

# Disclosure Effect of Carbon Emission and Corporate Social Responsibility to Financial Performance

Tommy Andrian<sup>1\*</sup> Yvonne Augustine Sudiby<sup>2\*</sup>

1.Faculty of Economics and Communication, Bina Nusantara University, Jakarta, Indonesia

2.Faculty of Economics and Business, Trisakti University, Jakarta, Indonesia

## Abstract

The objectives of this research are to examine the effect of Carbon Emission Disclosure and Corporate Social Responsibility Disclosure to financial performance. The objects of this study are consumer goods companies listed in Indonesia Stock Exchange (IDX) for the period 2015-2017. Panel data used in this study are unbalanced panels because a criteria is used for the targeted sample of consumer goods that achieve net profits during each study period so that not all companies have complete data for up to three periods. Total sample in this research are 92 companies, selected with purposive sampling, and analyzed by using multiple regression. The data used in this study are secondary data. The statistical software used is SPSS 24. The result of this research indicates that (1) Carbon Emission Disclosure had a positive significant effect on financial performance (2) Corporate Social Responsibility Disclosure had no significant effect on financial performance.

**Keywords:** Financial Performance, Carbon Emission Disclosure, Corporate Social Responsibility Disclosure

**DOI:** 10.7176/JESD/10-12-09

**Publication date:** June 30<sup>th</sup> 2019

## 1. Introduction

In line with the improvement in Indonesian economic activity, which grew by 5.2% in the third quarter of 2018 and was affected by improved public consumption ([www.bappenas.go.id](http://www.bappenas.go.id)). This is the process to turn the company's expansion into a business. This, of course, makes it even tighter as this is evident in the growing number of companies listed on the Indonesian Stock Exchange (IDX). Increasing competition in the business world encourages companies to demonstrate their competitive advantage in attracting investors to invest in the business. When determining the feasibility of an investment, investors can analyze the financial performance of the company. According to the Institute of Indonesia Chartered Accountants (2018), a company's financial performance is the ability to effectively and efficiently hold resources that are in the activities that have been performed in a given period of time.

The financial performance can be measured by various valuation criteria, one of which is the company's profit. Return On Asset (ROA) is one of the financial measures used as a measure of the company's profitability. The ROA ratio is related to the ability of the company to generate profits from the assets. If the higher ROA can be interpreted, the company's profit or gain is higher and otherwise. If the positive ROA shows the total assets used for the company's operational activities, this can mean a gain for the company and, conversely, the negative ROA means that the total assets used for the company's operational activities are not profitable to for the company.

According to Hanifah (2016), if the company wants to maintain its survival, it must pay attention to "3P" (profit for the survival of the company), people (Community and human well-being) and to the planet (promoting natural sustainability as a source)) so that, in addition to the pursuit of profit, the well-being of society must be respected and the environment actively conserved. The Intergovernmental Panel on Climate Change (2018) states that the average global surface temperature increases by 1.50 °C, leading to climate change in several places, including Indonesia. One of the causes of climate change in the world is greenhouse gases produced by human activities.

However, the Carbon Emission Disclosure (CED) disclosure in Indonesia remains voluntary and is practiced by several companies. CED is a company disclosure to assess carbon emissions and to selectively reduce greenhouse gas emissions (Cahya, 2016). However, Indonesia has committed to reducing its carbon footprint as several government regulations have already been adopted by the Government of Indonesia (RI), namely RI Law No. 17 of 2004 on the Kyoto Protocol to the United Nations Framework Convention on Climate Change Alliance to implement sustainable development and reduce carbon emissions, Presidential Decree No. 61 of 2011 on the national action plan for reducing greenhouse gas emissions from businesses resulting from carbon emission disclosure, and Presidential Decree No. 71 of 2011 on the implementation of national greenhouse gas inventories. The existence of these rules encourages companies to be more open to their social activities in terms of reducing carbon emissions.

According to Sanchez & Lorenzo (2012), companies that do little innovation in their business activities are trying to be environmentally friendly by exposing their carbon footprint to increase their profits. According to Hermawan et al. (2018), carbon emissions disclosure has an impact on public confidence and legitimacy, which has an impact on increasing profits. Luo and Tang et al. (2014) stated that the disclosure of carbon emissions is

only transparency and does not explain the company's strategy to take effective steps to reduce carbon emissions so as not to attract investors attention, which does not automatically apply to the financial performance of the company.

Another concrete form in companies applying the 3P concept is social performance. nowadays, the company needs to pay attention to the role of stakeholders, so that the company must be able to achieve harmonization between the company and the stakeholders by developing a corporate social responsibility program. According to Crowther (2008), Corporate Social Responsibility (CSR) is a way in which companies integrate their focus on social and environmental issues into their respective business activities as a form of voluntary stakeholder interaction.

In Law Limited Liability Company Number 40 of 2007 in Article 66a (2c) states that there are obligations that must be implemented by all companies in the implementation of social and environmental responsibility in their annual reports. Article 74 (1) then states that the company must assume social and environmental responsibility in its operations related to natural resources. Paragraph (2) states that this requirement can be calculated as a business expense by paying attention to compliance and fairness. Paragraph (3) states that companies that do not fulfill the obligations of paragraph (1) may be subject to sanctions in accordance with applicable laws and regulations. In addition, paragraph 4 states that public policies have governed social and environmental responsibility.

According to Angelia and Suryaningsih (2015), companies that make CSR disclosures can have a positive impact on the company, as the company can increase the trust and reputation of the community in the products offered by the company by conducting CSR activities so that the profits made by the company are higher. In accordance with the research of Suciwati et al. (2016) states that increasing an entity's CSR disclosure will increase its return on investment and reduce its disclosure, as well as reduce its return on investment. According to research (Yaparto, 2013), companies that fulfill their responsibilities have competitive weaknesses due to unnecessary costs that impact shareholder value, thereby reducing the company's bottom line.

Based on the description of the background above, the author assumed that research needs to be done to see whether there is an influence of carbon emission disclosure and corporate social responsibility disclosure on the financial performance of consumer goods companies in Indonesia.

## 2. Literature Review and Hypothesis

The theory of legitimacy states that companies try to ensure that the activities or activities they perform comply with the limits and standards of the society in which the company operates. Legitimacy can be seen as a way to harmonize the perception of actions of the desired entity in accordance with norms, values, and beliefs (Angelia and Suryaningsih, 2015). To close the legitimacy gap, companies need to identify activities under their control to gain legitimacy for the business. Activities to disclose environmental and social aspects may reflect the legitimacy of the company to society. The existence of a theory of legitimacy improves the positive image of the company when it receives the expected results of the business so that there are no demands from the public. Legitimacy, therefore, provides an overview of the company's business survival benefits derived from the performance of the business itself.

Stakeholder theory states that a company is not an entity that acts only for itself but must provide benefits to its stakeholders (shareholders, creditors, consumers, suppliers, government, society, analysts, and other parties). Thus, the existence of a company is strongly influenced by the support of stakeholders for the company (Ghozali and Chariri, 2008). Gray et al. (1995) state that the survival of a business depends on the support of stakeholders and that assistance must be sought for the company's activities to seek that support. The more powerful the stakeholders are, the greater the company's adaptation efforts. Social disclosure is considered as part of the dialogue between the company and its stakeholders. Based on stakeholder theory, the company will voluntarily choose to disclose information about environmental and social performance, and not encourage stakeholders to meet the expectations of having a more comprehensive activity and its impact on the social and environmental conditions of the organization Expect community.

According to Godfrey (2011), agency theory explains the existence of a relationship between agents and clients to achieve maximum business goals. The main principle of this theory is that there is a working relationship between the principal (investor) and the principal (manager) that enters into an agency relationship in a contract in which one or more clients involve other persons (agents) to perform certain services on behalf of to provide those who partially include authority in decision-making (Jensen and Meckling, 1976). This agency theory assumes that all persons are acting in accordance with their own interests and that clients wish to receive information on management activities related to the funds made available to the company by requesting an accountability report from the client for the assessment management performance is used. However, this leads to a conflict of interest between the principles and the agent, as the agent does not always act in accordance with the client's wishes and thereby incur agency costs. There are two factors in the agency relationship that affect the company's social and environmental information, namely cost and contract cost monitoring (Mustafa and

Handayani, 2014).

### Development of Hypothesis

In the discussion of legitimacy theory, companies must recognize activities under their control to gain legitimacy. Environmental activities in this case by disclosing carbon emissions can be used as a form of voluntary information transparency of the company, which has the effect of improving the positive image of the company as stakeholders see the efforts being made to protect the environment for the company operational activities and this is going to increase the profits of the company to maintain the sustainability of the company. According to Sanchez & Lorenzo (2012), companies that do little innovation in their business activities are trying to be environmentally friendly by showing carbon emissions to increase their profits. According to Hermawan et al. (2018), carbon emissions disclosure has an impact on public confidence and legitimacy, which has an impact on increasing profits. Based on this, the hypothesis that is built is:

Ha<sub>1</sub>: The disclosure of carbon emissions has a positive impact on financial performance.

The stakeholder theory explained that the company not only works for itself but also has to provide benefits to stakeholders. In this case, the company's participation in environmental and social activities impacts the company's financial performance as the company offers products that can be bought by the community. It is considered something that brings improvements to the community. According to Angelia and Suryaningsih (2015), companies that make CSR disclosures can have a positive impact on the company, as the company can increase the trust and reputation of the community in the products offered by the company by conducting CSR activities so that the profits made by the company are higher. In accordance with the research of Suciwati et al. (2016) states that increasing an entity's CSR disclosure will increase its return on investment and reduce its disclosure, as well as reduce its return on investment. Based on this, the hypothesis that is built is:

Ha<sub>2</sub>: The disclosure of corporate social responsibility has a positive impact on financial performance.

### 3. Research Methodology

The sample used in this study covers all industrial consumer goods companies listed on the Indonesian Stock Exchange (IDX) in 2015-2017. The panel data used in this study is an unbalanced panel because one of the criteria for a special purpose sample is a consumer goods company that generates a net profit over each study period, so not all companies have complete data for up to three periods, Thus, in 2015, the total number of companies used was 32 companies, 31 companies in 2016 and 29 companies in 2017.

Carbon Emissions Disclosure (CED) and Corporate Social Responsibility (CSR) disclosure are measured using dummy variables, 1 for companies reporting in the Annual Report and/ or Sustainability Report, and 0 for non- companies provide information in the Annual Report and/ or Sustainability Report. For each item specified in a company report with a value of 1, a total of the company's total is 18 (CED) and 84 (CSR). Then the acquisition value of each company is divided by the total. Based on the reference calculation of the CSR Disclosure Index by Angelia and Suryaningsih (2015), the following index formula also for Carbon Emission Disclosure.

$$I_j = \frac{\sum X_{ij}}{n_j}$$

Description:

X<sub>ij</sub> = number of revealed items

n<sub>j</sub> = total item

Table 1 Variables measurement

Variables	Sub Variables	Indicators	Scale Measurement
Financial Performance (ROA) Source: Weygandt, et al., 2015.	Return On Asset	ROA = Net Income/ Average Total Asset Description: Net Income: net income after tax Average Total Asset: the average total assets in the company	Ratio
Carbon Emission Disclosure (CED) Source: Choi, et al, 2013 & Sudiby, 2018.	1 Aspect Disclose Climate Change: Risks and Opportunities 2 Aspect Disclose GHG Emission 3 Aspect Disclose Energy Consumption 4 Aspect Disclose GHG Reduction and Cost 5 Aspect Disclose Carbon Emission Accountability	Carbon Emission Disclosure Index: CED = V/ M  Description: CED: Carbon Emission Disclosure V: Total item disclosed M: Total Expected Item  Which are: CED1: 2 item CED2: 7 item CED3: 3 item CED4: 4 item CED5: 2 item	Ratio
Corporate social responsibility Disclosure (CSR) Source: Sembiring (2005) and combined with Kansal and Singh (2011), and Vilar and Simao (2014).	1. Aspect Disclose Environment 2. Aspect Disclose Energy 3. Aspect Disclose Human Resources 4. Aspect Disclose Product, Services, Safety, & Innovation 5. Aspect Disclose Community Development 6. Aspect Disclose Others CSR Activities	Corporate social responsibility disclosure Index: CSR = V/ M  Description: CSR: Corporate social responsibility disclosure V: Total item disclosed M: Total Expected Item Which are: CSR1: 13 item CSR2: 6 item CSR3: 34 item CSR4: 8 item CSR5: 14 item CSR6: 9 item	Ratio

#### 4. Analysis and Discussion

In the following, the number of statements in the Sustainability Report (SR) of the consumer goods companies during the investigation period:

Table 2 Sustainability Report Disclosure

No	Industry Sector	Total Company	Company Disclose SR	%
1.	Food & Beverages	16	1	6,3
2.	Cigarettes	4	1	25
3.	Pharmacy	10	0	0
4.	Cosmetics	6	1	17
5.	Household	3	0	0
<b>Total</b>		<b>39</b>	<b>3</b>	<b>7,7</b>

(Source: Author's Calculation)

The sector of the consumer goods industry has the highest score among 2 other sectors in manufacturing companies with a total of 39 companies. There are 3 (PT Multi Bintang Indonesia Tbk, PT Gudang Garam Tbk,

and PT Unilever Indonesia Tbk) companies that issue sustainability reports or only 7, 7% because the industry in consumer goods has more initiative than the other two sectors in manufacturing companies to quality and to express responsibility for the products they market. In total, there are 39 consumer goods industry and only 3 companies that publish sustainability reports, or just 7.7%. This is because there is no compelling requirement that requires each company to disclose the sustainability report, as well as the costs and benefits that the company still considers.

Table 3 Descriptive Statistics

Variable	Min	Max	Mean	Std Deviation
ROA	0,0020	0,5525	0,0714	0,1506
CED	0,0555	0,9444	0,3085	0,1754
CSR	0,0714	0,6904	0,3889	0,1324

(Source: Data Processed Using SPSS 24)

Table 3 summarizes the descriptive statistics of 92 consumer goods firms during 2015-2017 and shows the comparison of variables among the firms. Return On Asset (ROA) is greatly lower than in other variables with a total minimum value 0,0020 owned by PT Mustika Ratu Tbk for the period 2015. Carbon Emission Disclosure (CED) is greatly higher than in other variables with total maximum value 0,9444 owned by PT Multi Bintang Indonesia Tbk and PT Unilever Indonesia Tbk for the period 2015 and 2016. The average value (mean) for the Corporate Social Responsibility Disclosure (CSR) is greatly higher than in other variables with total mean value 0,3889. Then, the value of standard deviation for Return On Asset (ROA) with total value 0,1506, Carbon Emission Disclosure (CED) is greatly higher than in other variables with total value 0,1754 and the Corporate Social Responsibility Disclosure (CSR) is greatly lower than in other variables with total value 0,1324.

Table 4 Classical Assumption Tests

Normality Test (Kolmogorov Smirnov)	
Significant = 0,20*	
Multicollinearity Test	
Variance Inflation Factors (VIF):	
CED	2,310**
CSR	2,310**
Tolerance:	
CED	0,433***
CSR	0,433***
Autocorrelation Test – Run Test:	
Significant = 0,675*	
Heteroskedasticity Test – Glejser:	
Significant:	
CED	0,707*
CSR	0,620*

Notes: \*p < 0,05 \*\*VIF<10 \*\*\*Tolerance>0,1

(Source: Data Processed Using SPSS 24)

From the above table 4, the regression model has passed classical assumption tests with  $\alpha=5\%$  except for multicollinearity tests test must be lower than 10. The results of the normality test show the Kolmogorov Smirnov significance of 0,200 greater than 0,05 so that the data is normally distributed. Based on the results of multicollinearity tests all independent variables (CED and CSR) have VIF values smaller than 10 and the tolerance values higher than 0,1, it can be concluded that multicollinearity does not occur. Autocorrelation testing carried out with run test can be stated that there is no autocorrelation because the significance value of 0.675 is greater than 0.05. Based on the results of the heteroscedasticity test, it can be seen that the significance value for Carbon Emission Disclosure (CED) is 0.707 and Corporate Social Responsibility Disclosure (CSR) is 0.620, greater than 0.05, there are no symptoms of heteroscedasticity.

Table 5 Regression Result

$ROA = 0,325 + 0,655 CED - 0,572 CSR + 0,066$			
Variable	Coeff.	t-stat	Prob
Constant	0,325	4,958	0,000*
CED	0,655	5,495	0,000*
CSR	-0,572	-3,624	0,000*
Prob (F-Statistic)			0,000*
Adj R Square			0,240
Std. Error			0,066
N			92

Notes: \*p < 0,05

(Source: Data Processed Using SPSS 24)

From the above table 5, it can be seen that the coefficient of determination (Adjusted R Square) is 0.240. This shows that the carbon emission disclosure and corporate social responsibility disclosure variables can explain ROA of 24% while the remaining that is equal to 76% is explained by other variables not present in this study. The Standard Error of Estimate (SEE) value is 0.066, meaning that the smaller the SEE value will make the regression model in this study more precise in predicting the dependent variable, namely financial performance that is proxied by ROA.

The probability (F-statistic) significance value is below 0.05, which corresponds to 0.000. It can be concluded that the independent variables of carbon emission disclosure and corporate social responsibility disclosure have a simultaneous or joint impact on financial performance. Thus, the regression model in this study meets feasibility and can be used to predict financial performance.

Partial regression test results (t-test) indicate that  $H_{a1}$  has been accepted so that it can be concluded that carbon disclosure has an impact on financial performance. Companies must recognize activities that are under their control to legitimize themselves. In this case, environmental activities can be used by disclosing carbon emissions as a form of voluntary information transparency of the company, which has the effect of improving the company's positive image, as stakeholders see what efforts are being made to protect the environment for the company's operations. Protecting the company and this will impact on increasing the profits the company generates to sustain the company's sustainability. This is consistent with the study by Demirel and Eskin (2017) and Hermawan et al. (2018) that there is a positive impact between the disclosure of carbon emissions and financial performance.

Partial regression test results (t-test) indicate that  $H_{a2}$  has been rejected, so it can be concluded that corporate social responsibility data has no impact on financial performance. Companies that take on social responsibility have competitive weaknesses because unnecessary costs affect shareholder value, so corporate profits decline and implementing CSR can only help to reduce the risk of their valuation being impaired in the long run and not increase company profits. This is consistent with the research of Yaparto (2013) and Eskin (2017).

## 5. Conclusion

From the research model was accepted, which means were the relationship of carbon emission disclosure and corporate social responsibility disclosure to financial performance. While t-test for individual hypotheses only carbon emission disclosure has a relationship with financial performance. The hypotheses were not accepted or rejected was corporate social responsibility disclosure. The evidence suggests every company has a different vision, mission, and value and some of them have not been oriented toward the triple bottom line and green accounting. The research limitation are subjectivity at the stage of assessing content analysis to determine the extent of carbon emission disclosure and corporate social responsibility disclosure and then the research only involves companies that make positive profit. The implication of this research can be considered for the company's management in the formulation and as a form of voluntary information transparency of the company, which has the effect of improving the company's positive image as the stakeholders strive to improve the environment for operations, this will have the effect of increasing the company's profits so that it maintains its sustainability.

The researchers strongly suggest that for future research, (1) Add control variables that can affect financial performance, such as company size, environmental performance, and industry type. (2) Use of other company sectors, such as miscellaneous industry, mining and infrastructure, listed on the Indonesian Stock Exchange to obtain a more representative sample to answer research problems. As significant differences in the nature of the business of the company being investigated may affect the results of the research, empirical tests and sector analyzes may be performed.



## References

- Angelia dan Suryaningsih. (2015). The Effect of Environmental Performance and Corporate Social Responsibility Disclosure Towards Financial Performance. *Procedia Social and Behavioral Sciences*. 1877-0428.
- Bappenas. (2018). Perkembangan Ekonomi Indonesia dan Dunia. Retrieved from <https://www.bappenas.go.id/id/berita-dan-siaran-pers/perkembangan-ekonomi-indonesia-dan-dunia-triwulan-iii-tahun-2017/>
- Bursa Efek Indonesia. (2018). Daftar perusahaan yang terdaftar di Bursa Efek Indonesia menurut *Fact Book*. Retrieved from <http://web.idx.id/id-id/beranda/publikasi/factbook.aspx>
- Bursa Efek Indonesia. (2018). Laporan Keuangan Tahunan. Retrieved from <http://web.idx.id/id-id/beranda/perusahaantercatat/laporankeuangandantahunan.aspx>
- Cahaya, Bayu Tri. (2016). Carbon Emission Disclosure: Ditinjau dari Media Exposure, Kinerja Lingkungan, dan Karakteristik Perusahaan Go Public Berbasis Syariah di Indonesia. *Jurnal Akuntansi NIZHAM*. Vol. 05. No 2.
- Choi, Bo Bae, Doowon Lee, dan Jim Psaros (2013). An Analysis of Australian Company Carbon Emission Disclosures. *Journal of Accounting Pacific Review*. Vol. 25, No. 1.
- Crowther, David. (2008). *Corporate Social Responsibility*. David Crowther, Guler Aras, & Ventus Publishing Apps. ISBN 978-87-7681-415-1.
- Demirel, Engin, and Ilknur Eskin. (2017). Relation Between Environmental Impact and Financial Structure of Cement Industry. *International Journal of Energy Economics and Policy*. Vol. 7. Issues 1.
- Ghozali, Imam dan Anis Chariri. (2008). Intellectual Capital dan Kinerja Keuangan Perusahaan: Suatu Analisis dengan Pendekatan Partial Least Squares. *Jurnal Akuntansi Universitas Diponegoro*.
- Ghozali, Imam. (2014). *Aplikasi Analisis Multivariate dengan Program IBM SPSS 23*. Semarang: Badan Penerbit Universitas Diponegoro.
- Global Reporting Initiative. (2018). Global Reporting Information and Standards. Retrieved from <https://www.globalreporting.org/standards>
- Godfrey, Jayne, Allan Hodgson, Ann Tarca, dan Jane Hamilton. (2010). *Accounting Theory*. Australian Edition: Wiley.
- Hanifah, Umi. (2016). Aktualitas Carbon Emission Disclosure: Sebagai Dasar dan Arah Pengembangan Triple Bottom Line. *Seminar Nasional dan The 3rd Call for Syariah Paper*. ISSN 2460-0784.
- Hermawan, Atang, Isye Siti Aisyah, Ardi Gunawan, dan Wiratri Yustia Putri. (2018). Going Green: Determinants of Carbon Emission Disclosure in Manufacturing Companies in Indonesia. *International Journal of Energy Economics and Policy*. ISSN: 2146-4553.
- Ikatan Akuntan Indonesia. (2017). *Standar Akuntansi Keuangan per 1 September 2017*. Jakarta: Salemba Empat.
- Intergovernmental Panel on Climate Change. (2017). Sekilas Perubahan Iklim. Retrieved from [https://unfccc.int/files/meetings/cop\\_13/press/application/pdf/sekilas\\_tentang\\_perubahan\\_iklim.pdf](https://unfccc.int/files/meetings/cop_13/press/application/pdf/sekilas_tentang_perubahan_iklim.pdf)
- Jensen, M. C dan Meckling, W.H. (1976). Theory of The Firm: Managerial Behavior, Agency Cost, and Ownership Structure. *Journal of Financial Performance*. Vol. 3, No. 4.
- Kansal, Monika dan Sukhdev Singh. (2011). Measurement of Corporate Social Performance: an Indian Perspective. *Social Responsibility Journal*. Vol. 8 No. 4.
- Lindblom, C. K. (1994). *The Implications of Organizational Legitimacy for Corporate Social Performance and Disclosure*. *Perspectives on Accounting Conference, New York*.
- Le Luo dan Qingliang Tang. (2014). Carbon Tax, Corporate Carbon Profile and Financial Return. *Pacific Accounting Review*. Vol 23, No. 3.
- Mustafa, Cut Cinthya dan Nur Handayani. (2014). Pengaruh Pengungkapan Corporate Social Responsibility terhadap Kinerja Keuangan. *Jurnal Ilmu dan Riset Akuntansi*. Vol. 3, No. 6.
- Peraturan Presiden. (2011). *Perpres No. 61 Tahun 2011 mengenai Rencana Aksi Nasional Penurunan Emisi Gas Rumah Kaca*.
- Peraturan Presiden. (2011). *Perpres No. 71 Tahun 2011 mengenai Penyelenggaraan Inventaris Gas Rumah Kaca Nasional*.
- Sanchez dan Lorenzo. (2012). Greenhouse Gas Emission Practices and Financial Performance. *International Journal of Climate Change Strategies and Management*. Vol. 4, No. 3.
- Sekaran, Uma dan Roger Bougie. (2016). *Research Methods for Business: a Skill Building Approach*. United Kingdom: John Wiley and Sons Ltd.
- Sembiring, E. R. (2005). *Karakteristik Perusahaan dan Pengungkapan Tanggung Jawab Sosial*. Simposium Nasional Akuntansi VIII.
- Suciwati, Desak Putu, Desak Putu Arie Pradnyan, dan Cening Ardina. (2016). *Pengaruh Corporate Social Responsibility terhadap Kinerja Keuangan*. *Jurnal Bisnis dan Kewirausahaan*. Vol. 12, No. 2.
- Sudibyo, Yvonne Augustine. (2018). Carbon Emission Disclosure: Does It Matter. *Journal of The 4th International Seminar on Sustainable Urban Development*. Doi: 10.1088/1755-1315/106/1/012036

Undang-Undang Republik Indonesia. (2007). *Undang-undang No. 40 Tahun 2007 mengenai Perseroan Terbatas*.  
 Undang-Undang Republik Indonesia. (2014). *Undang-undang No. 17 Tahun 2004 mengenai Pengesahan Kyoto Protocol To The United Nations Framework Convention on Climate Change*.  
 Vilar, Vitor Hugo dan Joao Simao. (2014). CSR Disclosure on The Web: Major Themes in The Banking Sector. *International Journal of Social Economics*. Vol. 42, No. 3  
 Weygandt, Kimmel, dan Kieso. (2015). *Financial Accounting IFRS Edition. United States of America*: Pearson.  
 Yaparto, Marissa. (2013). Pengaruh Corporate Social Responsibility terhadap Kinerja Keuangan. *Jurnal Ilmiah Mahasiswa Universitas Surabaya*. Vol. 2, No.1.

**Appendix:**

**Carbon Emission Disclosure Checklist**

No	Category	Checklist Item
1.	Climate Change: risks and opportunities	CC1 - Assessment/ description of the risks (regulatory, physical or general) relating to climate change and actions are taken or to be taken to manage the risks
		CC2 - Assessment/ description of current (and future) financial implications, business implications and opportunities of climate change
2.	GHG Emission	GHG1 - Description of the methodology used to calculate GHG emissions (e.g. GHG protocol or ISO)
		GHG2 - Existence external verification of quantity of GHG emission- if so by whom and on what basis
		GHG3 - Total GHG Emissions – metric tons of CO2-e emitted
		GHG4 - Disclosure of scopes 1 and 2, or scope direct GHG emissions
		GHG5 - Disclosure of GHG emissions by sources (e.g. coal, electricity, etc.)
		GHG6 - Disclosure of GHG emissions by facility or segment level
		GHG7 - Comparison of GHG emissions with previous years
3.	Energy Consumption	EC1 - Total energy consumed (e.g. tera-joules or peta-joules)
		EC2 - Quantification of energy used from renewable sources
		EC3 - Disclosure by type, facility or segment
4.	GHG Reduction and Cost	RC1 - Detail of plans or strategies to reduce GHG emissions
		RC2 - Specification of GHG emissions reduction target level and target year
		RC3 - Emissions reductions and associated costs or savings
		RC4 - Cost of future emissions factored into capital expenditure planning
5.	Carbon Emission Accountability	AEC1 - Indication of which board committee (or other executive bodies) has overall responsibility for actions related to climate change
		AEC2 - Description of the mechanism by which the board (or other executive bodies) reviews the company's progress regarding climate change

**Description of Scope 1, 2, and 3 in Carbon Disclosure Checklist**

Scope	Category	Description
1	Direct Green House Gas (GHG)	1. GHG occurs from the source or is controlled by the company, e.g. Emissions from the chemical production of equipment owned and controlled by the company.
		2. Direct GHG biomass incineration not included in scope 1 but shown separately;
		3. GHG emissions not included in the Kyoto Protocol, eg. CFCs, NOX, etc., should not be included in scope 1 but reported separately.
2	Indirect GHG emissions from electricity	1. Includes GHG emissions from power plants purchased or consumed by the company;
		2. Scope 2 physically occurs in the facility where electricity is generated.
3	Other indirect GHG emissions	1. Scope 3 is an operational report category that allows the treatment of all other indirect emissions;
		2. Scope 3 is a result of the company's activities, but comes from sources that are not owned or controlled by the company;
		3. Examples of scope 3 are extraction and production, purchased raw materials, purchased fuel transports and the use of products and services that are not sold.