



## Awareness of Economic, Environmental, and Social Issues and Financial Soundness—Does The Covid-19 Pandemic Matter?

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### ABSTRACT

**Purpose :** Regulators, the public and researchers emphasize the business world to increase awareness of economic, environmental, and social issues as corporate social responsibility (CSR). However, the economic consequences of CSR are still being debated. This study proves the role of CSR disclosure on financial soundness and the role of the coronavirus disease (covid-19 pandemic) in the relationship between the two.

**Method :** The research sample is a manufacturing company listed on the Indonesia Stock Exchange, with observations from 2015 to 2021. Data analysis uses panel data regression.

**Findings :** The results showed that CSR disclosure does not affect financial soundness, but the interaction between CSR and covid-19 pandemic negatively affects financial soundness. Therefore, covid-19 pandemic plays a major role in the extent to which CSR affects financial soundness. We will conduct regression analysis with other indicators of financial soundness to assess the robustness of our findings.

**Novelty :** The study contributes to the expansion of the prior literature in two important ways. First, we use the financial soundness consequences of CSR disclosures. This study provided evidence of covid-19's effect on CSR disclosures.

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### INTRODUCTION

Corporate social responsibility (CSR) is a major concern for all three researchers, the businesspeople, and the government. The company's operations have a negative impact on the environment and, in the long run, will affect business continuity. From the perspective of legitimacy, companies must conduct business according to firm acquire legitimacy by conforming to societal norms and values, such as ethical standards, legal requirements, and environmental responsibilities. They also acquire legitimacy by engaging in social and environmental initiatives that benefit the community and the environment.

To increase corporate awareness of CSR issues, the Government of Indonesia has required companies to allocate a portion of their profits to CSR activities. This regulation is Law number 40 of 2007, which mandates that companies allocate 2% of their net profit to social and environmental activities. In addition, companies in Indonesia are required to disclose their CSR activities in their annual reports, as mandated by the Financial Services Authority (OJK) Regulation No. 51/POJK.03/2017. However, implementing these two regulations still needs to be improved. CSR research in Indonesia reports that companies in Indonesia have low CSR disclosure (see Nasih et al., 2022; Palupi, 2023; Sunarsih & Nurhikmah, 2017; Ikhsan et al., 2021; Cahyonowati & Darsono, 2013; Mahmudah et al., 2023). This low CSR disclosure is still an ongoing debate about its economic consequences (Zhou et al., 2021). That is, can companies "do well by doing good" (Zhou et al., 2021).

Researchers use various approaches to examine the economic consequences of awareness of CSR issues. The first approach proves the profitability consequences of the awareness of CSR issues (Xue et al., 2023; Alshurafat et al., 2022; Buchanan et al., 2018; Wang & Qian, 2011; Brammer & Millington, 2005). The awareness of CSR issues helps companies acquire sociopolitical legitimacy, acquire positive stakeholder responses and gain political access, positively influencing the company's financial performance (Alshurafat et al., 2022; Wang & Qian, 2011). However, Xue et al. (2023) found voluntary and mandatory CSR disclosure to have a negative effect on firm profitability. The negative impact of CSR on profitability because companies invest in CSR activities for the long term, so companies

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will reduce their profits to attract long-term investors (Nguyen et al., 2020).

Second, researchers document the role of CSR in reducing financing costs (Magnanelli & Izzo, 2017; El Ghoul et al., 2011; Goss & Roberts, 2011). Familiar researchers conclude that CSR reduces the cost of debt (El Ghoul et al., 2011) because CSR increases investor confidence (Chen et al., 2022). Increased investor confidence makes it easy for investors to invest in companies with high CSR performance and further reduces the cost of debt. Other scholars consider it shows a positive relationship between CSR and the cost of debt because CSR activities use some of the company owner's rights and increase risk (Magnanelli & Izzo, 2017).

The third approach is to prove lower risk consequences from CSR (Chen et al., 2022; Zhou et al., 2021; Bannier et al., 2022; Shih et al., 2021; Do, 2022). Extensive CSR disclosure increases company information to stakeholders, including investors. This information disclosure reduces investor information asymmetry, increases investor confidence in the company, and further reduces asset price volatility (Chen et al., 2022). This causes CSR disclosure to have a negative effect on risk (Zhou et al., 2021; Shih et al., 2021; Do, 2022). Magnanelli & Izzo (2017) tested aspects of CSR (consists of environmental, and social aspects) on risk and found that the environment disclosure had a negative effect on risk. However, social disclosure increases the risk (Magnanelli & Izzo, 2017). Thus, CSR is not a value driver with an impact on the firm's risk profile (Magnanelli & Izzo, 2017).

Scholars who prove the economic consequences of CSR disclosure produce inconsistent results and cause CSR to emerge as one of the most important areas of research (Wu et al., 2022). For this reason, we tested the economic consequences of CSR disclosure with a different design, namely financial soundness. We argue that CSR disclosure improves the company's reputation for investors and customers (Chen et al., 2022; Servaes & Tamayo, 2013; Brammer & Millington, 2005). A good company reputation will increase customer loyalty, and purchases, and improve financial soundness. The study of the economic consequences of CSR disclosure on the financial soundness of companies in Indonesia has been limited to research by previous researchers. Previous researchers put more emphasis on risk consequences (Palupi, 2023), firm values (Mahmudah et al., 2023; Isnalita & Narsa, 2017), and market risk (Saraswati et al., 2021) from CSR disclosure. Thus, this research contributes to previous literature through the financial soundness consequences of CSR disclosures.

Second, previous research which proves the economic consequences of CSR disclosures uses companies in developed countries as research objects (Magnanelli & Izzo, 2017; Xue et al., 2023; Chen et al., 2022; Suganda & Kim, 2023; Dai et al., 2019; Hao et al., 2018; Servaes & Tamayo, 2013). This study uses a sample of companies in developing countries which developed and developing countries have different cultures, including responses to the importance of companies that care about the environment. These different settings allow different results from previous researchers.

Third, we use the observation period of the year the covid-19 pandemic occurred. This pandemic can increase company awareness of social, environmental, and economic issues. However, the covid-19 pandemic has also caused a decline in sales because of limitations on the government taking policies to limit community activities. In the study of CSR, it is assumed that organizations carry out CSR activities and report their CSR activities in an annual report or CSR disclosure. Furthermore, this research expands on previous references by providing evidence of the influence of the covid-19 pandemic on the financial soundness consequences of the CSR disclosures.

The next section of this paper is the theoretical background and hypothesis development. In this section, the paper writes the legitimacy theory and logical background of the relationship between CSR disclosure and the company's financial soundness. The second section presents the theory and hypothesis. The third section presents the methods, concerning samples, methods of measuring variables, and data analysis. The fourth section presents the results of research and discussion, and the last section presents conclusions, theoretical and practical recommendations, and research limitations.

This study links CSR disclosure with financial soundness because the financial soundness of a firm is driven by the company's fundamental performance, such as Return on Assets (ROA) and Return on Equity (ROE) and depends on the company's capital structure (Horta et al., 2012). The main benefit of corporate disclosure is to reduce information asymmetry between companies and stakeholders (Xue et al., 2023). CSR disclosure facilitates monitoring of managers by stakeholders outside the company, such as investors, creditors, consumers, and debtors. On the company's concern for economic, environmental, and social issues. The extent of company performance information obtained by stakeholders increases managerial decision-making, and leads to more efficient company investments (Xue et al., 2023). Thus, CSR disclosure will increase investor interest in investing in the company and will further reduce the cost of debt (Magnanelli & Izzo, 2017; El Ghoul et al., 2011; Goss & Roberts, 2011).

In the legitimacy theory approach, companies will express their concern for social, economic, and environmental issues to acquire legitimacy from society, trust from investors, and improve reputation and consumer loyalty (Araújo et al., 2023; Servera-francés et al., 2019; Sindhu & Arif, 2017; Lee et al., 2017). In a perfectly competitive market, consumers can choose the product they want to meet their needs. In a perfect market, consumers can choose a variety of products available on the market, including the opportunity to choose products provided by producers who care about social, economic and environmental issues (green products) (Zhang & Dong, 2020; Joshi & Rahman, 2015). This consumer decision led to an increase in the company's sales and profitability. Thus, companies with high CSR disclosure have a positive impact on financial soundness.

**H<sub>1</sub>: CSR disclosure has a positive effect on financial soundness.**

The covid-19 pandemic that hit all countries caused a decline in the country’s economic performance. The pandemic covid 19 caused increases and uncertainties, security prices and reduced trust, caused financial markets to fall to their lowest point since the 2008–2009 global financial crisis (Makki & Alqahtani, 2023). The covid-19 pandemic makes it difficult for companies to maintain sales and reduces the company’s fundamental performance (Verhoef et al., 2023; Alsamhi et al., 2022; Harel, 2021). Thus, the covid-19 pandemic has caused a decrease in company performance (Makki & Alqahtani, 2023; Alsamhi et al., 2022).

The impact of the covid-19 pandemic on the relationship between CSR disclosure and financial soundness is that the decline in macroeconomic performance because of the covid-19 pandemic has caused social, economic, and environmental problems to increase. This increase in problems increases public pressure on companies to participate in solving social, economic, and environmental problems. The company also experienced downward pressure on sales and fundamental performance. Company participation in addressing social, economic and environmental problems requires costs, and reduces the rights of company owners (Zhou et al., 2021) so this company involvement increases the decline in company financial performance and further reduces financial soundness.

**H<sub>2</sub>: The Covid-19 pandemic has caused CSR disclosure to have a negative effect on financial soundness.**

**RESEARCH METHODS**

The object of this research is a manufacturing company listed on the Indonesia Stock Exchange (IDX). This object was chosen for manufacturing companies because manufacturing companies have a bigger environmental impact than other companies. IDX data shows that there are 178 manufacturing companies listed on the IDX. However, out of 178 companies, only 23 firms consistently issued sustainability reports during the year of observation (2015-2021). With this method, 161 firm years are obtained. Financial soundness is measured by the formula 1:

$$Z - Score_{ROA_{t,i}} = \frac{ROA_{t,i} + \frac{\sum Equity_{t,i}}{\sum Assets_{t,i}}}{\sigma ROA_{t,i}} \dots\dots\dots 1$$

ROA<sub>t,i</sub> is the ratio of net profit to total assets in year t and company i. σROA is the standard deviation of ROA for the last three years of observation. A higher Z-score indicates that the banks have higher financial soundness (Mukhibad et al., 2022; Khalil & Slimene, 2021; Louhichi et al., 2019). Another alternative in measuring the z-score is based on ROE (formula 2) (Mokni et al., 2016). This research uses z-score\_ROE as a robustness test.

$$Z - Score_{ROE_{t,i}} = \frac{ROE_{t,i} + \frac{\sum Equity_{t,i}}{\sum Assets_{t,i}}}{\sigma ROE_{t,i}} \dots\dots\dots 2$$

CSR disclosure (CSRD) is measured based on the Global Reporting Initiative standard (GRI) indicators (Ates, 2023). Of all GRI indicators, this study uses three aspects of performance, namely economic (Eco\_Disc) using 9 items, environment (Env\_Disc) consisting of 34 items and social (Soc\_Disc) consisting of 16 items (Rodrigues & Borges, 2015). To measure CSRD, this study uses content analysis by checking the availability of information about GRI items in annual reports and sustainability reports published by companies. Score 1 for each item that is disclosed and vice versa score zero for companies that do not disclose. The CSRD score is calculated by the ratio of the disclosure score to all GRI items. Following Mukhibad & Setiawan (2022) and Mukhibad et al. (2022), covid-19 pandemic variable (COVID) is measured by a dummy where the year of observation of the measured period of COVID is given a score of 1, and 0 otherwise.

**Table 1.** Descriptive Statistics

Variables	Obs.	Mean	Std. Dev.	Min	Max
z-scoreroa	161	43.313	58.486	-1.160	495.510
z-scoreroe	161	10.195	13.759	0.120	106.000
CSRD	161	0.278	0.117	0.078	0.974
Eco_Disc	161	0.265	0.133	0	0.846
Env_Disc	161	0.298	0.166	0	1
Soc_Disc	161	0.268	0.121	0	1
CLR	161	0.640	0.286	-1.522	1.162
PM	161	11.198	10.746	-22.350	49.380
ETA	161	55.219	17.549	10.963	92.926
SIZE	161	21.293	3.673	12.483	26.587
Covid	161	0.286	0.453	0.000	1.000

**Table 2.** Matrix Correlation

	1	2	3	4	5	6	7	
Z-score_ROA	1	1						
CC-SRD	2	-0.2038	1					
CLR	3	0.1121	0.0672	1				
PM	4	-0.2308	0.216	0.2292	1			
ETA	5	0.0963	-0.186	0.1775	0.2048	1		
SIZE	6	0.2978	0.1348	0.2762	0.1739	0.0228	1	
Covid	7	0.1003	0.2244	-0.1243	-0.0834	-0.0414	0.026	1

$$Z\text{-score}_{i,t} = \beta_0 + \beta_1 \text{CSR}_{i,t,c} + \text{control}_{i,t,c} + \varepsilon \dots \dots \dots \text{Equation 1}$$

$$Z\text{-score}_{i,t} = \beta_0 + \beta_1 \text{CSR}_{i,t,c} + \beta_2 \text{COVID}_{i,t,c} + \beta_3 \text{CSR} * \text{Cov}_{i,t-1,c} + \text{control}_{i,t,c} + \varepsilon \dots \dots \dots \text{Equation 2}$$

$$Z\text{-score}_{i,t} = \beta_0 + \beta_1 \text{CSR}_{i,t-1,c} + \text{control}_{i,t,c} + \varepsilon \dots \dots \dots \text{Equation 3}$$

$$Z\text{-score}_{i,t} = \beta_0 + \beta_1 \text{CSR}_{i,t-1,c} + \beta_2 \text{COVID}_{i,t,c} + \beta_3 \text{CSR} * \text{Cov}_{i,t-1,c} + \text{control}_{i,t,c} + \varepsilon \dots \dots \dots \text{Equation 4}$$

The control variables in this study comprise four variables based on previous research findings that these four variables tend to have a consistent effect on financial soundness. The first variable is the ratio of current liabilities to all debts (current liabilities ratio-CLR). Pecking order refers to managers' preferences for funding sources to cover their financing needs (Guizani, 2020). So, based on pecking order theory, the structure of capital affects the company's financial performance (Nenu & Vintil, 2018). The second control variable is profitability, as measured by profit margin (PM). The PM is measured by the ratio of gross profit divided by net sales. The third control variable is capital structure as measured by the equity-to-assets ratio (ETA). Following Nazir et al. (2021), short- and long-term debt have negative and significant impacts on profitability. The fourth control variable is total assets as measured by the natural logarithm of total assets. The amount of assets is used as a control variable because it is based on the learning-by-doing hypothesis that large companies are experienced in managing companies and increasing investors and subsequently increasing financial soundness (Mollah et al., 2021).

Research data was analyzed using panel data analysis. In this test, the Langrang test and Hausman test will be conducted to determine the recommended analysis method between random effects and fixed effects. The classic assumption test includes multicollinearity, heteroscedasticity, and autocorrelation tests. The multicollinearity test is performed by testing the correlation between the independent variables and the variance inflation factor (VIF). The Wooldridge test is used to detect autocorrelation in the model, and the Wald test is used to detect the existence of heteroscedasticity problems in the model. Equation 1-2 are research equation, following (Magnanelli & Izzo, 2017) that CSR disclosure usually produce effects not immediately but in the long period, this research consider a lag time effect of one year between the CSR disclosure on corporate performance. Based on this argument, we develop equation 3-4.

**RESULTS AND DISCUSSIONS**

**a. Descriptive Analysis**

Table 1 describes that the average CSR score is 0.278, the minimum score is 0.120 and the maximum score

**Table 3.** Regression Analysis Test

	Coef.	Robust Std. Err.	Coef.	Robust Std. Err.	Coef.	Robust Std. Err.	Coef.	Robust Std. Err.
	Model 1		Model 2		Model 3		Model 4	
CSR	-0.847	0.801	-	-	-	-	-	-
Eco_Disc	-	-	-0.058	0.854	-	-	-	-
Env_Disc	-	-	-1.855*	0.928	-	-	-	-
Soc_Disc	-	-	0.683	1.163	-	-	-	-
CSR_Lag1	-	-	-	-	-0.807	0.699	-	-
Eco_Disc_Lag1	-	-	-	-	-	-	-0.266	0.558
Env_Disc_Lag1	-	-	-	-	-	-	-0.811	0.766
Soc_Disc_Lag1	-	-	-	-	-	-	0.408	1.284
CLR	-1.141**	0.507	-1.213**	0.551	-1.195**	0.464	-1.240**	0.532
PM	0.015*	0.007	0.014**	0.007	0.015**	0.007	0.015**	0.007
ETA	0.017*	0.009	0.017*	0.009	0.016*	0.009	0.017*	0.009
SIZE	0.558	0.356	0.629*	0.338	0.574	0.360	0.532	0.330
covid	0.030	0.170	0.115	0.156	-0.048	0.169	-0.047	0.168
_cons	-8.795	7.242	-10.127	6.832	-8.992	7.441	-8.173	6.895
VIF (Mean)	1.15		1.39		1.13		1.33	
Modified Wald test (P-Value)	0.0000		0.0000		0.000		0.0000	
Wooldridge test (P-Value)	0.0001		0.0002		0.000		0.0001	
Breusch and Pagan Lagrangian multiplier test (P-Value)	0.000		0.000		0.000		0.0000	
Hausman (P-Value)	0.0012		0.0122		0.000		0.0000	
Prob > F	0.0008		0.0065		0.0004		0.0001	
R-Sq	0.1398		0.1794		0.1435		0.1498	

We present scores of coefficients and robust standard error. \*\*\*, \*\*, \* denote 1%, 5% and 10% significance levels, respectively

is 0.974. The average research sample reveals a CSRD of 27.8%. Of the three items, the disclosure score is 29.8%. The lowest disclosure score on the economic aspect (Eco\_Disc) is 26.5%.

Table 2 presents the correlation scores between variables. The largest correlation score is 0.29 (SIZE and ROA). The correlation between variables is lower than 0.8 and shows that there is no serious correlation in the model and shows that there is no multicollinearity problem in the model. The VIF test confirms this conclusion because all modes produce a mean VIF of less than 5.

The results of the autocorrelation test using the Wooldridge test on all models yield a probability <0.05 and indicate autocorrelation problems in the model. The Modified Wald test is used to test the heteroscedasticity problem and produces a probability of all models less than 0.05 (Table 3) and indicates that there is a heteroscedasticity problem in all models.

The Breusch and Pagan Lagrangian multiplier test and the Hausman test were used to selecting the analysis model between RE and FE. Test on all models (Table 3) produces a probability of less than 0.05. The results of this test recommend using FE for data analysis.

### b. Regression Analysis Test

Table 3 presents the results of the model test using FE. The results of the model 1 test show that CSRD produces a coefficient of -0.847 and a probability of more than 0.10 and indicates that CSRD has no effect on financial soundness. The results of the CSRD lag 1 test produce a probability of more than 0.10 and show that the current CSRD and the previous year have no effect on financial soundness.

By dividing the aspects of performance, including economic, environmental, and social performance, the results of the model 2 test show that only environmental performance has a probability of less than 0.1 and a coefficient score of -1.855. These results indicate that environmental performance has a negative influence on financial soundness. However, using CSRD performance lag 1, model 4 shows that last year's economic, environmental, and social disclosures have no effect on financial soundness. This finding shows that the disclosure environment only has a negative effect on financial soundness in the current year.

### c. Moderating Effects

Table 4 presents the results of the model test using RE. The results of the model 5 test show that the CSRD

**Table 4.** Regression Analysis Test for the Moderation Effect of Covid-19 pandemic

	Coef.	Robust Std. Err.	Coef.	Robust Std. Err.	Coef.	Robust Std. Err.	Coef.	Robust Std. Err.
	Model 5		Model 6		Model 7		Model 8	
CSRD	-0.191	0.928	-	-	-	-	-	-
CSRD*Cov	-0.653**	0.232	-	-	-	-	-	-
Eco_Disc*Cov	-	-	-0.460	0.492	-	-	-	-
Env_Disc*Cov	-	-	1.027*	0.570	-	-	-	-
Soc_Disc*Cov	-	-	-1.391	0.830	-	-	-	-
CSRD_Lag1	-	-	-	-	-0.216	0.712	-	-
CSRD_Lag1*Cov	-	-	-	-	-0.556**	0.208	-	-
Eco_Disc_Lag1*Cov	-	-	-	-	-	-	-0.707	0.510
Env_Disc_L1*Cov	-	-	-	-	-	-	1.144**	0.477
Soc_Disc_Lag1*Cov	-	-	-	-	-	-	-1.293	1.005
CLR	-1.185**	0.490	-1.209**	0.493	-1.184**	0.465	-1.185**	0.493
PM	0.008	0.009	0.004	0.008	0.011	0.008	0.009	0.008
ETA	0.013	0.009	0.008	0.009	0.012	0.008	0.010	0.009
SIZE	0.426	0.343	0.378	0.317	0.436	0.339	0.434	0.336
covid	-0.188	0.181	-0.170	0.156	-0.157	0.175	-0.184	0.171
_cons	-5.752	6.993	-4.455	6.494	-5.974	6.997	-5.833	6.899
VIF (Mean)		1.21		1.16		1.16		4.77
Modified Wald test		0.000		0.0000		0.000		0.0000
Wooldridge test		0.001		0.0000		0.0000		0.0000
Breusch and Pagan Lagrangian multiplier test		0.000		0.0000		0.000		0.0000
Hausman		0.0017		0.0000		0.0000		0.0166
Prob > F		0.0000		0.0001		0.0001		0.0003
R-Sq		0.1904		0.1888		0.1838		0.2258

We present scores of coefficients and robust standard error. \*\*\*, \*\*, \* denote 1%, 5% and 10% significance levels, respectively

**Table 5.** Regression Analysis Test for Robustness

	Coef.	Robust Std. Err.	Coef.	Robust Std. Err.	Coef.	Robust Std. Err.	Coef.	Robust Std. Err.
	Model 9		Model 10		Model 11		Model 12	
CSRD	-0.571	0.686	-	-	-	-	-	-
Eco_Disc	-	-	1.179	0.875	-	-	-	-
Env_Disc	-	-	-1.834**	0.776	-	-	-	-
Soc_Disc	-	-	0.106	0.747	-	-	-	-
CSRD_Lag1	-	-	-	-	-0.401	0.645	-	-
Eco_Disc_Lag1	-	-	-	-	-	-	-0.817	0.514
Env_Disc_Lag1	-	-	-	-	-	-	-0.575	0.711
Soc_Disc_Lag1	-	-	-	-	-	-	0.944	1.394
CLR	-0.748	0.410	-0.728	0.403	-0.784	0.369	-0.859	0.454
PM	0.009	0.009	0.011	0.007	0.009	0.009	0.010	0.010
ETA	0.022	0.008	0.021	0.008	0.021	0.009	0.023	0.010
SIZE	0.747	0.365	0.828	0.320	0.759	0.379	0.723	0.364
Covid	0.098	0.135	0.154	0.106	0.048	0.106	0.045	0.103
_cons	-14.842	7.623	-16.519	6.711	-15.054	8.028	-14.306	7.761
VIF (Mean)		1.15		1.39		1.10		1.33
Modified Wald test		0.0000		0.0000		0.0000		0.0000
Wooldridge test		0.0000		0.0001		0.0000		0.0001
Breusch and Pagan Lagrangian multiplier test		0.0000		0.0000		0.0000		0.0000
Hausman		0.0000		0.0001		0.0000		0.0000
Prob > F		0.0024		0.0080		0.0022		0.0050
R-Sq		0.1479		0.2049		0.1473		0.1659

We present scores of coefficients and robust standard error. \*\*\*, \*\*, \* denote 1%, 5% and 10% significance levels, respectively

moderating variable during the covid-19 pandemic produced a coefficient of -0.653 and a probability of less than 0.10. These results show that covid-19 pandemic increases the negative effect of CSRD on financial soundness. The results of the CSRD lag 1 test during a pandemic (model 7) produce a coefficient of -0.556 and a probability of less than 0.05. The results of the study indicated that Covid-19 increased the negative effect of the previous year's CSRD on financial soundness.

Models 6 and 8 result from testing the effect of covid-19 pandemic on the relationship between economic, environmental, and social performance in the current and previous years with financial soundness. The results of the model 6 test show that the covid-19 pandemic moderating variable and the disclosure environment have a coefficient score of 1.027 and a probability of less than 0.05. These results indicate that covid-19 pandemic is also able to increase the positive influence of the disclosure environment in the current year on financial soundness. Model 8 shows that the moderating variable for the covid-19 pandemic and disclosure environment has a coefficient score of 1.144 and a probability of less than 0.05. These results indicate that covid-19 pandemic could also increase the positive influence of the disclosure environment in the previous year on financial soundness. Test models 6 and 8 show that Covid-19 strengthens the positive influence of the disclosure environment in the current year and the previous year on financial soundness.

#### d. Discussion

The results of this study (Table 4) provide empirical evidence that CSRD has no effect on a company's economic performance, especially financial soundness. These results are consistent with research findings from Alharbi et al. (2023) which found no effect of CSR on firm value. These results support the argument that in developing countries, consumer choices to use products are not based on company concern for social, environmental, and economic issues. Consumers have alternatives in determining product choices available on the market, including the opportunity to choose green products (Zhang & Dong, 2020; Joshi & Rahman, 2015). However, these products are expensive because of high production costs. This causes consumers in developing countries to find it difficult to choose this product, and the impact of CSRD does not increase the company's economic benefits. This is different from developed countries where consumer product choices are based on companies that have a concern for social, environmental and economic issues (Shen & Studies, 2015; Xue et al., 2023; Alshurafat et al., 2022; Buchanan et al., 2018; Wang & Qian, 2011; Brammer & Millington, 2005).

However, by testing each CSR performance indicator (Model 2), we find that the disclosure environment has a negative effect on the z-score. A low z-score shows that the company has low financial soundness. We report

**Table 6.** Robustness Test for Moderation Effect of Covid-19 pandemic

	Coef.	Robust Std. Err.	Coef.	Robust Std. Err.	Coef.	Robust Std. Err.	Coef.	Robust Std. Err.
	Model 13		Model 14		Model 15		Model 16	
CSRD	-0.013	0.904	-	-	-	-	-	-
CSRD*Cov	-0.555**	0.249	-	-	-	-	-	-
Eco_Disc*Cov	-	-	-0.961*	0.518	-	-	-	-
Env_Disc*Cov	-	-	0.960	0.585	-	-	-	-
Soc_Disc*Cov	-	-	-0.706	0.691	-	-	-	-
CSRD_Lag1	-	-	-	-	0.198	0.659	-	-
CSRD_Lag1*Cov	-	-	-	-	-0.570	0.222	-	-
Eco_Disc_Lag1*Cov	-	-	-	-	-	-	-0.427	0.481
Env_Disc_L1*Cov	-	-	-	-	-	-	0.581	0.416
Soc_Disc_Lag1*Cov	-	-	-	-	-	-	-0.852	0.814
CLR	-0.765	0.390	-0.726	0.364	-0.752	0.362	-0.749	0.378
PM	0.004	0.010	0.001	0.007	0.005	0.009	0.005	0.009
ETA	0.019	0.009	0.015	0.008	0.018	0.008	0.017	0.009
SIZE	0.640	0.394	0.590	0.368	0.623	0.386	0.632	0.401
Covid	-0.089	0.167	-0.059	0.104	-0.066	0.116	-0.078	0.112
_cons	-12.385	8.296	-11.133	7.815	-12.081	8.208	-12.144	8.474
VIF (Mean)		1.22		4.80		1.16		3.89
Modified Wald test		0.0000		0.0000		0.0000		0.0000
Wooldridge test		0.0000		0.0000		0.0001		0.0000
Breusch and Pagan Lagrangian multiplier test		0.0000		0.0000		0.0000		0.0000
Hausman		0.0000		0.0000		0.0000		0.0000
Prob > F		0.0005		0.0023		0.0002		0.0013
R-Sq		0.1944		0.2367		0.2011		0.2299

We present scores of coefficients and robust standard error. \*\*\*, \*\*, \* denote 1%, 5% and 10% significance levels, respectively

that the company's concern for the environment in the current year reduces the company's economic consequences (financial soundness). These results support the findings Smith et al. (2007) and Crisóstomo et al. (2011) that corporate environmental disclosures have a negative effect on financial accounting performance. These results have been reported by Xue et al. (2023) that voluntary and mandatory CSR disclosure has a negative effect on company profitability. This is because companies invest in CSR activities for the long term, so companies will reduce their profits to attract long-term investors (Nguyen et al., 2020).

The covid-19 moderation test (Table 5) on the effect of CSRD on financial soundness shows that covid-19 causes CSRD to have a negative effect on financial soundness (model 7). The Covid-19 pandemic made it difficult for companies to maintain sales and reduced the company's fundamental performance (Alsamhi et al., 2022) and profitability (Makki & Alqahtani, 2023; Alsamhi et al., 2022). The company's financial pressure is increasing along with demands from regulators that companies have concern for social, economic, and environmental issues. Thus, the covid-19 pandemic caused CSRD to reduce financial soundness.

The Covid-19 pandemic moderation test on the relationship between each social, economic, and environmental performance on financial soundness (Model 8) shows that the covid-19 pandemic only has a positive effect on environmental performance on financial soundness. The covid-19 pandemic caused a decline in company performance. However, during the covid-19 pandemic, companies that had environmental concerns led to an increase in reputation and loyalty and subsequently increased financial soundness in the current year and in the following years. These results are consistent with Almustafa et al. (2023) report on the negative impact of the covid-19 pandemic on firm performance and the positive impact of the crisis on firm risk. Jin et al. (2022) report that the covid-19 pandemic had a negative impact on the Chinese company's financial performance, and slack resources offset this adverse effect. The covid-19 pandemic has caused public awareness to protect the environment. This means that people are encouraged to use products from manufacturers that have high environmental performance. Thus, the covid-19 pandemic increases the positive influence of environmental performance on financial soundness.

#### e. Robustness Test

Following Safiullah & Shamsuddin (2019), another alternative to measuring the financial soundness is to divide ROA and CAR divided by the standard deviation of ROA. The test results of models 1 and 2 in Table 5 and Table 6 corroborate the results of the model 4 test. Using other indicators to measure financial soundness. Our re-

sults show that CSRD has no effect on financial soundness. This robustness test strengthens the results of the main research test.

## CONCLUSIONS

This study aims to prove the effect of CSRD on the economic consequence of companies, specifically financial soundness. Moreover, this study provides empirical evidence on how the interaction between CSRD, and covid-19 pandemic affects financial soundness. The results showed that CSRD does not affect the financial soundness. By testing the previous year's CSRD, we also found that CSRD did not affect financial soundness. However, by regressing each CSRD indicator (social, environmental, economics disclosure), we find that environmental disclosure for the current year and the previous year has a negative affects financial soundness. Pressure from the public for companies to have environmental awareness causes companies to have to increase investment spending on environmental activities for the long term, resulting in a decrease in financial performance and financial soundness.

The results of the interaction test between CSR and covid-19 pandemic on financial performance show that covid-19 pandemic causing CSRD has a negative relationship with financial soundness. This finding extends previous studies that the covid-19 pandemic plays a major role in the extent to which CSR negatively affects the financial soundness of firms.

Based on these findings, we recommend regulators reduce incentives for companies to have concern for social, environmental, and economic (CSR) issues without considering the level of consumer awareness of the importance of CSR. Consumers with CSR concerns will find it challenging to consume green products because they make product choices based on price. These impacts decreasing the financial soundness of the firm. Moreover, during the covid-19 pandemic, the company experienced a decline in performance and the pressure on CSR investment added to its burden to maintain its financial performance.

This study only uses the manufacturing sector as a research sample because of the limitations of companies that publish sustainability reports. We suggest using a broader sample across both types of countries; developed, developing, and low-income countries.

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