CHAPTER II

LITERATURE REVIEW

2.1. Legitimacy Theory

According to Rankin et al. (2022), a company's actions and activities regarding a range of social and environmental issues are understood through the application of legitimacy theory. Companies can enhance the legitimacy of their actions and gain public trust by being transparent about their social and environmental impact. They need to demonstrate that they are taking steps to minimize their negative impact, which can be achieved through annual reports, sustainability reports, or other forms of communication.

Legitimacy theory is a positive theoretical framework that evolves from the concept of a social contract. The social contract refers to the direct or indirect expectations of society regarding how a company should act in its business activities to ensure the sustainability of the company in the future (Rankin et al., 2022). Therefore, organizations must align with the values and norms of society.

In this research, legitimacy can be achieved by disclosing carbon information in the company's annual or sustainability reports. This can be realized through governance mechanisms such as compliance with legal standards and relevant ethical codes. The disclosure of carbon information by companies will enhance public trust by demonstrating that the company is responsible and concerned about the social and environmental impacts of its operational activities.

2.2. Signalling Theory

According to Rankin et al. (2022), signal theory involves actions by companies, such as disclosing information during stock issuance, with the aim of maximizing value. This theory underscores the potential for enhancing the value of a reporting entity through financial reporting. It highlights the importance of information communicated by the company to investors regarding management's performance in achieving the owner's objectives. Information disseminated to the market helps investors determine whether it sends a positive or negative signal, which is crucial for investment decision-making.

In this research, signal theory pertains to the disclosure of internal information within the company to investors, which aims to boost recognition and investor confidence in the company. This, in turn, directly contributes to increased investment and elevates the company's value. Firms that openly share top-tier carbon-related data can showcase their excellence to investors and other stakeholders. This transparency contributes to fostering a favourable corporate reputation and boosting investor confidence in purchasing their shares, leading to improved stock market liquidity.

2.3. Stakeholder Theory

In Stakeholder theory relates to how morality and ethics should play a role in the business world. This theory states that organizations should not only focus on increasing profits but also be responsible for providing benefits to society, the social environment, and the government (Rankin et al., 2022). Stakeholders play a crucial role in the sustainability of a company because they can control the

necessary resources. Fostering connections with stakeholders requires companies to prioritize meeting their interests and demands, particularly those stakeholders concerned with the accessibility of resources utilized in the company's operations (Hörisch et al., 2014).

Efforts made to maintain relationships with stakeholders and to protect the interests of each party can be reflected in a sustainability report (Hörisch et al., 2020). A sustainability report contains transparent information related to the company's position and activities concerning economic, environmental, and social aspects. With the publication of a sustainability report, the company's performance can be directly assessed by stakeholders, influencing their decisions in contributing to the company. One of the efforts made by companies to meet stakeholder demands is by providing high-quality carbon information related to the company's operational activities through the sustainability report.

Companies that fail to invest in low-carbon initiatives risk incurring significant expenses and facing competitive disadvantages (Rahman et al., 2014). Conversely, companies that demonstrate strong environmental performance can gain a competitive edge and attract stakeholder support. Due to climate change remaining a top global threat, the public directly or indirectly drives companies to disclose environmental information. Investor evaluations to determine whether they will invest in a company become a motivating factor for companies to voluntarily disclose information to access high-quality resources. Carbon emission disclosure is a form of corporate responsibility to all stakeholders. Therefore, this theory serves

as the foundation for companies to disclose carbon emissions to avoid information gaps with stakeholders.

2.4. Enterprise Value

The company's value is a crucial indicator for determining the public's perception of the level of success a company has achieved, particularly in terms of stock prices. A company's stock price reflects its value as assessed by investors. A higher stock price indicates that investors believe the company is more valuable, and vice versa. Continuous increases in a company's stock price signify growing value, potentially leading to higher returns for shareholders (Rusmana & Purnaman, 2020). The company's performance is represented by its value, and positive market reactions provide insight into the company's future.

There are several methods to assess a company's value, such as using its book value, market value, deductive judgment, and net worth (Thavikulwat, 2004). The rise in a company's stock price suggests an increase in its value, often measured through its stock market price (Soetjano & Thamrin, 2020). Market ratios are financial metrics used to compare a company's market value to its book value. Common market ratios include the price-to-earnings ratio, the market-to-book ratio, and Tobin's Q.

This study employs Tobin's Q as one proxy to measure a company's value. Tobin's Q is a metric used to assess the market value of a company's outstanding shares and debt relative to the replacement cost of its assets (Zhong et al., 2022). This valuation ratio provides insights into market reactions and investor interest in

a company. Investors may consider this when buying shares of a company with a value higher than its book value. Thus, Tobin's Q offers a comprehensive measure of a company's value, incorporating both its current financial performance and prospects.

2.5. Carbon Information Disclosure Quality

Carbon gas emissions are the release of carbon into the atmosphere caused by the combustion of fossil fuels (Linggasari, 2015). Business entity activities are one of the significant contributors to carbon dioxide emissions, leading to environmental damage. The increasing volume of these gas emissions has prompted governments worldwide, including Indonesia, to enact regulations requiring all businesses or companies to report on their emission activities through carbon disclosure in sustainability reports (Irwhantoko & Basuki, 2016). Carbon emission information disclosure serves as a communication channel between business entities and their stakeholders regarding the types of business activities related to social and environmental practices. Through this communication channel, businesses are expected to receive input from stakeholders on their environmental conservation efforts.

The emergence of carbon emissions demands greater transparency from companies in providing information about their environmental impact. Carbon information disclosure is characterized by two features: mandatory disclosure and voluntary disclosure. In Indonesia, the disclosure of greenhouse gas emissions is still voluntary, and not all companies include this information in their reports. Businesses are expected to participate in environmental conservation efforts and

provide benefits to their stakeholders. This expectation is based on sustainable development goals that consistently prioritize economic, social, and environmental equality.

Diverse sectors, such as environmental advocacy, commerce, and politics, have been progressively pressing companies to confront the challenges brought about by severe global warming (Choi et al., 2013). Stakeholders perceive the implementation of carbon emission disclosure by companies as a tangible step toward mitigating their carbon footprint. The voluntary disclosure of information pertaining to environmental performance serves as a positive signal to stakeholders, indicating the company's commitment to transparency. This disclosure is expected to reduce the volume and impact of greenhouse gas emissions.

2.6. Previous Research

There is one previous research that has examined the effect of carbon information disclosure quality on enterprise value. The study was conducted by Cao et al. (2022), investigating the effects of carbon information disclosure quality and greenwashing on enterprise value. This research states that good carbon information disclosure can improve enterprise value. In the short term, greenwashing through carbon information disclosure may temporarily enhance enterprise value, but this effect diminishes in the long term. Companies with lower pollution levels tend to experience a more significant positive impact on enterprise value than heavy polluters. Moreover, the effect of carbon information disclosure on enterprise value is more pronounced within favourable legal environments compared to less supportive ones.

Apart from that research, no other directly relevant research has been found. However, several previous studies have explored carbon information disclosure quality. The second study, conducted by Pitrakkos and Maroun (2018), concluded that companies need to provide more detailed and higher-quality carbon reporting to stakeholders. Companies should develop detailed protocols for managing climate change risks and invest in systems to collect and analyse environmental data. Potential reinforcement of regulations could be essential in compelling companies to disclose minimum information regarding their greenhouse gas emissions. Subsequent research endeavours should aim to explore the intricate relationships between companies and their stakeholders in greater detail. It is crucial to provide companies with specific guidance on effectively combatting climate change.

The third research, conducted in the United Kingdom by Saha et al. (2022), found a positive relationship between carbon emission disclosure volume and quality. This suggests that higher education institutions that disclose more about their carbon activities are likely to produce higher quality disclosures. This is likely because the target is creating more pressure for higher education institutions to work towards carbon sensitivity and to report more about their efforts. The study's findings are of interest to various stakeholders, including policymakers, green groups, and other stakeholders interested in carbon reporting and environmental standards. This means that higher education institutions less recognized for their environmental standards can follow better disclosure practices to improve their reputation.

The fourth research, by Sanjaya and Yoelencia (2024) found that carbon performance does not impact economic or operating performance, but it significantly and positively affects financial performance. On the other hand, carbon index disclosure positively and significantly influences both economic and operational performance. This suggests that corporations are aligning with the interests of their stakeholders to remain viable and are conducting activities that align with societal norms and values. Corporations also provide voluntary environmental information, such as carbon performance and carbon information disclosure, to demonstrate their commitment to sustainability.

The fifth research by Asyifa and Burhany (2022) explains that carbon emission disclosure does not affect firm value. This implies that whether companies disclose their carbon emissions does not influence investor decisions, thus not affecting the company's value. This might be due to the low levels of carbon emission disclosures in the study's sample, the voluntary nature of such disclosures in Indonesia, and the incomplete implementation of government regulations or policies related to carbon emissions, such as carbon taxes and carbon trading schemes. However, environmental performance positively affects firm value, meaning that better environmental performance enhances company value. Therefore, increased carbon emission disclosure and higher environmental performance scores positively impact firm value, indicating that more comprehensive carbon emission information and superior environmental performance boost firm value.

The sixth research conducted by Afnilia and Astuti (2023) indicated that the board of directors positively influences firm value, while the volume of carbon emissions, carbon emission disclosure, independent commissioners, and the audit committee do not have an impact on firm value.

Table 2. 1

Prior Research Results

No	Researchers	Variable	Object	Result
1	Cao et al. (2022)	**Dependent Variable** Enterprise Value **Independent Variables** Carbon Information Disclosure Quality and Greenwashing **Control Variables** - Company Size - Listing Age - Debt-Paying Ability - Growth Ability - Operation Ability - Industry	Enterprises in the Social Responsibility Index of the Shanghai Stock Exchange from 2016 to 2020.	An effective CID can enhance enterprise value. The beneficial influence of CID quality on the enterprise value of companies with lower pollution levels is more evident than on those with higher pollution levels. Additionally, the favourable effect of CID quality on enterprise value is more pronounced for firms operating within a supportive legal framework compared to those in less supportive legal environments.
2	Pitrakkos & Maroun (2018)	**Dependent Variable** Quality and Quantity Scores of Carbon Disclosures **Independent Variable** Type of Enterprise	Companies which prepared integrated reports from Johannesburg Stock Exchange in 2016.	Businesses should prioritize offering stakeholders more comprehensive and higher-quality carbon reports. They ought to devise detailed protocols for addressing climate change risks and allocate resources towards acquiring systems for gathering

				and analysing environmental data. It may be necessary to introduce further regulations mandating companies to furnish at least basic information regarding their greenhouse gas emissions. Subsequent research endeavours should delve deeper into the intricate dynamics between companies and their stakeholders. Moreover, companies should receive specific guidance on strategies for addressing climate change effectively.
3	Saha et al. (2019)	**Dependent Variable** CED Quality **Independent Variables** CED Volume and Carbon Reduction Targets **Control Variables** - Emission - Audit - Investment - Sustainability - Size - Age	Universities (HEI) in the UK during the year 2012.	CED volume in annual reports and Higher Education Funding Council of England (HEFCE) carbon reduction target were found to have a significant positive impact on CEDQ.
4	Sanjaya & Yoelencia (2023)	**Dependent Variable** Firm Performance - Market performance - Accounting performance - Operating performance **Independent Variables** Carbon Performance and CID	Companies listed on IDX with financial statements and sustainability reports in 2016-2021.	Carbon performance positively affects financial performance but not economic or operating performance, carbon index disclosure significantly boosts economic and operating performance but not financial performance.

		Control Variables - Revenue Growth Rate - Company Size - Debt to Assets Ratio		
5	Asyifa & Burhany (2022)	**Dependent Variable** Firm Value **Independent Variables** CED and Environmental Performance	Seven companies on the SRI-KEHATI index in 2016-2020.	Carbon emission disclosure alone does not impact firm value. Environmental performance, both independently and when combined with carbon disclosure, positively influences firm value.
6	Afnilia & Astuti (2023)	**Dependent Variable** Firm Value **Independent Variables** - Carbon Emission Volume - Carbon Emission Disclosure - Board of Directors - Independent Commissioners - Audit Committee **Control Variables** - Company Size - Leverage	Energy sector and primary consumer companies listed on the IDX in 2019-2021.	The influence of the board of directors on firm value is positive, while firm size exerts a negative effect. Carbon emissions volume, carbon emissions disclosure, independent commissioners, the audit committee, and leverage do not affect firm value.

Source: Previous Research

2.7. Hypothesis Development

As stated by Hartono (2017), hypotheses must be developed. A logical explanation, pertinent theories, and the findings of earlier studies can all be used to

develop hypotheses. The effect of carbon information disclosure quality on enterprise value is the hypothesis development put forth in this study.

2.7.1. Effect of Carbon Information Disclosure Quality on Enterprise Value

The disclosure of carbon emissions involves a compilation of both quantitative and qualitative information derived from a company's historical emissions data and its future predictions regarding the company's carbon emissions level. It includes not only the disclosure of these emissions figures but also explanations and their implications (Anggraeni, 2015). Enterprises that report their carbon emissions and implement eco-friendly strategies are more likely to boost public confidence in the organization and augment intangible assets. Moreover, the amount of carbon information disclosed by a company can have an impact on its value.

In today's environmentally conscious world, companies are increasingly evaluated on their commitment to sustainability and environmental responsibility. High-quality carbon information disclosure demonstrates a company's proactive approach to addressing climate change and managing its environmental impact. This transparency enhances a company's reputation and brand image, attracting environmentally conscious consumers and investors who value sustainable practices.

Investors are increasingly considering a company's environmental performance and carbon footprint as a factor in investment decisions. High-quality carbon information disclosure signals to investors that a company is well-positioned to manage climate related risks and opportunities, making it more attractive

investment prospect. Moreover, companies with higher carbon footprints or more significant environmental impacts tend to disclose more carbon information. This suggests that companies with more carbon information disclosure may be taking proactive steps to manage their emissions, which can require additional investment in technology, resources, and personnel. Additionally, if a company is found to be engaging in illegal pollution practices, this can also lead to increased costs and reputational damage, further impacting short-term performance and hindering long-term value growth.

The legitimacy theory also explains the relationship between the quality of carbon information disclosure and enterprise value. According to Rankin et al. (2022), legitimacy theory serves as a framework for understanding a company's actions and engagements concerning social and environmental matters. This research applies legitimacy theory to argue that a company's reports on carbon emissions should reflect current ethical standards. By doing this, the company aims to build public trust and backing, which can ultimately improve its long-term success. The public expects companies to provide quality information to support corporate transparency. By meeting public expectations, companies can gain a competitive advantage that allows them to adapt well and improve a positive image among stakeholders, including investors. A stronger public image can boost the company's value.

Signalling theory suggest that companies can bridge the knowledge gap between themselves and investors by disclosing internal information, particularly about carbon footprint. This transparency builds trust and recognition, attracting

more investment and boosting the company's overall value. In other words, sharing high-quality carbon data allows companies to effectively signal their competitive edge to investors and other stakeholders. This demonstrates that the company is serious about addressing existing environmental issues, making a positive corporate image, and encouraging investors to consider purchasing their stocks.

Additionally, from the perspective of stakeholder theory, companies do not only operate for their own interests but are also obliged to benefit their stakeholders. Climate change is accelerating towards catastrophe, forcing enterprises to disclose their environmental information. Recognizing that investors place significant value on relevant information, companies are proactively disclosing such information to secure access to crucial resources. This voluntary disclosure strategy aims to enhance the company's attractiveness to investors, thereby facilitating access to capital, expertise, and other valuable resources. Corporate accountability can be seen through how detailed and transparent the company is in disclosing carbon information. Companies that disclose carbon information can stand out from the competition by attracting stakeholder support, which translates to higher company value.

The closest related research is the study proposed by Cao et al. (2022), stating that good carbon information disclosure can improve enterprise value. Therefore, carbon information disclosure quality significantly and positively affects enterprise value. Based on the three theories presented earlier and the research conducted by Cao et al. (2022), the hypotheses proposed for this research are as follows:

H_A: The quality of carbon information disclosure has a positive impact on enterprise value.