



Post Pandemic Business Sustainability Performance on Indonesian Stock Exchange Listed Companies

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Abstract

This study aims to examine the effect of the pandemic on the performance of business sustainability implementation related to ESG (Environmental, Social, and Government) in companies listed on ESG-based stock indices on the Indonesia Stock Exchange. ESG-based stock indices are the SRI-KEHATI index, ESG Leaders index, ESG Sector Leader index, ESG Quality 45 index, and IDX LQ45 Low Carbon Leaders Index. ESG score data is obtained from the S&P Global website. There are 31 companies that are listed on the ESG-based index with available ESG score data. The data analysis used in this study is the Wilcoxon Signed-Rank Test and Mann-Whitney Test. The study concludes that the Covid-19 pandemic has positively and significantly affected the company's ESG performance. In the Environmental component, the conclusion is that there is no difference between the performance of the company and its industry. In the Social component, there is a difference between the performance of the company and its industry. In the Governance component, the conclusion is that there is a difference between the performance of the company and its industry. Furthermore, the Social component has a significantly higher average when compared to the assessment of the Social component of the industry. During the pandemic, the company carried out social actions to reduce the impact of the pandemic on the community; the pandemic made the company more sensitive to the condition of the surrounding community. This research provides a view of businesses that are trying to survive during the pandemic by focusing on business sustainability and the community.

Keywords: Business sustainability, Environment, ESG score, Government, Social.

JEL: G32

SDG: SDG8, Target 8.1

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1. Introduction

The Covid-19 pandemic has been going on since the end of 2019 and is now gradually declining. Indonesia's Covid-19 cases were first reported in March 2020. The Indonesian government has taken policies to reduce the impact of the spread of the pandemic, for example, by providing socialization of mask use, limiting public mobility, social distancing, and providing vaccinations to the community. Government policies implemented during the pandemic can contain the spread of Covid-19, but the ongoing pandemic impacts decreasing economic growth. In 2019, Indonesia's economic growth was 5.02 percent, and then economic growth fell to -2.07 percent in 2020. Declining economic growth also occurred globally. World economic growth declined from 2.9 percent in 2019 to -3.1 percent in 2020.

The Covid-19 pandemic has caused volatility and uncertainty in the world economy along with various changes in everyone's life and activities. Changes have also occurred in business activities in various companies (Abodunrin, Oloye, & Adesola, 2020; Savio, D'Andrassi, & Ventimiglia, 2023). Social distancing policies and attention to health problems caused by the Covid-19 pandemic have an impact on business owner activity in Asia which fell by 26 percent (Fairlie, 2020; Maital & Barzani, 2020). The capital market has also experienced fluctuations due to the Covid-19 pandemic (Djajadikerta, Trireksani & Appiagyei, 2022). Company management strives to implement strategies to anticipate declining business activity and company performance. One of the strategies implemented is through activities related to Environmental, Social, and Governance (ESG). The company implemented ESG-related activities during the pandemic to reduce the impact on business activities and a sharp decline in the company's financial performance (Hwang, Kim, & Jung, 2021).

The company's management is expected to take proactive steps to respond to stakeholder needs by choosing an ethical attitude during the pandemic and implementing ESG activities that can support business sustainability to show the company's commitment to all stakeholders. This strategy will effectively gain the trust of stakeholders during the Covid-19 pandemic (Al Amosh & Khatib, 2023). Research from Kalia & Aggarwal (2023) measures the impact of ESG scores on company profitability, namely return on assets (ROA) and return on equity (ROE). ESG scores are divided into three categories: E-score for environment, S-score for social, and G-score for governance. The results of the study concluded that the company's activities related to ESG have a positive and significant impact on the company's performance. This research provides a good picture of perceptions from investors regarding the implementation of ESG activities in companies.

The relationship between ESG activities carried out by companies and company resilience in facing the pandemic can be seen in the research results of Yingxu (2020), which proposes the ESG performance hypothesis to function as an indicator to help companies reduce negative risks during the pandemic crisis. The study's conclusion shows that stocks with good ESG performance can withstand market turmoil due to the Covid-19 pandemic. Companies that have good ESG risk management can recover faster after a crisis. Companies that have high ESG performance have better resilience during the global pandemic.

The impact of implementing business sustainability on companies listed on the stock exchange has become a topic of interest to researchers. The Indonesia Stock Exchange has implemented sustainable finance initiatives to create a globally competitive and inclusive Indonesian capital market to realize a stable, healthy, and sustainable growth economy. Research on business sustainability in companies in Indonesia, for example, the impact of ESG implementation on corporate financial performance is moderated by competitive advantage (Lubis & Rokhim, 2021), the impact of ESG implementation on company value in Indonesia and Southeast Asian countries (Palupi, 2023). The research on ESG ratings is based on environmental, social-employee, social-

social, and governance aspects of the performance of LQ45 index constituent companies (Mitra & Anas, 2021).

The importance of ESG implementation in improving company performance has encouraged researchers to research applying ESG activities during the pandemic and post-pandemic in companies listed on the Indonesia Stock Exchange. This research is expected to contribute to the development of business sustainability in companies listed on the stock exchange and those not listed on the stock exchange.

2. Literature Review

The Sustainable Development Goals or SDGs Agenda launched by the United Nations consists of 17 Goals to continue the Millennium Development Goals (MDGs) program, which ended in 2015. The SDGs goals are No poverty; Zero hunger; Good health and well-being; quality education; gender equality; clean water and sanitation; Affordable and clean energy; Decent work and economic growth; Industry, innovation, and infrastructure; Reduced inequalities; Sustainable cities and communities; Responsible consumption and production; climate action; Life below water; Life on land; Peace, justice, and strong institutions; Partnership for the goals.

Implementing ESG activities is part of the Sustainable Development Goals focusing on environmental, social, and governance. ESG principles were officially proposed in 2004, and countries worldwide actively promote development activities from ESG principles (Li, Wang, Sueyoshi, & Wang, 2021). ESG often provides a stakeholder value maximization perspective concerning investor decisions. ESG activities consist of three pillars: the environmental pillar related to natural world conservation, the social pillar associated with people and relationship consideration, and the governance pillar related to company standard running (Rau & Yu, 2023).

The Indonesia Stock Exchange supports implementing ESG principles and promotes ESG investing activities in companies listed on the stock exchange. Currently, the Indonesia Stock Exchange has several stock indices related to ESG. The stock index is a statistical measure representing the price movement of a group of stocks selected based on specific methodologies and criteria and periodically evaluated (Indonesia Stock Exchange, 2021). Indices related to ESG are the SRI-KEHATI index, ESG Leaders index, ESG Sector Leader index, ESG Quality 45 index, and IDX LQ45 Low Carbon Leaders Index.

The SRI-KEHATI Index measures the stock price performance of companies with good performance in sustainable business activities, are aware of the environment and social issues, and have good corporate governance; companies have Sustainable and Responsible Investment (SRI). The constituents of the SRI-KEHATI Index are 25 companies. The SRI-KEHATI Index was launched in 2009 and is managed in collaboration with Yayasan KEHATI (Indonesian Biodiversity Foundation).

The ESG Leaders Index measures the price movements of shares of companies that have good ESG (Environmental, Social, and Governance) assessments, have sound financial performance and transaction liquidity, and there is no significant controversy — the controversy analysis and ESG Assessment conducted by Sustainalytics. The ESG Leaders Index was launched in 2020 and has a constituency of 30 companies.

The ESG Sector Leader Index, launched at the end of 2021, has 48 stocks from companies with above-average ESG performance assessments in the industry and good transaction liquidity—the industry classification based on the Indonesia Stock Exchange Industrial Classification (IDX-IC). The ESG Sector Leader Index was launched in collaboration with Yayasan KEHATI (Indonesian Biodiversity Foundation).

The ESG Quality 45 Index was launched in late 2021. The ESG Quality 45 Index constituents consists of 45 stocks of companies with an excellent ESG performance assessment; besides that, companies must have good financial quality and liquidity. The ESG Quality 45 Index was launched with Yayasan KEHATI (Indonesian Biodiversity Foundation).

The IDX LQ45 Low Carbon Leaders Index was launched in 2022; this index adjusts weights per sector according to the IDX-IC classification for carbon intensity and excludes companies in the coal industry. The IDX LQ45 Low Carbon Leaders Index aims to reduce carbon emission intensity exposure over portfolios by at least 50% compared to the LQ45 Index as the parent index.

The Indonesia Stock Exchange made an Industrial Classification (IDX-IC) to determine the classification of Listed Companies on the stock exchange. The determination of IDX-IC is based on market exposure, evaluation, and justification conducted by the Indonesia Stock Exchange. IDX Industrial Classification consists of 12 sectors, namely Energy; Basic materials; Industrials; Consumer Non-Cyclicals; Consumer Cyclicals; Healthcare; Financials; Properties & Real Estate; Technology; Infrastructures; Transportation & Logistics; Listed Investment Product.

Research conducted by Folger-Laronde, Pashang, Feor, & El Alfy (2022) has a pandemic background that caused a global health crisis. This research analyzes the differences and relationships between financial profits and the sustainable performance of ETF investment products during the market decline during the Covid-19 pandemic. Research findings show that investment sustainability performance cannot be used as a stand-alone factor to determine financial performance. Apart from that, the research also highlights the challenges of measuring sustainability performance, namely the responsiveness of sustainability performance during the health crisis, and the transparency of the methodology used in ESG rankings. The hypothesis related ESG performance proposed in this study is:

H1: There is an influence of the pandemic on ESG performance in companies listed on ESG-based stock indices.

Research on ESG on companies listed in BRICS countries (Brazil, Russia, India, China, and South Africa) (Garcia, Mendes-Da-Silva, & Orsato, 2017), uses four different ESG performance proxies, namely (1) overall ESG performance, (2) environmental performance, (3) social performance, and (4) corporate governance performance. The research findings on BRICS companies refute the counter-intuitive evidence that companies belonging to sensitive industries have better ESG performance than companies from greener, less sensitive industries. The best environmental performance is mainly owned by companies that are considered sensitive or have the potential to cause damage to society. Companies from sensitive industries tend to disclose their ESG performance to protect their reputation. The hypotheses related to environmental, social, and governance performance proposed in this study are:

H2: There is a difference between the performance of the environmental component in the company and its industry.

H3: There is a difference between the performance of the Social component in the company and its industry.

H4: There is a difference between the performance of the Government component in the company and its industry.

3. Methodology

The data used in the study are companies listed on at least one ESG-based index on the Indonesia Stock Exchange, namely the SRI-KEHATI INDEX (SRIK), ESG Leaders Index (ESGL), ESG Sector Leader (ESGS) index, ESG Quality 45 index (ESGQ), and IDX LQ45 Low Carbon Leaders (ILCL) Index. The number of companies included in one of the ESG-based indices amounts to 70. ESG score data is obtained from the S&P Global (www.spglobal.com) website. Companies listed on the ESG-based index have the availability of ESG score data for 31 companies, as detailed in Figure 1.

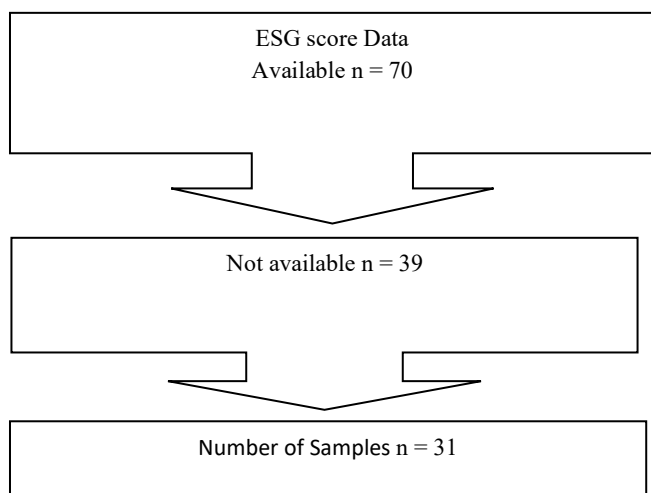


Figure 1. Research sample selection procedure

The data of companies sampled in the study are at least listed on one ESG-based index on the Indonesia Stock Exchange; for example, HMSP is only listed on the ESGL index, and BBKA is listed on all ESG-based indices, namely SRIK, ESGL, ESGS, ESGQ, and ILCL. Companies listed on the ESG-based index are presented in Table 1.

Table 1. Companies listed on ESG-based index

No.	Code	Company	SRIK	ESGL	ESGS	ESGQ	ILCL
1	AKRA	AKR Corporindo Tbk.		√	√	√	√
2	ANTM	Aneka Tambang Tbk.	√		√	√	√
3	ASII	Astra International Tbk.	√		√	√	√
4	BBCA	Bank Central Asia Tbk.	√	√	√	√	√
5	BBNI	Bank Negara Indonesia (Persero) Tbk.	√	√	√	√	√
6	BBRI	Bank Rakyat Indonesia (Persero) Tbk.	√	√	√	√	√
7	BMRI	Bank Mandiri (Persero) Tbk.	√	√	√	√	√
8	BRPT	Barito Pacific Tbk.		√	√		√
9	CPIN	Charoen Pokphand Indonesia Tbk			√	√	
10	EMTK	Elang Mahkota Teknologi Tbk.		√	√		√
11	EXCL	XL Axiata Tbk.		√			√
12	HMSP	H.M. Sampoerna Tbk.		√			
13	ICBP	Indofood CBP Sukses Makmur Tbk.	√		√	√	√
14	INCO	Vale Indonesia Tbk.			√	√	√
15	INDF	Indofood Sukses Makmur Tbk.	√		√	√	√
16	INKP	Indah Kiat Pulp & Paper Tbk.			√	√	
17	INTP	Indocement Tunggul Prakarsa Tbk.	√		√	√	√
18	JPFA	Japfa Comfeed Indonesia Tbk.	√		√	√	√
19	JSMR	Jasa Marga (Persero) Tbk.	√	√	√	√	
20	KLBF	Kalbe Farma Tbk.	√		√	√	√
21	MDKA	Merdeka Copper Gold Tbk.			√		
22	MIKA	Mitra Keluarga Karyasehat Tbk.		√		√	

23	PGAS	Perusahaan Gas Negara Tbk.	√	√	√	√	√
24	SIDO	Industri Jamu dan Farmasi Sido Muncul Tbk.	√	√	√	√	
25	SMGR	Semen Indonesia (Persero) Tbk.	√		√	√	
26	TBIG	Tower Bersama Infrastructure Tbk.		√	√	√	√
27	TLKM	Telkom Indonesia (Persero) Tbk.	√	√	√	√	√
28	TOWR	Sarana Menara Nusantara Tbk.		√	√		√
29	TPIA	Chandra Asri Petrochemical Tbk.					√
30	UNTR	United Tractors Tbk.	√		√	√	√
31	UNVR	Unilever Indonesia Tbk.	√	√	√	√	√

Data processing on ESG score difference tests during the pandemic compared to after the pandemic uses the Wilcoxon Signed-Rank Test for dependent samples, while different tests for ESG scores for each company compared to their industries use the Mann-Whitney Test for independent samples (Lind, Marchal, and Wathen, 2021). The significance level used is 5%. The basis for decision-making is to reject the null hypothesis (H_0) if the p-value < 0.05 . ESG score data for each company and ESG score for its industry are presented in Table 2.

Table 2. Company and Industry ESG Score

No.	Code	ESG		Environmental		Social		Governance	
		2020	2022	Company	Industry	Company	Industry	Company	Industry
1	AKRA	18	32	35	20	27	19	38	29
2	ANTM	26	28	34	25	22	24	27	33
3	ASII	18	34	31	32	36	33	35	37
4	BBCA	48	54	40	18	58	28	56	33
5	BBNI	29	35	21	18	45	28	32	33
6	BBRI	46	63	41	18	75	28	62	33
7	BMRI	22	32	11	18	41	28	35	33
8	CPIN	7	15	10	21	16	22	18	24
9	ICBP	8	21	15	21	27	22	20	24
10	INCO	21	28	24	25	26	24	33	33
11	INDF	9	25	19	21	33	22	21	24
12	INKP	21	25	23	32	27	28	24	33
13	INTP	21	25	13	26	35	29	28	31
14	JPFA	11	21	16	21	29	22	18	24
15	JSMR	23	29	25	26	33	22	27	28
16	KLBF	22	24	15	18	25	16	26	27
17	MIKA	10	29	20	16	35	17	24	24
18	PGAS	29	33	39	34	35	33	23	33
19	SIDO	30	30	37	24	24	22	31	25
20	SMGR	22	34	33	26	37	29	31	31
21	TBIG	13	26	25	33	28	32	24	34
22	TLKM	15	29	25	33	39	32	20	34
23	UNTR	15	20	16	16	20	17	23	25
24	UNVR	26	35	44	31	34	23	32	27
25	BRPT	9	24	19	21	24	24	30	24
26	EMTK	14	27	25	16	24	13	33	23
27	MDKA	9	25	25	25	24	24	26	33
28	TOWR	14	16	14	33	10	32	25	34
29	EXCL	16	20	21	33	21	32	18	34
30	HMSP	15	26	27	37	34	34	18	37
31	TPIA	16	26	21	21	34	24	24	24

4. Results

Based on the results of data processing presented in Table 3 for descriptive statistics, the number of samples was 31 companies, with the mean ESG score value during the pandemic being 19.45. Then, in the post-pandemic, the mean value of the ESG score increased to 28.74. During the pandemic, the ESG score had a minimum value of 7.00 and a maximum value of 48.00; compared to post-pandemic, the ESG score has increased to a minimum value of 15.00 and a maximum of 63.00.

Table 3. ESG Score Descriptive Statistics

	N	Mean	Std. Deviation	Minimum	Maximum
During Pandemic	31	19.45	9.83	7.00	48.00
Post Pandemic	31	28.74	9.55	15.00	63.00

Companies that implement ESG activities almost entirely experience an increase in ESG score performance in the post-pandemic compared to during the pandemic (positive ranks). During the pandemic, companies are increasingly concerned about environmental, social, and government activities. Data analysis for ESG score is presented in Table 4.

Table 4. ESG Score Ranks Analysis

		N	Mean Rank	Sum of Ranks
Post_Pandemic - During_Pandemic	Negative Ranks	0	0.00	0.00
	Positive Ranks	30	15.50	465.00
	Ties	1		
	Total	31		

Based on the results of the data presented in Table 5, the Z value is -4.79 with a p-value (Asymp. Sig. 2-tailed) of 0.00, where the value is below the significance value of 0.10. The decision for hypothesis 1 (H1) is accepted, meaning there is a significant difference between ESG scores during the pandemic and ESG scores post-pandemic. The Covid-19 pandemic has positively and significantly affected ESG performance in companies listed on ESG-based stock indices.

Table 5. Wilcoxon Signed Ranks Test Result

	Post Pandemic - During Pandemic
Z	-4.79
Asymp. Sig. (2-tailed)	0.00

The performance of each company's ESG components compared to its industry is presented in Table 6. In the Environmental component, the company's mean rank value is 31.06, lower than the industry's mean rank value of 31.94. In the Social component, the company's mean rank value is 37.44, higher than the industry's mean rank value of 31.94. In the Governance component, the company's mean rank value is 27.31, lower than the industry's mean rank value of 35.69.

Table 6. Mann-Whitney Test Result

ESG Component	Group	N	Mean Rank	Sum of Ranks
ESG_Environmental	Company	31	31.06	963.00
	Industry	31	31.94	990.00

	Total	62		
ESG_Social	Company	31	37.44	1160.50
	Industry	31	25.56	792.50
	Total	62		
ESG_Governance	Company	31	27.31	846.50
	Industry	31	35.69	1106.50
	Total	62		

Statistical tests for each company's ESG components compared to its industry are presented in Table 7. The Environmental component has a significance value of 0.85, greater than 0.10, so it rejects hypothesis 2 (H2) with the conclusion that there is no difference between the performance of the Environmental component in the company and its industry. The Social component has a significance value of 0.01, smaller than 0.10, so accepted hypothesis 3 (H3) with the conclusion that there is a difference between the performance of the Social component in the company and its industry. The Governance component has a significant value of 0.07, smaller than 0.10, so hypothesis 4 (H4) is accepted with the conclusion that there is a difference between the performance of the Government component in the company and its industry.

Table 7. Mann-Whitney Test Statistics Result

	ESG Environmental	ESG Social	ESG Governance
Mann-Whitney U	467.00	296.50	350.50
Z	-0.19	-2.60	-1.84
Asymp. Sig. (2-tailed)	0.85	0.01	0.07

ESG scores of companies constituting ESG-based indices on the Indonesia Stock Exchange have increased significantly during the pandemic. The assessment of the Environmental component is, on average, lower than the assessment of the Environmental component of the industry, but the difference is not significant. The assessment of the Social component has a significantly higher average than the assessment of the Social component of the industry. The assessment of the Governance component has a significantly lower average than the assessment of the Governance component of the industry.

5. Conclusion

The current Covid-19 pandemic is gradually starting to decline. Government policies implemented during the pandemic can contain the spread of Covid-19 but have an impact on decreasing economic growth. The company's management implements business sustainability, namely environmental, social, and governance (ESG), to anticipate a decrease in the company's business activities. The implementation of ESG-related activities demonstrates the company's commitment to all stakeholders. The Indonesia Stock Exchange supports applying ESG principles to companies listed on the stock exchange. The Indonesia Stock Exchange has several stock indices related to the implementation of ESG.

ESG scores of companies listed on the Indonesia Stock Exchange have increased significantly during the pandemic. In the assessment of the ESG component, the application of the Social component has a significantly higher average when compared to the evaluation of the Social component of the industry. During the pandemic, the company took social actions to reduce the impact of the pandemic on the community by providing direct assistance and through social responsibility. The pandemic has made the company more sensitive to the situation of the surrounding community.

The limitation of the study is that few companies listed on the stock exchange have an ESG score, so the sample of companies used is small. Future research suggests using ESG scores from companies listed on the stock exchange and those not listed on the stock exchange, in addition, research can also focus on the application of ESG in industries that have major environmental and social impacts.

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