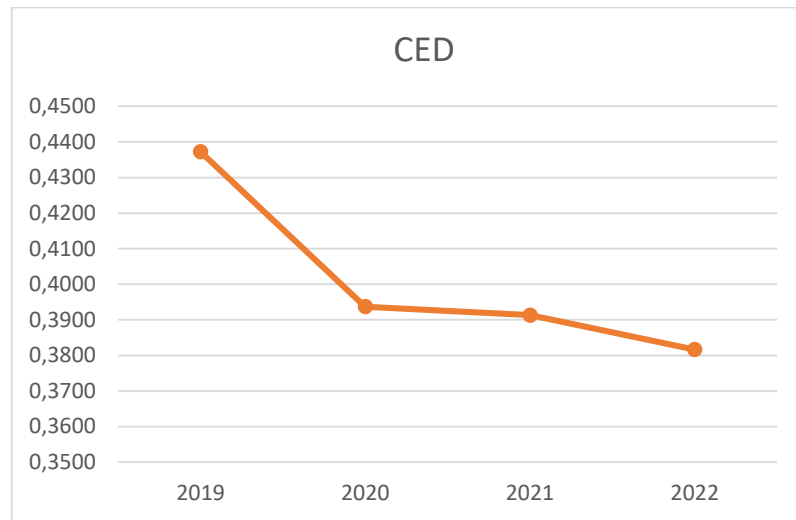
The global energy sector will emit the most carbon dioxide (CO₂) in history in 2022, with figures from the Energy Institute indicating that these emissions will total 34.37 billion tonnes. China will be recognized as the nation generating the most amount of carbon emissions for the energy sector in 2022, with 10.55 billion tons of CO₂ produced, or 30.69% of all emissions worldwide. The United States came in second place with 4.82 billion tons of CO₂ produced last year, or 14% of the world's total emissions. India and Russia came next, with 2.59 billion and 1.45 billion tonnes of CO₂ emissions from the energy sector, respectively. With 691.97 million tons of CO₂ emissions from the energy sector in 2022, Indonesia is placed sixth in the world.



Source: International Energy Agency (IEA)

Figure 1.3
Carbon Dioxide Emissions from Energy Combustion and Global Industrial Activities

The International Energy Agency (IEA) projects that worldwide industrial activity and energy burning will result in 36.8 gigatonnes of carbon dioxide (CO₂) emissions by 2022. As can be seen from the graph, these emissions are up by about 0.5 gigatonnes when compared to 2021 and have reached a new historical high. The primary sources of the increase in emissions in 2022, according to the IEA, will be the combustion of coal and oil.



Source: Data analyzed, 2023

Figure 1.4
Level of Carbon Emissions Disclosure in Companies Classified as Carbon Intensive Industries on the Indonesian Stock Exchange

From figure 1.4 above, it can be seen that the average value of disclosure of carbon emissions in companies classified as carbon-intensive industries on the Indonesia Stock Exchange in 2019–2022 has decreased every year. Whereas in 2020 it decreased, namely 0.3937, from the previous year, namely 0.4372. For the following year, 2021–2022, we again experienced a decline, namely 0.3913 and 0.3816. On average, from 2019 to 2022, the level of disclosure of carbon emissions in the company decreased for four consecutive years.

A company's approach to carbon produced by its operations is disclosed in its annual report, and by making these disclosures, companies are able to prevent or reduce carbon emissions. Disclosure of carbon emissions is presented as an accounting application related to societal problems. A crucial component of CSR

reporting is the disclosure of carbon emissions. In order to achieve sustainable development goals and contribute to global efforts to limit and minimize greenhouse gas (GHG) emissions, Indonesia ratified the Kyoto Protocol on December 3, 2004, with reference to Law No. 17 of 2004. The country also followed and signed the Kyoto Protocol MOU. The Kyoto Protocol was adopted in 1997 and entered into force in 2005 as a major driver of changes in corporate approaches to global warming (Lee et al., 2015). Since the introduction of the Kyoto Protocol, entities especially those operating in environmentally sensitive industries, have come under increasing pressure to prevent carbon emissions across the organization. This study has a main focus on one of the GHGs, namely carbon emissions (CO₂) from companies that contribute greatly to climate change in the world. Ardillah and Rusli (2022) Disclosure of carbon emissions in Indonesia is still voluntary (volunteer disclosure), so there are companies that have not disclosed the amount of carbon emissions produced by these companies. In practice, there is still minimal disclosure of carbon emissions by companies. Even though it is important for all business actors to report their carbon emissions to stakeholders as a form of accountability for a changing climate. Therefore, this study will examine several factors that might explain why companies disclose information related to their carbon emissions.

There are various factors in expressing carbon emissions, one of which is financial performance. According to the signaling theory, good information promotes the development of the enterprise and will bring potential economic benefits, however, bad news will hinder the development of the enterprise and is likely to

reduce the financial performance of the firm in the current period. Therefore, based on the perspective of voluntary disclosure theory and signaling theory, this paper argues that enterprises with high quality of carbon disclosure have better financial performance (Lu et al., 2022). Companies that are profitable will provide sufficient resources to pay for environmental disclosure costs, while companies that are less profitable cause companies to tend to focus on achieving financial goals thereby limiting their ability to do business. The study by Kalu et al. (2016) suggest that the economic factor that influences voluntary carbon disclosure in the property sector of developing countries is company size which determines the available resources. Then profitability is determined by fundraising activities and easily accessible disclosures. Finally, financial slack affects the ease of replacing equipment and machinery to reduce greenhouse gas emissions.

The phenomenon of global warming has now become an increasingly important issue in most countries (Liu et al., 2015). Calls for companies to mitigate climate change challenges can also be justified. An important aspect in climate change mitigation is the obligation of companies to acknowledge, measure, record, present and disclose their carbon emissions (Kalu et al., 2016). According to Kalu et al. (2016) also stated that carbon disclosure serves as a means to gain public trust and legitimacy. Previous studies have examined the disclosure of carbon emissions from various aspects, both in Indonesia and abroad. Many factors affect the disclosure of carbon emissions. Choi et al. (2013) mentions the influencing factors, First, media exposure has a function in social activities for example, a community that loves the

environment. Media also has a function in providing information to stakeholders, including information regarding company operational activities. Companies need to be careful about company activities monitored by the media because they can affect the company's value and image. Proactive media monitors the environment, so companies will increasingly want to disclose and report every activity (Nur and Priantinah, 2012). Industry also wants media exposure to spread information about its social responsibilities to the public using various communication tools. Industry needs to be wary of the media that monitors its activities because it can determine the value and good name of the industry in the eyes of the public (Pratiwi & Sari, 2018).

Limited research on the impact of corporate governance on reducing carbon emissions (Konadu et al., 2022). Most related studies have examined the relationship between corporate governance and carbon emissions disclosure or how corporate governance mechanisms influence environmental sustainability performance without specifically focusing on emissions reduction carbon (Agyemang et al., 2020). Meanwhile, carbon emissions reduction is an important and sensitive topic in the environmental sustainability debate, because this requires more research attention. According to Oyewo (2023) SDG 13 requires multinational companies to actively participate in tackling climate change, considering that leading multinational companies operate in large carbon emitting industries, and are based in the largest emitting countries. According to Jackson and Belkhir (2018), we provide fresh insights to help explain why environmental reports are occasionally criticized for being incomplete or of relatively low quality, based on an examination of corporate

GHG disclosures. This can be explained in terms of GHG emissions as distilling the physical complexity of GHG emissions into a single quantitative scale that can be used to evaluate the environmental performance of an organization. If production data is not available to evaluate environmental performance, the mandated GHG emissions declaration at the plant level will have less significance.

A company that seems to be doing well in terms of environmental performance at the corporate level may not be doing so at the site level (Wegener et al., 2019). Either "good" environmental performance at a facility or merely changing GHG intensity with "good" performance in some facility settings compensating "poor" performance in others may be associated to seemingly "good" environmental performance. In the end, customers may be misled by information about GHG emissions at the corporate level into thinking that these companies have less regulatory risk or expense than they actually do.

Based on the background of the phenomenon and the research gap, this research is interesting to re-examine previous research and will make the carbon-intensive industry a list of companies to be researched. Because carbon emissions are not only produced by the mining sector but are produced by many sectors such as the cement industry, steel industry, paper industry, textile industry, ceramics, petrochemicals, food, and certain beverages, Carbon-Intensive Industry Companies are companies that, in carrying out their operational activities, use a lot of fuel that emits carbon emissions (Ministry of Industry and Ministry of Environment and

Forestry, 2013). In this study, carbon emissions disclosure is used as the dependent variable, and financial performance, media exposure, corporate governance, and environmental performance are independent variables. Specifically, titles with this variable have not yet been widely researched, even though previous research has found different results, giving rise to a research gap. Apart from that, this research was conducted over a time period of 4 years, from 2019 to 2022, in accordance with suggestions in previous studies. Based on the explanation above, this research takes on the title **“CARBON EMISSIONS DISCLOSURE: Study of Companies Classified as Carbon-Intensive Industries on the Indonesian Stock Exchange“**

1.2 Research Questions

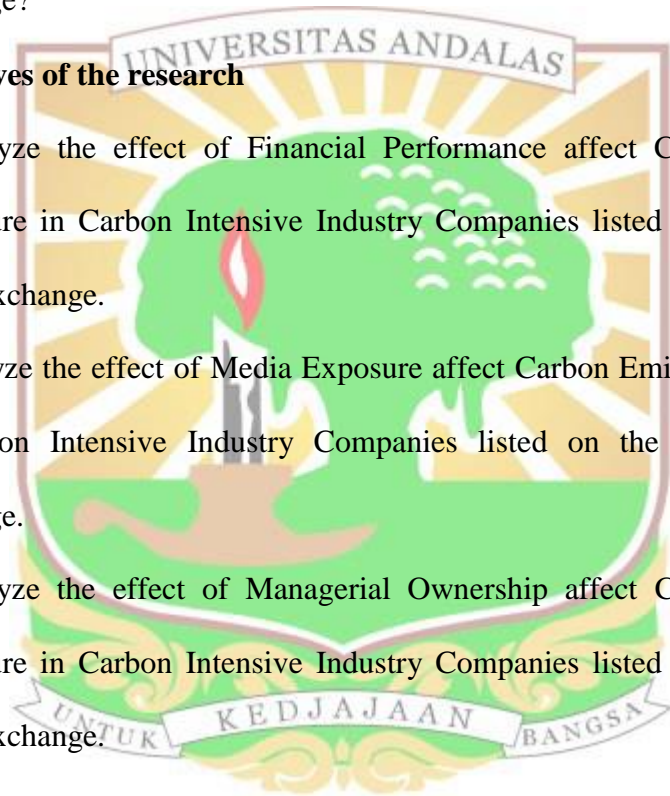
Based on the background above, the author formulate several problems as follows:

1. Does Financial Performance affect Carbon Emissions Disclosure in Carbon Intensive Industry Companies listed on the Indonesia Stock Exchange?
2. Does Media Exposure affect Carbon Emissions Disclosure in Carbon Intensive Industry Companies listed on the Indonesia Stock Exchange?
3. Does Managerial Ownership affect Carbon Emissions Disclosure in Carbon Intensive Industry Companies listed on the Indonesia Stock Exchange?
4. Does Institutional Ownership affect Carbon Emissions Disclosure in Carbon Intensive Industry Companies listed on the Indonesia Stock Exchange?
5. Does Audit Committee affect Carbon Emissions Disclosure in Carbon Intensive Industry Companies listed on the Indonesia Stock Exchange?

6. Does Independent Board of Commissioners affect Carbon Emissions Disclosure in Carbon Intensive Industry Companies listed on the Indonesia Stock Exchange?
7. Does Environmental Performance affect Carbon Emissions Disclosure in Carbon Intensive Industry Companies listed on the Indonesia Stock Exchange?

1.3 Objectives of the research

1. To analyze the effect of Financial Performance affect Carbon Emissions Disclosure in Carbon Intensive Industry Companies listed on the Indonesia Stock Exchange.
2. To analyze the effect of Media Exposure affect Carbon Emissions Disclosure in Carbon Intensive Industry Companies listed on the Indonesia Stock Exchange.
3. To analyze the effect of Managerial Ownership affect Carbon Emissions Disclosure in Carbon Intensive Industry Companies listed on the Indonesia Stock Exchange.
4. To analyze the effect of Institutional Ownership affect Carbon Emissions Disclosure in Carbon Intensive Industry Companies listed on the Indonesia Stock Exchange.
5. To analyze the effect of Audit Committee affect Carbon Emissions Disclosure in Carbon Intensive Industry Companies listed on the Indonesia Stock Exchange.



6. To analyze the effect of Independent Board of Commissioners affect Carbon Emissions Disclosure in Carbon Intensive Industry Companies listed on the Indonesia Stock Exchange.
7. To analyze the effect of Environmental Performance affect Carbon Emissions Disclosure in Carbon Intensive Industry Companies listed on the Indonesia Stock Exchange.

1.4 Contributions of research

There are two types of the contributions of this research as follows:

1. For investors

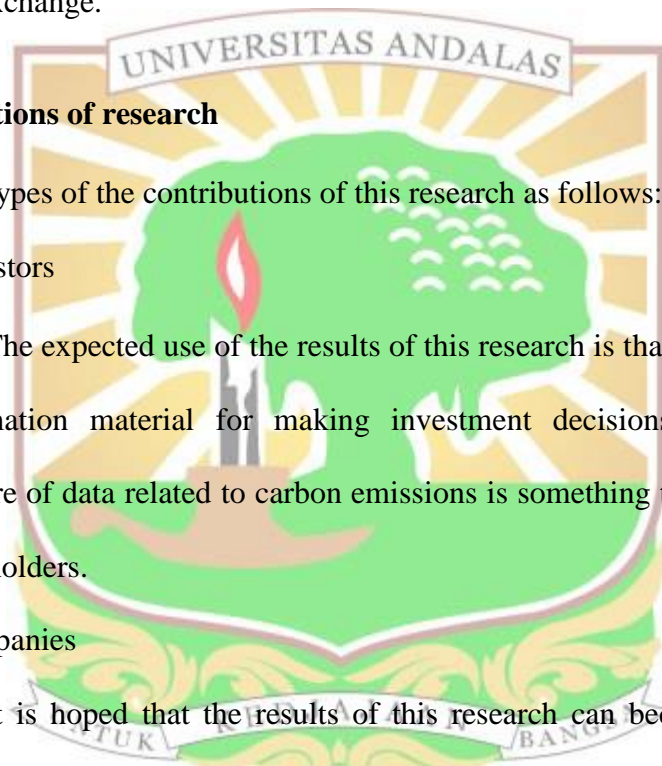
The expected use of the results of this research is that they can be used as estimation material for making investment decisions, related to the disclosure of data related to carbon emissions is something that is meaningful to stakeholders.

2. For companies

It is hoped that the results of this research can become articles and references to ensure industry policies and help understand the disclosure of data related to carbon emissions.

3. For the government

It is hoped that the results of this research can become an estimate in determining policies related to efforts to reduce carbon emissions.



1.5 Outline of Research

CHAPTER I INTRODUCTION: This section contains background research, problem formulation, research objectives, research benefits, research scope, and also the systematics of writing.

CHAPTER II LITERATURE REVIEW: This section describes literature review for each variable, several previous studies related to the current research, as well as the conceptual framework and hypotheses.

CHAPTER III RESEARCH METHOD: This section contains research design, explanation of the operational definition of each variable, the population and sample used, data collection techniques, and finally the data analysis technique used in this study.

CHAPTER IV RESEARCH RESULTS AND DISCUSSION: This section describes the explanation of the research, then there is a discussion of the research object, then the results of instrument testing and analysis of the results, and finally the results of hypothesis testing so that this research can be applied.

CHAPTER V CONCLUSION: This section contains the conclusions of the research, then the implications of the research, then the limitations encountered in the research, and finally the suggest.