

## DO GREEN ACCOUNTING AND CARBON EMISSION DISCLOSURE AFFECT STOCK RETURN?

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### ABSTRAK

Isu lingkungan seperti perubahan iklim dapat menjadi faktor eksternal yang mempengaruhi fluktuaasi harga saham serta tingkat pengembalian saham. Penelitian ini bertujuan menganalisis dampak dari pengungkapan emisi karbon, praktik *green accounting*, dan profitabilitas terhadap pengembalian saham perusahaan sektor makanan dan minuman yang terdaftar di Bursa Efek Indonesia selama periode 2020 -2022. Penelitian ini menggunakan pendekatan kuantitatif dengan metode analisis regresi linear berganda dan sampel sebanyak 54 perusahaan. Hasil penelitian ini menunjukkan bahwa profitabilitas memiliki dampak signifikan pada pengembalian saham. Namun, pengungkapan emisi karbon dan *green accounting* tidak memiliki dampak signifikan pada pengembalian saham. Hasil penelitian ini dapat menjadi referensi dalam bagi perusahaan dan investor untuk lebih memperhatikan kondisi lingkungan.

Kata Kunci: Green accounting, carbon emission disclosure, profitabilitas, return saham

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### ABSTRACT

*Environmental issues such as climate change can be an external factor that influences stock price fluctuations and stock returns. This research aims to analyze the impact of carbon emission disclosure, green accounting practices, and profitability on the share returns of food and beverage sector companies listed on the Indonesia Stock Exchange during the period 2020 to 2022. This research uses a quantitative approach, multiple linear regression analysis methods, and a sample of 54 companies. The results of this study indicate that profitability has a significant impact on stock returns. However, carbon emission disclosure and green accounting do not significantly impact stock returns. The results of this research can be a reference for companies and investors who want to pay closer attention to environmental conditions.*

*Keywords:* Green accounting, carbon emission disclosure, profitability, stock return

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## 1. Introduction

The fluctuations of the stock price are an important concern for an investor, as they will affect the rate of return on the stock. Share returns are influenced by the company's technical and fundamental factors, namely, domestic and foreign politics, government policies, rising interest rates, company performance, and external factors of the company (Putra et al., 2021). Examples of corporate external factors are such environmental issues as climate change that need to be a concern for the entire sector of society to be studied.

Climate change is a global emergency that needs to be a national concern. Therefore, the United Nations (UN) convened a conference of world leaders on December 12, 2015, to discuss climate change in Paris known as the Paris Agreement. The Paris Agreement aims to reduce greenhouse gas emissions as well as mitigate the impact of climate change to strengthen resilience and increase adaptability to climate impacts. It makes the whole country have a target to reduce carbon emissions, one of which is Indonesia. According to a press release on October 25, 2022, by the Ministry of Economic Coordination of the Republic of Indonesia, in the Nationally Determined Contribution document, Indonesia has an emission reduction target of 31.89% by the year 2030 (Kemenko Bidang Perekonomian, 2022).

According to European Commission data edgar.jrc.ec.europa.EU (2023), Indonesia is recorded as the largest contributor to Southeast Asia's emissions of 1.240,8 million tons. To reduce carbon emissions in Indonesia, the Government has established policies or regulations governing carbon reduction through the Regulations of the Minister of Environment and Forestry of the Republic of Indonesia No. 21 Year 2022 on the Implementation of the Carbon Economic Value. The Government's efforts to reduce carbon emissions are a form of action to support sustainable development or sustainable Development Goals. The concept of sustainable growth goals is constantly updated to realize sustainability of the environment (planet), people, and economics (economic) similar to the concept of green accounting (Lako, 2018).

Green accounting is accounting that incorporates environmental cost factors into the financial results of the company's operations (Dianty & Nurrahim, 2022). According to Murthin & Septiani (2022), companies that realize environmental, social, and economic sustainability will provide more reliable information to stakeholders and shareholders. The Sustainable Responsible Investment (SRI) Kehati Index, ESG Leaders, and LQ45 Low Carbon Leaders are stock indices that refer to the United Nations Principle for Responsible Investment with the list of companies that are merged as companies that strive to boost the economy without neglecting environmental conditions. Historically, the SRI Kehati, ESG Leaders, and LQ45 Low Carbon Leaders indexes have shown good performance compared to one of the major board indices such as the LQ45.

Figure 1 shows the performance of the SRI Kehati Index. The SRI Kehati Index is the performance of a company that is committed to environmental conservation and sustainability, showing performance that surpasses the Jakarta Composite Index (JCI) and LQ45 in the period 2015–2024. With a significant rise of 47.78%, the SRI Kehati index was highlighted as it managed to record consistent and substantial growth during the period. This superior performance shows that investment-oriented toward environmental and social values not only supports sustainability goals but can also deliver competitive financial results in the long term.



Figure 1. Performance of the SRI stock index

The ESGL Index focuses on companies that excel in environmental, social, and governance practices (ESG). The ES GL Index shows satisfactory performance when compared to the LQ45, an index that includes 45 selected stocks with high liquidity on the Indonesian Stock Exchange. Nevertheless, when compared to the Jakarta Composite Index (JCI), the ESGL index does not show the same strong performance. Nevertheless, ESGL's 23.40% increase in share performance during the 2015–2024 period still indicates significant growth. This shows that, while not always in line with overall market performance, focusing on ESG principles can yield a profitable outcome for investors who have concerns about environmental, social, and corporate governance factors.



Figure 2. Performance of the ESGL stock index

The LQ45 Low Carbon Leader Index, which bases its selection on companies committed to carbon reduction and environmentally friendly business practices, shows impressive performance over the period 2020–2024. With share performance increasing by 36.21% over the period, the index confirms that there is strong market demand for investment in companies that prioritize environmental sustainability. This increase reflects the growth and credibility of companies involved in carbon reduction initiatives, as well as the success of their business strategies in capturing opportunities in markets that are increasingly concerned with environmental issues. Thus, the LQ45 Low Carbo Leader Index offers strong evidence that investments aimed at reducing environmental impact can generate substantial returns for investors during the period.



Figure 3. Performance of the LQ45LCL stock index

Figures 1,2 and 3 show that the stock index movements between SRI Kehati, ESG Leaders, LQ45 Low Carbon Leaders (LQ45LCL), Jakarta Composite Index (JCI), and LQ45 have fluctuated. However, despite fluctuations, starting in 2015–2024, the SRI Kehati index showed better performance than the Jakarta Composite Index (JCI) and LQ45, with the highest increase of 47.78% from 2015–2024. Moreover, the ESGL and Lq45LCL indexes also showed good performance compared to the LQ45 but not compared with the JCI. The ESGL stock performance increased by 23.40% for 2015–2024, and the share performance of LQ 45LCL for 2020–2024 grew by 36.21%. This suggests that climate-related information relevant to capital market values and environmental concerns is likely to attract investor attention, influence investment assessment, and result in stock price changes (Choi et al., 2020).

Investors' attention to climate change information can increase demand for corporate stocks that implement environmental accounting, thereby affecting the company's stock price. Companies that disclose living environmental indices tend to have a good return rate because the disclosure of the living environment index will affect the rate of volatility of stock market returns (Obida et al., 2019). This is in line with research by Rosilawati et al. (2021), Nurhayati & Dasmaran (2022), and Sembiring & Yanti (2023) that green accounting influences share returns. While according to Wulandari et al. (2022) and Selfiani & Yunita (2021), green accounting cannot affect share returns. In addition to green accounting, there is also the disclosure of environmental indices and carbon emissions disclosures (Cotter et al., 2019).

The disclosure of carbon emissions involves reporting on the efficiency of carbon output, which includes factors such as raw material consumption, labor costs, factory overhead, environmental overhead expenses, and costs related to carbon management standards (Irwhantoko & Basuki, 2016). Carbon emission disclosure has the potential to enhance the company's valuation by enticing investors to consider investing in the company (Alifiani & Suryaningrum, 2020). Carbon emission management often reflects operational efficiency and technological innovation that tends to perform financially well in the long term, which is attractive to investors (Tsa et al., 2022). Carbon disclosure is one of the most important pieces of information for investors about how a company manages climate risks.

Companies are not only required to make profits, but they also need to pay attention to the environmental impact of global warming as a result of production activities. According to a publication by the Joint Research Centre (JRC), the science and knowledge service of the European Commission, the percentage increase in greenhouse gas emissions in Indonesia in 2021–2022 is most likely to be caused by 26% burning and industrial processes. Based on a study conducted by Ivanovich et al. (2023) in 171 countries, the food sector could raise global temperatures by 10 degrees Celsius by 2100. Therefore, efforts need to be made to decarbonize the food and beverage industry, one of them through carbon disclosure.

The performance of the company's environment will be a consideration for an investor when investing. Based on a study by Bernardini et al. (2021), a more focused investment strategy for low-carbon companies will yield higher returns without altering the overall risk profile. It is consistent with Bolton & Kacperczyk (2020), Bernardini et al. (2021), and Cahyadi & Sitinjak (2022) that when companies implement good environmental practices such as carbon disclosure, it will increase shareholder returns. According to research by Aswani et al. (2024), carbon emission disclosure does not affect share returns.

In addition to external factors related to the environment, other factors influence the return on shares, namely the corporate financial performance in terms of profitability (Asia, 2020). Profitability, which is reflected in indicators such as net profit margins, return on equity (ROE), and returns on assets (ROA), plays an important role in attracting investor interest. Increased profitability of a company can reflect good performance and potential profits for investors, then it could be reflected in rising stock prices and share returns (Ulupui et al., 2020). It is in line with research by Nadyayani & Suarjaya (2021), Rheynaldi et al. (2023), and Davidson et al. (2023) that the profitability ratio measured using return on asset (ROA) influences share returns. Whereas, according to Laulita & Yanni (2022) and Simorangkir (2019), profitability does not influence share return.

Given the circumstances, scholars are intrigued by selecting targets to examine the impact of green accounting, carbon emission disclosure, and profitability on the stock returns of companies within the food and beverage sector listed on the Indonesia Stock Exchange from 2020 to 2022. The selection of this timeframe was influenced by the onset of the COVID-19 pandemic in early 2020, which significantly impacted company performance, including profitability, and led to a reduction in operational activities affecting the level of carbon emissions intensity produced by companies. The food and beverage sector was selected as the subject of the study because, based on a study by Ivanovich et al. (2023) of 171 countries, the food sector could raise the global temperature by 10 degrees Celsius by 2100. Rising global temperatures drive increased transparency and accountability related to carbon emissions, both through regulation, pressure from stakeholders, and corporate initiatives to manage risks and opportunities associated with climate change. Differences in previous research results make researchers want to confirm previous findings to verify the truth or validity of the results through a different context, the population used.

The research aims to guide investors in choosing sustainable companies and encourage companies to take greater care of the environment through carbon disclosure and environmental accounting. The disclosure of information by the company will have an

impact on the rise and fall in the price of the company's securities, thereby affecting the return on the stock. The novelty of the study lies in the use of food and beverage sector companies in Indonesia that are rarely used as research objects to investigate the impact of carbon disclosure on share returns. This research is expected to provide an understanding of the field of accounting related to the importance of disclosure by the company.

## 2. Theoretical Framework and Hypothesis Development

A stakeholder is defined as an entity, whether individual or group, that can influence or be influenced by an organization that is driven for a purpose to be achieved (Freeman & McVea, 1984). In stakeholder theory, companies need the support and purpose of stakeholders to consider the activities to be carried out because stakeholders are the parties that have a large share in the company's growth. Companies need the support and purpose of stakeholders to consider the activities they are going to undertake because stakeholders are the parties that have a large share in the company's growth. Environmental problems are in the interests of various groups and should be addressed so as not to interfere with the quality of life of the people. Therefore, social and environmental disclosure is a dialogue between companies and stakeholders. Corporate growth not only occurs through financial indicators but also needs to pay attention to broader indicators of social and environmental value creation (Schaltegger et al., 2019).

Corporate growth which not only looks at financial indicators but also pays attention to broader indicators regarding social and environmental value creation can be a signal to pass on information about the quality of the company to other parties. According to Spence (1973), the theory of signaling describes how individuals use signals to communicate information about their characteristics or qualities to others. A good company's reputation and credibility can act as a signal that increases market confidence and can avoid information asymmetry between the parties that have more information to communicate with those who have less information. These actions help reduce uncertainty and provide a clearer picture of the company's conditions and prospects.

The stakeholder theory provides an understanding that the disclosure of corporate information is important to stakeholders for decision-making. The stakeholder theory provides an understanding that the disclosure of corporate information is important for stakeholders in decision-making (Mumtazah & Purwanto, 2020). Transparent disclosure of information can minimize the existence of agency fees charged by the company. So companies don't have to pay extra to overcome the information gap between management and stakeholders. Environmental disclosure can increase stakeholder confidence in a company, one of which is an investor. The higher investor confidence will affect the amount of demand for corporate shares, thus increasing the price of the stock, followed by the rate of return on the stock. It is in line with research by Sembiring & Yanti (2023), Nurhayati & Dasmaran (2022), and Rosilawati et al. (2021) that green accounting increases share returns. Corporate concern for the environment can control the increasing cost of environmental prevention.

H<sub>1</sub>: Green accounting influences stock returns

Carbon Emission Disclosure is an emission disclosure that describes how companies contribute to environmental change. The energy consumption carried out by companies is a major cause of the increase in greenhouse gas emissions. Therefore, the government has established a policy of limiting greenhouse gas emissions for companies for a certain period as set out in the Regulations of the Minister of Environment and Forestry of the Republic of Indonesia No. 21 Year 2022 (KLHK, 2022). From a signaling theory perspective, carbon disclosure is used as a signal to markets and investors about their performance and commitment to sustainability. If a company transparently and positively discloses information related to carbon emissions, it can be interpreted as a signal that the company has sustainable environmental policies and practices. Investors and stakeholders, who are increasingly paying attention to environmental issues, can interpret this disclosure as a positive indicator associated with good corporate governance and environmental responsibility.

Disclosure of company carbon emissions is institutional for investors before deciding to invest. Investors have an interest in companies that disclose climate-related information with lower carbon emissions (Cohen et al., 2023). Investor interest in firms that reveal carbon emissions can increase the trading volume of corporate stocks (Ambarwati et al., 2020). Increased corporate stock trading volumes will increase the company's share return. So this is in line with research by Bolton & Kacperczyk (2020), Bernardini et al. (2021), and Cahyadi & Sitinjak (2022) that suggests that disclosure of carbon emissions can increase corporate share returns.

H<sub>2</sub> : Carbon disclosure affects stock returns

Every company wants to have high profitability because an increase in a company's profitability is seen as an attempt to satisfy the interests of shareholders. With consistency in good financial performance, it can maintain positive signals in the long term. Within the framework of stakeholder theory, this augmentation can be construed as a company's endeavor to acknowledge and enhance shareholder returns. In the context of signaling theory, increased profitability followed by consistency of sound financial performance can maintain positive signals in the long term. This consistency can underpin the enduring growth of share returns. Investors are drawn to acquiring shares in enterprises exhibiting robust profitability. Enhanced corporate earnings are a positive signal of corporate performance, piquing investor interest in acquiring corporate shares. Profitability ratios are employed for comparative analysis to gauge a company's capacity to generate profits from its revenue. From an investor's perspective, the profitability expansion is a pivotal gauge for assessing the company's prospects. Increasing demand for shares at the time of offering will increase share prices and corporate share returns (Devi & Artini, 2019).

A heightened Return on Assets (ROA) signifies the company's efficient utilization of assets to generate profits. An elevated ROA signifies brighter prospects for the company and translates into superior returns for investors holding shares in the company. Research by Nadyayani & Suarjaya (2021), Marpaung et al. (2023), and Rheynaldi et al. (2023) suggest that profitability calculated with ROA can affect corporate share return so that there is an influence between profitability and share return.

H<sub>3</sub> : Profitability affects stock returns.

### 3. Research Method

This research is a quantitative study focusing on companies in the food and beverage sector listed on the Indonesian Stock Exchange (IDX) from 2020 to 2022. The data comprises time series data, and the collection process involves documentation methods, which include gathering, recording, and analyzing the obtained data. The data includes carbon disclosure information found in annual reports or sustainability reports, as well as PROPER rankings of energy and basic materials companies for the 2020-2022 period, sourced from the IDX, company websites, and the Ministry of Environment and Forestry of the Republic of Indonesia (KLHK). The research sample was selected using purposive sampling techniques based on specific criteria.:

**Tabel 1. sample criteria**

No.	Criteria	Amount
1.	Food and beverage sector companies listed on the Indonesian Stock Exchange (BEI) in succession in the period 2020-2022	61
2.	Companies that follow the PROPER program in succession in 2020-2022.	(37)
3.	Companies that disclose at least one carbon emission indicator in either the annual report and/or the sustainability report for the period 2020-2022.	(2)
4.	Companies showing profits in their financial statements for the period 2020-2022	(4)
	Total Samples	18
	Total observation (*3 years)	54

This research utilizes secondary data, which was not directly collected by the researcher but obtained from various sources to support the study. The data sources include carbon disclosure information from annual reports or sustainability reports and the PROPER rankings of food and beverage companies from 2020 to 2022, gathered from the IDX, company websites, and the Ministry of Environment and Forestry of the Republic of Indonesia (KLHK). Green accounting variables use a nominal measurement scale, whereas carbon emission disclosure, profitability, and equity return use a ratio measuring scale. The indicators and references for each variable in this study are detailed as follows:

**Table 2. Variables Operationalization**

No	Variable	Indicator	References
1.	<i>Green Accounting</i>	PROPER Rating	KLHK
2.	<i>Carbon Emission Disclosure</i>	$CED = \frac{\text{Total score of 1 obtained by the company}}{\text{Maximum item total that can be disclosed}} \times 100\%$	Meiryan et al. (2023)
3.	Profitability (Return on Asset)	$ROA = \frac{\text{Earning After Interest \& Taxes}}{\text{Total Asset}}$	Sudana, (2015;26)
4.	Stock Return	$Stock Return = \frac{P_t - P_{t-1}}{P_{t-1}} \times 100\%$	Marpaung et al. (2023)

This research employs analytical techniques, including descriptive statistics and multiple linear regression analysis, conducted with the assistance of SPSS 29 software. The statistical analysis techniques comprise normality tests, classical assumption tests, and hypothesis tests. The normality test is measured using the Kolmogorov-Smirnov test, with residual data considered normally distributed when the significance (Sig)  $> 0.05$ . The classical assumption test includes several tests, such as the multicollinearity test, the heteroscedasticity test, and the autocorrelation test. The multiple linear regression equation model tested is as follows:

(Note: Y: Stock Return,  $\alpha$  = Konstanta,  $X_1$  = Green Accounting,  $X_2$  = Carbon Emission Disclosure,  $X_3$  = Profitability,  $b_1 b_2 b_3$  = Coefficient Regression,  $e$  = Error term)

## 4. Result and Discussion

The descriptive statistical test will provide information on the maximum value, minimum value, average (mean), and standard deviation of the independent and dependent variables. Descriptive statistics can provide a general overview of the distribution of data. The results of the descriptive statistical tests for the variables of carbon emission disclosure, profitability, and share returns are as follows:

**Table 3. Descriptive Statistics**

Variables	N	Minimum	Maximum	Mean	Std. Deviasi
<i>Carbon Emission Disclosure (X2)</i>	54	0,11	1,00	0,5806	0,28365
<i>Profitability (X3)</i>	54	0,003	0,27	0,092	0,05668
<i>Stock Return (Y)</i>	54	-0,59	1,25	0,0456	0,37192
Valid N	54				

Source, Secondary Data, Processed (2024)

Table 3 shows the data spread for carbon emission disclosure, profitability, and stock return. The Carbon Emission Disclosure data ranges from 0.11 to 1.00. The average of the Carbon Emission disclosure is around 0.5806, which means most values tend to be around this figure. The standard deviation of 0.28365 indicates that the data is not too far from the average. Based on the minimum and maximum values in profitability it appears that the data range ranges from 0.003 to 0.27. The average of the data is around 0.092, which means most values tend to be around this number. The standard deviation of 0.05668 indicates that the data does not spread too far from the average. A descriptive analysis of the independent variable of equity return describes that the observed data range from -0.59 to 1.25, with an average value slightly above zero, i.e., 0.0456, and the spread of data around the average is quite moderate with a standard deviation of 0.37192. Looking at the relationship between the average value and the standard relative deviation, it is far away. The profitability variable indicates that the data variance is relatively high when looking at the difference between the mean and the standard deviation.

**Table 4. Frequency Distribution of Green Accounting**

Variable	Predicate	Amount	Percentage
Green Accounting	1	0	0
	2	0	0
	3	49	91%
	4	3	6%
	5	2	4%

The results of the variable frequency distribution analysis "green accounting" from Tabel 5 showed the greatest proper value of third rating (3) of 49 companies with 91 percent. The proper value of the fourth rating (2) is three companies with 6 percent. The proper value of the fifth rating (5) for two companies is 4 percent. While Proper first rating (1) and second rating (2) do not have a company to acquire, proper 1 and 2 rating percentages are 0%.

**Table 5 Summary of Classical Assumption Test Results**

No.	Testing	Indicator	Conclusion
1.	Normality Test	Kolmogorov-Smirnov 0,200>0,05	Normal distribution
2.	Multicollinearity	Tolerance> 0,1 VIF<10	No occurrence of multicollinearity
3.	Heteroskedasticity	Glejser tests Sig > 0,05	No occurrence of heteroskedasticity
4.	Autocorrelation	Durbin Watson 1.749	No Occurrence of autocorrelation

Source, Secondary Data, Processed (2024)

The data analysis conducted in this study encompasses a range of tests, including a normality test, a classic assumption test consisting of multicollinearity, heteroskedasticity, and autocorrelation tests, as well as hypothesis testing presented in Table 5. The normality test yielded a significant value of 0.200 for the Kolmogorov-Smirnov test. Consequently, the normality test in this study satisfies the condition as the asymptotic sig (2-tailed) value exceeds 0.05, indicating that the assumption of a normal distribution is acceptable. The multicollinearity test results for each variable revealed tolerance values exceeding 0.10 and variance values below 10, suggesting the absence of significant multicollinearity among variables. Moreover, the heteroskedasticity test, utilizing a Glejser test >5% for each variable, displayed significance values exceeding 0.05, indicating the absence of significant heteroskedasticity for each variable. The autocorrelation test exhibited a Durbin-Watson value of 1.749, surpassing a DU of 1.4464 and falling below 4-1.6800 (4-DU). Therefore, it can be concluded that this regression model does not exhibit positive or negative autocorrelation, yielding non-rejected results.

After ensuring that all the research variables do not deviate from the classical assumption test, the next step in data processing is to apply linear regression analysis, as presented in Table 6.

**Table 6. Regression Analysis Result**

Research Variable	Regression Coefficient	Prob. value	Significance	Conclusion
Constant	-0,178			
<i>Green Accounting</i> (X1)	0,062	0,604	>0,05	Not Accepted
<i>Carbon Emission Disclosure</i> (CED)	-0,317	0,080	>0,05	Not Accepted
Profitability	2,384	0,008	<0,05	Accepted

Source, Secondary Data, Processed (2024)

Based on Table 4, the value of the adjusted  $R^2$  determination coefficient is 0.140. It suggests that independent variables can influence dependent variables by 14%, while the remaining 86% are influenced by other factors, not including green accounting, carbon emission disclosure, and profitability. While the F test results show a sig value  $0,014 < 0,05$ , it can be concluded that independent variables simultaneously affect dependent variables. The results of the t-test showed that two variables have a significant value greater than 0.05, namely the green accounting variable and the carbon emission disclosure. This means that green accounting and carbon emissions disclosures do not influence share returns, whereas the profitability variable has a t-test less than 0.05, which means that the profitable variables influence the dependent variables.

The resulting constant value of -0,178 can be interpreted as if the independent variable is a constant value, then the dependent variable has a value of -0,178. The value of the variable regression coefficient X1 (green accounting) with a positive value of 0.62 indicates that the existence of a direct relationship between share returns and green accounting means that if the X1 variable increases by one unit, then the Y variable will increase by 0.62, assuming that the free variable is constant. A negative X2 variable emission disclosure with a negative value of -0.317 shows that there is an unequal relationship between carbon emission and stock returns, which means if the X2 variable rises by one unit, then the y variable decreases by 0.317, assuming the free variable is a constant. The value of the X3 variable regression coefficient (profitability) of a positive value of 2,384 indicates a correlation between profitability and share return, which means that if the variable X3 increases by one unit, then the Y variable will increase by 2,384, assuming that the free variable is constant.

Table 6 shows the significance value of a green accounting variable of 0.604 greater than the value of the conditional significance of the accepted hypothesis of 0.05. It suggests that the  $H_1$  green accounting hypothesis affects the share return rejected. Thus, it can be concluded that the independent variable of green accounting has no significant impact on the dependent variable. This can be caused by several factors, including a lack of understanding or appreciation by investors of the importance of sustainable factors in assessing company performance, as well as external factors that are more dominant in determining the share price. The determination coefficient in Table 6 shows that the rise in share returns is affected by a dependent variable of 14%, while the remainder is influenced by other factors of 86%.

The stakeholder theory proposes that a company should take into account the concerns of all parties affected by its operations, including employees, customers, communities,

governments, and the environment. Through the implementation of green accounting practices, companies showcase their dedication to sustainability, potentially improving their standing with investors and elevating their stock value. According to signaling theory, companies that proactively embrace sustainable measures like green accounting can send favorable signals to markets and investors regarding their commitment to social and environmental responsibility. However, the findings of this study do not consistently show a significant effect on share returns. The findings are in line with research by Wulandari et al. (2022) and Selfiani & Yunita (2021), which state that green accounting does not affect stock returns. Investors tend to choose to focus on quick results, while environmental disclosure is focused on long-term goals so that information provided in annual reports or sustainability reports less influences investor decisions to invest. Moreover, disclosures of environmental accounting practices are still a voluntary initiative of the company, so the impact on the expected share return by investors has not been optimally realized.

The findings from the data analysis presented in Table 6 indicate that the significance value for the carbon emission disclosure variable, at 0.080, exceeds the accepted significance threshold of 0.05 for the conditional hypothesis. This implies that hypothesis  $H_2$  regarding carbon emission disclosure affecting rejected share returns cannot be supported. Consequently, it is inferred that the independent variable of carbon emission disclosure does not exert a significant impact on the dependent variable. The signaling theory suggests that information released by companies, like carbon emissions, can convey positive messages to investors about the company's future performance, potentially boosting share returns. However, the findings of this study indicate that carbon disclosure does not consistently have a significant effect on stock returns. This suggests that investors might not view carbon disclosure as a strong indicator of the company's prospects, or there may be other factors that more heavily influence their investment choices.

Capital markets tend to be influenced by various factors and may experience varying levels of efficiency. Therefore, the results of this study do not support the proposition of signaling theory. The disclosure of carbon emissions has no direct correlation with the short-term financial performance of the company by investors. Thus, the information does not directly affect the perception of the market towards the return on its shares. Investors tend to focus on factors that directly influence the company's financial performance in the short term, such as revenue, net profit, sales growth, and other financial factors that have a direct impact on the valuation of a company.

The results of this investigation do not support the signaling theory hypothesis but are consistent with the findings of Aswani et al. (2024), which indicate that carbon emission disclosure does not impact stock returns. The relationship between emissions and share performance is complex and influenced by various external and internal factors. Additionally, there is a time lag between carbon emission disclosures and the announcement of share returns because carbon emissions data are typically finalized after the year-end. In contrast, stock prices can change more rapidly due to investor sentiment.

The data analysis results in Table 6 indicate that the significance value for the profitability variable is 0.008, which is below the accepted threshold of 0.05. This implies that the  $H_3$  profitability hypothesis positively affects share returns. Therefore, it can be concluded that the profitability independent variable has a significant impact on the

dependent variable. The findings indicate that profitability significantly impacts share returns, which can be understood through stakeholder theory and signaling theory. According to stakeholder theory, more profitable companies are typically better at addressing the interests of various stakeholders. By fulfilling these interests, a company can enhance its public reputation and confidence, contributing to long-term success. Meanwhile, signaling theory suggests that high profitability acts as a positive signal to investors regarding the company's future performance. Information about high profits reflects operational efficiency and strong growth potential, attracting investor interest and boosting share returns. Therefore, higher profitability not only strengthens relationships with stakeholders but also sends positive signals to the market, collectively contributing to increased share returns.

The market's perception of a company's financial performance is often seen as an indicator of future success and potential growth. Providing sustainable profitability is a way to meet the long-term interests of various stakeholders, as strong financial performance can support investments in employees, product innovation, and socially and environmentally responsible business practices, as well as provide wider economic benefits for society. Good profitability creates a stable and positive environment for all stakeholders, thereby improving market perception of the company and corporate share returns. The results align with prior research by Nadyayani & Suarjaya (2021), Rheynaldi et al. (2023), and Davidson et al. (2023), indicating that the profitability ratio, assessed through return on assets (ROA), influences stock returns. ROA exhibits a notable positive effect on stock returns, indicating that companies with higher ROA levels are more effective in leveraging their assets to generate profits, consequently amplifying share returns and enticing investor interest in the company's investment prospects.

## **5. Conclusions, Implications, and Limitations**

The results of the study provide evidence that only profitability can affect the return of shares of food and beverage sector companies listed on the Indonesian Stock Exchange for the period 2020–2022. This is because profitability is a way to meet the long-term interests of various stakeholders, as strong financial performance can support investment in employees, product innovation, socially and environmentally responsible business practices, and provide wider economic benefits to society. Good profitability creates a stable and positive environment for all stakeholders, thereby improving the market perception of companies and corporate share returns. Green accounting and carbon emission disclosure do not affect share returns due to several factors. Investors tend to focus more on quick results than the long-term goals disclosed in environmental reports, so annual or sustainability reports have less influence on investment decisions. Environmental accounting disclosures are still voluntary, so their impact on expected stock returns has not been optimal. The relationship between emissions and stock performance is complex and influenced by various factors. Additionally, there is a time lag between carbon emission disclosures and the announcement of stock returns, while stock prices can change rapidly due to investor sentiment.

The limitations of this research lie in several important factors. First, few companies routinely disclose information regarding their carbon emissions and apply green

accounting. This is due to the lack of regulations mandating such disclosures, as well as the costs and resources required to collect and report carbon emissions data, which many companies may find burdensome. Second, there are differing interpretations of environmental concepts among various parties, including companies, governments, and the public. These differing interpretations can affect how environmental impacts are measured and evaluated, creating variability in the data produced. For instance, one company might report emissions based on production, while another might report based on energy consumption. Additionally, the differing goals and priorities of each party, such as the government's focus on sustainable policies, companies' focus on economic profit, and the public's focus on quality of life, also influence how environmental concepts are implemented and reported. These differences result in inconsistent data, making comparisons between companies or regions difficult and reducing the reliability of research findings on environmental impacts and corporate performance related to green issues, so this leads to the limitation of the sample used for research. So the implications of this study for researchers can be reviewed, further methods of measurement and disclosure of carbon emissions used, and population numbers and samples added to improve the scope and accuracy of the research. Further research may consider adding moderation or intervening variables to deepen and broaden understanding of the relationship between the independent and dependent variables studied.

## References

Adil, M., & Winarsih, E. (2019). Pengaruh kinerja sosial dan kinerja lingkungan terhadap kinerja keuangan PT. Indonesia Power. *Ajar*, 2(02), 49–64. <https://doi.org/10.35129/ajar.v2i02.81>

Alifiani, I., & Suryaningrum, D. (2020). *Carbon emission disclosure as mediation of factors affecting firm value*. Conference: Proceedings of the 2nd International Conference of Business, Accounting and Economics, ICBAE 2020, 5 - 6 August 2020, Purwokerto, Indonesia. <https://doi.org/10.4108/eai.5-8-2020.2301146>

Ambarwati, Hapsoro, D., & Wicaksono, C. A. (2020). Relationship analysis of eco-control, company age, company size, carbon emission disclosure, and economic consequences. *The Indonesian Journal of Accounting Research*, 23(02), 293–324. <http://doi.org/10.33312/ijar.487>.

Asia, N. (2020). Faktor-faktor yang mempengaruhi return saham pada perusahaan property tahun 2014-2016 di Bursa Efek Indonesia. *FORECASTING: Jurnal Ilmiah Ilmu Manajemen*, 2(1), 76–101. <https://stiemmamuju.e-journal.id/FJIIM/article/view/29>.

Aswani, J., Raghunandan, A., & Rajgopal, S. (2024). Are carbon emissions associated with stock returns? *Review of Finance*, 28 (1), 107–109, <https://doi.org/10.1093/rof/rfad019>

Bae Choi, B., Lee, D., & Psaros, J. (2013). An analysis of Australian company carbon emission disclosures. *Pacific Accounting Review*, 25(1), 58–79. <https://doi.org/10.1108/01140581311318968>

Bai, J., Shao, J., Yu, Q., Demir, M., Altay, B. N., Ali, T. M., Jiang, Y., Wang, L., & Xin Hu. (2023). Sulfur-doped porous carbon Adsorbent: A promising solution for effective and selective CO<sub>2</sub> capture. *Chemical Engineering Journal*, 479(147667).

https://doi.org/10.1016/j.cej.2023.147667.

Bernardini, E., Di Giampaolo, J., Faiella, I., & Poli, R. (2021). The impact of carbon risk on stock returns: evidence from the European electric utilities. *Journal of Sustainable Finance and Investment*, 11(1), 1–26. <https://doi.org/10.1080/20430795.2019.1569445>

Bolton, P., & Kacperczyk, M. (2020). Do investors care about carbon risk? *NBER Working Papers*, 01, 1–23. <http://www.nber.org/papers/w16019>

Cahyadi, A., & Sitinjak, E. L. M. (2022). Pengungkapan emisi karbon, nilai tambah ekonomi dan pasar terhadap imbal hasil saham. *Jurnal Ekonomi & Manajemen*, 4(2), 16–30. <https://doi.org/10.46918/point.v4i2.1618>.

Cerciello, M., Busato, F., & Taddeo, S. (2023). The effect of sustainable business practices on profitability. Accounting for strategic disclosure. *Corporate Social Responsibility and Environmental Management*, 30(2), 802–819. <https://doi.org/10.1002/csr.2389>

Choi, D., Gao, Z., & Jiang, W. (2020). Attention to global warming. *Review of Financial Studies*, 33(3), 1112–1145. <https://doi.org/10.1093/rfs/hhz086>

Cohen, S., Kadach, I., & Ormazabal, G. (2023). Institutional investors, climate disclosure, and carbon emissions. *Journal of Accounting and Economics*, March 2021, 101640. <https://doi.org/10.1016/j.jacceco.2023.101640>

Cotter, J., Lokman, N., & Najah, M. M. (2019). Voluntary disclosure research: Which theory is relevant? *SSRN Electronic Journal*, 1–25. <https://doi.org/10.2139/ssrn.3470466>

Davidson, C., Hadu, J., Manafe, H. A., & Bibiana, R. P. (2023). Analisis pengaruh ROA, ROE, dan NPM terhadap return saham (Literature review manajemen keuangan perusahaan). *Jurnal Ilmu Multidisplin*, 1(4), 963–971. <https://doi.org/10.38035/jim.v1i4>.

Devi, N. N. S. J. P., & Artini, L. G. S. (2019). Pengaruh ROE, DER, PER, dan nilai tukar terhadap return saham. *E-Jurnal Manajemen Universitas Udayana*, 8(7), 4183. <https://doi.org/10.24843/ejmunud.2019.v08.i07.p07>

Dianty, A., & Nurrahim, G. (2022). Pengaruh penerapan green accounting dan kinerja lingkungan terhadap kinerja keuangan. *Economics Professional in Action (E-PROFIT)*, 4(2), 126–135. <https://doi.org/10.37278/eprofit.v4i2.529>

Eriyanti, Y. (2022). The effect of disclosure of sustainability reporting based on GRI standards on company performance (Study on non-financial companies listed on the SRI-KEHATI index 2017-2019). *Jurnal Akuntansi Trisakti*, 9(1), 145–154. <https://doi.org/10.25105/jat.v9i1.10272>

Freeman, R. E., & McVea, J. (1984). *Strategic Management: A Stakeholder Approach to Strategic Management*. Cambridge University Press. [https://doi.org/https://doi.org/10.1017/CBO9781139192675](https://doi.org/10.1017/CBO9781139192675)

Ghozali, I. (2021). *Aplikasi Analisis Multivariate* (10th ed.). Badan Penerbit Universitas Diponegoro.

International Sustainability Standards Board (ISSB). (2019). Exposure Draft. In *Wiley Interpretation and Application of IFRS Standards* (Vol. 44, Issue 0).

Irwhantoko, I., & Basuki, B. (2016). Carbon emission disclosure: Studi pada perusahaan manufaktur Indonesia. *Jurnal Akuntansi dan Keuangan*, 18(2), 92–104.

https://doi.org/10.9744/jak.18.2.92-104

Ivanovich, C. C., Sun, T., Gordon, D. R., & Ocko, I. B. (2023). Future warming from global food consumption. *Nature Climate Change*, 13(3), 297–302. <https://doi.org/10.1038/s41558-023-01605-8>

Jogiyanto, H. (2015). *Teori Portofolio dan Analisis Investasi*. BPFE.

Krismandari, E. C., & Amanah, L. (2021). Pengaruh likuiditas, profitabilitas, leverage terhadap return saham dengan kebijakan deviden sebagai variabel moderasi. *Jurnal Ilmu dan Riset Akuntansi*, 10(6), 21. <http://jurnalmahasiswa.stiesia.ac.id/index.php/jira/article/view/4055>.

Kristiani, L. A., & Werastuti, D. N. S. (2020). Pengaruh kinerja lingkungan dan kinerja sosial terhadap kinerja keuangan dengan good corporate governance sebagai variabel pemoderasi. *JIMAT (Jurnal Ilmiah Mahasiswa Akuntansi)*, 11(3), 487–498. <https://ejournal.undiksha.ac.id/index.php/S1ak/article/view/26619>

Lako, A. (2018). Conceptual Framework of Green Accounting. *Accounting, May*, 60–66.

Laulita, N. B., & Yanni, Y. (2022). Pengaruh Return On Asset (ROA), Return On Equity (ROE), Debt To Equity Ratio (DER), Earning Per Share (EPS) dan Net Profit Margin (NPM) terhadap return saham pada perusahaan yang terdaftar di Indeks LQ45. *YUME : Journal of Management*, 5(1), 232–244. <https://doi.org/10.37531/yume.vxix.467>

Lim, B., Sotes-Paladino, J., Yaqiong, Y., & Wang, G. J. (2024). The value of growth: Changes in profitability and future stock returns. *Journal of Banking & Finance*, 158. <https://doi.org/https://doi.org/10.1016/j.jbankfin.2023.107036>

Lintong, Y. C. Y., & Wokas, H. R. N. (2022). Pengaruh dividen dan laba bersih terhadap harga saham (Studi kasus pada perusahaan konstruksi yang terdaftar di Bursa Efek Indonesia tahun 2015-2019). *Jurnal LPPM Bidang EkoSosBudKum (Ekonomi, Sosial, Budaya, Dan Hukum)*, 5(2), 1053–1064.

Liu, Y. S., Zhou, X., Yang, J. H., Hoepner, A. G. F., & Kakabadse, N. (2023). Carbon emissions, carbon disclosure, and organizational performance. *International Review of Financial Analysis*, 90(102846). <https://doi.org//doi.org/10.1016/j.irfa.2023.102846>

Mahajan, R., Lim, W. M., Sareen, M., Kumar, S., & Panwar, R. (2023). Stakeholder theory. *Journal of Business Research*, 166(December 2022), 114104. <https://doi.org/10.1016/j.jbusres.2023.114104>

Marpaung, F. K., Sarah, E. M., & Rahmi, I. (2023). Effect of return on equity (ROE), return on assets (ROA), debt to equity ratio (DER), and current ratio (CR) on stock returns. *International Journal of Economics Social and Technology*, 2(1), 50–56. <https://doi.org/10.59086/ijest.v2i2.275>

Meiryani, Huang, S. M., Warganegara, D. L., Ariefianto, M. D., Teresa, V., & Oktavianie, H. (2023). The effect of industrial type, environmental performance and leverage on carbon emission disclosure: Evidence from Indonesian LQ45 companies. *International Journal of Energy Economics and Policy*, 13(4), 622–633. <https://doi.org/10.32479/ijEEP.14466>

Mumtazah, F., & Purwanto, A. (2020). Analisis pengaruh kinerja keuangan dan pengungkapan lingkungan terhadap nilai perusahaan. *Diponegoro Journal of*

*Accounting*, 9(2), 1–11. <http://ejournal-s1.undip.ac.id/index.php/accounting>

Muralikrishna, I. V., & Manickam, V. (2017). *Chapter Seven - Environmental Accounting* (V. M. Iyyanki V. Muralikrishna (ed.)). Butterworth-Heinemann. <https://doi.org/10.1016/B978-0-12-811989-1.00007-5>

Murthin, M., & Septiani, A. (2022). Pengaruh pengungkapan sustainability report terhadap biaya modal dengan sustainability assurance dan penyedia assurance sebagai variabel moderasi (Studi empiris pada perusahaan yang terdaftar di Bursa Efek Indonesia tahun 2018-2020). *Diponegoro Journal of Accounting*, 11(4), 1–12.

Nadyayani, D. A. D., & Suarjaya, A. A. G. (2021). The effect of profitability on stock return. *American Journal of Humanities and Social Sciences Research*, 5(1), 695–703. <https://www.ajhssr.com/wp-content/uploads/2021/01/ZZZC21501695703.pdf>

Nurhayati, N., & Dasmaran, V. (2022). Implementasi akuntansi lingkungan dan size terhadap profitabilitas usaha. *Jurnal Akuntansi*, 14(2), 310–318. <http://journal.maranatha.edu>

Obida, Ajao, O. S., Kintoye, I. R., & Enyi, E. (2019). Environmental disclosure practices and stock market return volatility in the Nigerian stock market. *International Journal of Scientific and Research Publications (IJSRP)*, 9(7), p9113. <https://doi.org/10.29322/ijrsp.9.07.2019.p9113>

Palazzo, G., & Scherer, A. G. (2006). Corporate legitimacy as deliberation: A communicative framework. *Journal of Business Ethics*, 71–88. <https://doi.org/https://doi.org/10.1007/s10551-006-9044-2>

Pujiati, L. (2018). Pengungkapan emisi karbon dalam sebuah dilema (Studi pada perusahaan manufaktur yang terdaftar di BEI periode 2013-2017). [Repository@stiedewantara.ac.id](http://Repository@stiedewantara.ac.id), 1–14.

Putra, R. A. K. (2021). Perkembangan IHSG periode 2014-2018. 13(1), 17–25. <https://doi.org/10.30872/jmmn.v13i1.8549>.

Rheynaldi, P. K., Endri, E., Minanari, M., Ferranti, P. A., & Karyatun, S. (2023). Energy price and stock return: Evidence of energy sector companies in Indonesia. *International Journal of Energy Economics and Policy*, 13(5), 31–36. <https://doi.org/10.32479/ijep.14544>

Rosilawati, W., Noviarita, H., Wahyu Ningsih, N., & Prayoga, C. (2021). The application of green accounting on stock activity in Islamic perspective. *Ad-Deenar: Jurnal Ekonomi dan Bisnis Islam*, 05, 1–14. <https://doi.org/10.30868/ad.v5i01.1196>

Schaltegger, S., Hörisch, J., & Freeman, R. E. (2019). Business cases for sustainability: A stakeholder theory perspective. *Organization and Environment*, 32(3), 191–212. <https://doi.org/10.1177/1086026617722882>

Selfiani., & Yunita, I. (2021). The effect of green accounting disclosure, company size, on stock return with GCG as a moderating variable. *International Journal of Business, Economics and Law*, 24(5), 156–165.

Sembiring, S. V. B., & Yanti, H. B. (2023). Analisis pengaruh penerapan green accounting, kinerja lingkungan dan pengungkapan CSR terhadap return saham. *Ekonomi Trisakti*, 3(2), 2713–2724. <https://doi.org/10.25105/jet.v3i2.17453>.

Simorangkir, R. T. M. C. (2019). Pengaruh kinerja keuangan terhadap return saham. *Jurnal Ilmu & Riset Akuntansi*, 21(2019), 155–164.

<https://doi.org/10.34208/jba.v2i2.616>

Sinaga, I. M., Lubis, A., & Prayudi, A. (2020). Pengaruh internet financial reporting (IFR) dan tingkat pengungkapan informasi website terhadap frekuensi perdagangan saham pada perusahaan pertambangan yang terdaftar di BEI. *Jurnal Ilmiah Manajemen dan Bisnis (JIMBI)*, 1(2), 106–111. <https://doi.org/10.31289/jimbi.v1i2.394>

Spence, M. (1973). Job Market Signaling. *The Quarterly Journal Of Economics*, 87, 355–374. <https://doi.org/10.1055/s-2004-820924>

Sudana, I. M. (2015). *Manajemen Keuangan Perusahaan* (N. I. Sallama (ed.); 2nd ed.). PT. Gelora Aksra Pratama.

Susanti, L., Tania, L., Komala, H. W., & Meiden, C. (2022). Pemetaan bibliometrik terhadap social theory pada bidang akuntansi menggunakan VOSviewer. *Jurnal Ekobistek*, 11, 272–277. <https://doi.org/10.35134/ekobistek.v11i4.393>

Syafrizal, A., Ilham, R.N., Muchtar, D. & Wardhiah. (2023). Effect of capital adequacy ratio, non-performing financing, financing to deposit ratio, operating expenses, and operational income on profitability at PT. Bank Aceh Syariah. *Journal of Accounting Research, Utility Finance and Digital Assets*, 1(4), 312–322. <https://doi.org/10.54443/jaruda.v1i4.51>

Tandelilin, E. (2017). *Pasar Modal Manajemen Portfolio dan Investasi* (G. Sudibyo (ed.)). PT. Kanisius.

Tsa, W. H., Lu, Y. H., & Hsieh, C. L. (2022). Comparison of production decision-making models under carbon tax and carbon rights trading. *Journal of Cleaner Production*, 379(1). <https://doi.org/10.1016/j.jclepro.2022.134462>.

Ulupui, I. G. K. A., Murdayanti, Y., Yusuf, M., Pahala, I., & Zakaria, A. (2020). Integrated reporting disclosure and its implications on investor reactions. *Journal of Asian Finance, Economics and Business*, 7(12), 433–444. <https://doi.org/10.13106/JAFEB.2020.VOL7.NO12.433>

(UNFCCC), U. N. F. C. on C. C. (1998). *Kyoto Protocol to The United Nations Framework Convention on Climate Change*.

Wang, E., Nie, J., & Zhan, H. (2022). The Impact of Carbon Emissions Trading on the Profitability and Debt Burden of Listed Companies. *Sustainability (Switzerland)*, 14(20). <https://doi.org/10.3390/su142013429>

Warren, J. (2008). *Carbon Accounting*. May, 1–14.

Wulandari, N. N., Junaidi, A., & Yuniarti, R. (2022). Peran Pengungkapan Akuntansi Lingkungan pada Stock Return di Perusahaan GO Publik Di Indonesia. *EKOMBIS REVIEW: Jurnal Ilmiah Ekonomi Dan Bisnis*, 10(1), 501–505. <https://doi.org/10.37676/ekombis.v10i1.1660>

Yang, Y., Zhang, J., & Li, Y. (2023). The effects of environmental information disclosure on stock price synchronicity in China. *Heliyon*, 9(5). <https://doi.org/10.1016/j.heliyon.2023.e16271>

Yousefian, M., Bascompta, M., Sanmiquel, L., & Vintró, C. (2023). Corporate social responsibility and economic growth in the mining industry. *Extractive Industries and Society*, 13(February). <https://doi.org/10.1016/j.exis.2023.101226>