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Assessing Banks' Performance in Sustainability Practices and Programs during the COVID-19 Pandemic: The Case of Indonesian Banks

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A B S T R A C T

Purpose: This study aims to examine the sustainable banking performance within the Indonesian banking sector during the COVID-19 pandemic years of 2020 and 2021.

Design/methodology/approach: The study focuses on evaluating the sustainable banking performance of banks listed on the Indonesia Stock Exchange. Secondary data sourced from the banks' official websites, including sustainability and annual reports, were utilized for analysis. Quantitative analysis was conducted through content and statistical analyses. The assessment of sustainable performance is guided by the frameworks provided by the Financial Services Authority and the Global Reporting Initiative.

Findings: There is a discernible difference in sustainable banking performance between 2020 and 2021. This variation indicates a discrepancy in bank performance as measured by the Sustainable Banking Index (SBI) between the transitional period for the implementation of the second OJK roadmap in 2020 and after the implementation of the second OJK roadmap in 2021. The presence of the Financial Services Authority's Sustainable Finance Roadmap Phase II further elucidates the sustainable banking performance target. Additionally, the alignment of sustainable finance principles with post-pandemic economic recovery presents an opportunity to rebuild a resilient economy. The positive impacts observed signify an opportunity for the banking sectors to expedite the adoption of sustainable finance.

Research limitations/implications: Limitations of this research include reliance on secondary data, with the data gathered limited to the years 2020-2021, and the scope being limited to banks listed on the Indonesia Stock Exchange. Nonetheless, the findings suggest that regulatory frameworks promoting sustainability can heighten banks' consciousness toward disclosure and implementation, thereby enhancing their sustainable banking performance. Furthermore, the alignment of sustainability principles with post-pandemic economic recovery presents an opportunity for fostering a resilient economy.

Originality/value: This study may be beneficial in enhancing the understanding of sustainable banking practices during times of crisis, shedding light on the importance of regulatory measures and sustainability principles in shaping banks' responses and performance within the Indonesian context. Additionally, the study develops a framework for assessing sustainable banking performance by elaborating on the regulations of the Financial Services Authority (OJK) and GRI guidelines for the banking sector in Indonesia. However, sustainability practices and programs in banks are highly dependent on regional factors, socioeconomic development levels, consumer preferences, and regulatory environments. Therefore, future research may adjust the frameworks according to the conditions of each country.

Keywords: Bank, Banking performance, Sustainability, COVID-19, Indonesia

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I. Introduction

Since the end of 2019, humans have faced problems caused by the outbreak of coronavirus (COVID-19). It has created both serious health and economic problems. Moreover, as a virus containment action, lockdowns have pushed the global economy into a worst economic crisis. COVID-19 is also a signal of an environmental crisis. According to recent research, the spread of the virus and its consequences on human health was caused by climate change. It has been proven that the increase in temperature and low air quality is significantly associated with the COVID-19 pandemic (Bashir et al. 2020). Furthermore, COVID-19 mutations are growing faster due to climate change (Volkov 2022).

This indicates that two approaches are needed to solve the problems simultaneously. First, in the short term, it is necessary to recover the economy as soon as possible. In this case, governments responded to the impact of COVID-19 in the form of stimulus payments, relief packages, and several economic policies, including monetary and fiscal policies (Farihah and Hartadinata 2021; Luo et al. 2022). Second, for a long-term post-COVID-19 recovery, the economy must be managed more sustainably. Ethical and green finance can be a solution to achieve this goal because it considers Environmental, Social, and Government (ESG) issues in optimizing long-term financial return (Schoenmaker 2017). It can help to overcome economic and environmental crises because of its capacity to gather resources to promote investment and drive economic growth with a low social-environmental impact. It can affect investment decision-making process (Park and Noh, 2018)

Having a significant role in the financial system, the banking sector is also not spared from the disruption caused by COVID-19. Under this situation, banks are very vulnerable because many debtors have difficulty paying their debts (Stephen G. Cecchetti and Schoenholtz 2020). It leads to various risks, such as financial, insolvency, bankruptcy, and liquidity risks. Therefore, several strategies that have been carried out to be resilient and survive this pandemic include credit restructuring, digitalizing services, providing assistance to small and medium enterprises, and making innovations in both products and services (Khaira Sihotang and Hasanah 2021).

In the context of long-term post-COVID-19 recovery, banks play a significant role in rebuilding a resilient economy through sustainability practices and programs. Banks play a catalytic role in influencing the ethical and green finance of other industries, especially their debtors. Banks, along with the government and relevant stakeholders, need to work together to realize a better sustainable performance to achieve the triple bottom line business concept. The triple bottom line is a business concept that requires companies to measure social and environmental impact as well as financial performance (Elkington 2013).

In the past two decades, sustainability codes of conduct have been developed and adopted widely by organizations, making them disclose their sustainability practices and programs. The codes are the United Nations Global Compact (UNGC) principle, Global Reporting Initiatives (GRI), United Nations Environment Program Finance Initiative (UNEP FI), Equator Principle, and ISO 14000-26000 (Islam et al. 2016; Kumar and Prakash 2019). Several countries have also issued sustainability guidelines that are specially intended for organizations in each country; examples of these countries are Argentina, China, Indonesia, South Africa, Nigeria, and Morocco (Maimbo and Zadek 2017).

As a developing country, Indonesia has demonstrated its commitment to promoting sustainability. Financial Service Authority (OJK), which is an integral part of the country, launched the roadmap for sustainable finance, which is divided into two stages－Phase I (2015-2019) and Phase II (2020-2024) (Financial Services Authority (OJK) 2014). OJK also issued regulation POJK No.51/POJK.03/2017, which is about Sustainable Finance for Financial Services Institutions, Issuers, and Public Companies. It obliges financial institutions to apply sustainable economic principles to achieve a sustainable economy.

Banks of Indonesia responded enthusiastically to OJK's policies (Meutia et al. 2020). The Sustainable Banking Network (SBN) has positioned Indonesia as the first mover along with China in implementing sustainability (International Finance Corporation (IFC) 2019). It has been proven that the existence of regulation can increase banks' awareness to implement sustainability (Weber and Oni 2015). However, the sustainable banking performance of Indonesian banks is still low (Gunawan et al. 2022). This is due to the lack of understanding, knowledge, and competence of human resources about sustainability (Halimatussadiah et al. 2018). These gaps must be resolved immediately so that banks can run the Sustainable Finance Roadmap Phase II with better performance.

The Sustainable Finance Roadmap Phase II was implemented in 2020. However, the implementation was postponed to 2021-2025 due to the COVID-19 pandemic (Financial Services Authority (OJK) 2021). The postponement can be an opportunity for the banking sector to prepare better strategies for accelerating sustainability. For banks, sustainability practices and programs can increase their efficiencies and lower risk through cost reduction (Kosasih et al. 2021). In addition, companies have started to modify their operational activities to be more eco-friendly (Chong et al. 2022). Therefore, banks can diversify their products and services to increase profitability.

Studies that highlight sustainable banking performance in Indonesia are generally based on compliance in disclosing sustainability practices and programs based on regulations of the Financial Services Authority (OJK) (Meutia et al. 2020; Wanta and Herawati 2021) and GRI (Andania and Yadnya 2020; Gunawan et al. 2022). Therefore, this study aims to assess sustainable banking performance based on Financial Services Authority (OJK) regulations and GRI for the banking sector in Indonesia. It requires an assessment policy to standardize the sustainability performance in the banking sector so that banks can compete to get the best predicate in sustainable banking performance (Setyowati 2020). Here, a comprehensive performance appraisal framework is needed to obtain accurate results.

This study attempts to provide new insight into sustainable banking performance in Indonesia during the COVID-19 pandemic. Banks face various risks due to the downturn in the economy caused by COVID-19, which may seriously hinder sustainability practices and programs. Next, this study focuses on assessing the sustainable banking performance of banks listed on the Indonesia Stock Exchange (IDX) during the pandemic (2020-2021). It aims to investigate the extent of sustainable banking adoption in Indonesian banking sectors during the early years of the COVID-19 pandemic. Furthermore, it tests whether there was a difference in sustainable banking performance in 2020 and 2021. This is very important because the presence of the COVID-19 pandemic made 2020 a gap year for the implementation of the Sustainable Finance Roadmap Phase II.

The rest of this article is organized as follows. Section 2 presents an overview of Indonesian banks during the COVID-19 pandemic, sustainability practices and programs in the Indonesian banking sector, and a framework to assess banks' sustainability practices and programs. Section 3 presents the data and methodology. Section 4 presents the results and discussion. The final section discusses the conclusion, research implications, and the limitations of the study.

II. Literature Review

A. Overview of Indonesian Banks in the Early Years of the COVID-19 Pandemic

In the Law of the Republic of Indonesia Number 10 of 1998 regarding the banking sector, a bank is defined as a business entity that collects funds from the public in the form of savings and distributes them to the public in the form of credit and/or other forms to improve the standard of living of people. Affordable credit can encourage the necessary innovation and expansion in economic and financial inclusion to the poor (Musembi & Chun, 2020).

A bank collects public funds and then distributes the funds to the public to enhance people's standard of living. By channeling funds to people who are in need through the provision of credit, especially for the business world, banks indirectly have a positive influence on the community. These intermediation activities ensure sustainable economic development (Zachosova, Babina, and Zanora 2018).

The never-ending pandemic has become a threat to the banking sector. The banking sector is the 'heart of a smooth blood flow' of economic activities. Banks play a significant role as an intermediary institution for the flow of funds from the public in the form of saving and distributing them to the public in the form of credit. Therefore, it is important to maintain public trust to increase the intermediation efficiency of banks. Public trust in banks is also needed because banks do not have enough cash to pay their obligations to all their customers at once.

Efforts and strategies are needed so that banks can be resilient in facing this pandemic. On the one hand, the government has issued several policies to stimulate the national economy, which has especially helped the banking sector to survive during the pandemic (Farihah and Hartadinata 2021). On the other hand, banks have also formulated strategies to deal with the pandemic. The COVID-19 pandemic has changed many things in the banking system. For example, banks face new behaviors of employees and customers; hence, they must adapt to the new challenge. Therefore, banks need to rebuild reliable brands because, in these times, customers are surrounded by fear and instability. Furthermore, banks need to be more digital and more involved in understanding customer needs.

B. Sustainability Practices and Programs in Indonesian Banks

The concept of sustainability in banks continues to evolve. It started with 'social banking,' which includes philanthropy and community development programs. Then, it developed into 'ethical banking,' which integrates business practices and ethical practices in bank operations, and 'green banking,' which promotes environmentally friendly practices in banking. The last is 'sustainable banking,' which integrates aspects of ESG in banking activities to achieve sustainable goals. Thus, the concept of sustainable banking is an integration of social, ethical, and green banking (Weber and Feltmate 2018).

In 2014, through the Financial Services Authority (OJK), Indonesia launched the Sustainable Finance Roadmap Phase I (2015-2019). Eight banks are willing to be the first movers in the implementation of this roadmap. The roadmap focuses on the basic framework of regulation and reporting systems; increasing understanding, knowledge, and competence of human resources in the financial services industry; providing incentives; and coordinating with relevant agencies. However, there are still gaps in the roadmap, such as the lack of industry understanding of the importance of sustainability and the absence of standardization of the program at the national level.

Some of these gaps must be resolved immediately so that the banking sector can maximize its opportunities to align with the increasing market demand for sustainable products and services. Utilization of these opportunities must be balanced with risk management, especially risks related to climate change. Climate change risks can be related with the value of companies (Park and Noh, 2017). The biggest challenge in implementing sustainability is how to change the mindset of businessmen and the community in optimizing long-term profits by integrating ESG issues into business activities (Haryanto and Budiman, 2016).

On July 18, 2017, the Financial Services Authority (OJK) issued regulation No.51/POJK.03/2017 regarding the provisions to implement sustainability for the financial industry. It also aims to strengthen the Sustainable Finance Roadmap Phase I launched by OJK in 2014. It is hoped that the existence of these regulations can bind commitments for banks to implement sustainability in business activities.

To implement sustainable finance, banks are required to prepare a Sustainable Finance Action Plan

(RAKB). The RAKB must be communicated to shareholders and stakeholders at all levels of an organization. Banks are required to compile a separate sustainability report from their annual report or as an integral part of their annual report. The sustainability report must be published no later than April 30 of the following year.

Next, the Financial Services Authority (OJK) issued the Sustainable Finance Roadmap Phase II (2021-2025), which focuses on accelerating the application of ESG principles in Indonesia, innovation of financial products and services, as well as a national campaign for sustainability. Furthermore, banks are expected to report on the progress of sustainability practices and programs regularly to the public. They are required to focus on creating a comprehensive sustainable ecosystem by involving all relevant parties and encouraging the development of cooperation with other parties. The Phase II roadmap is expected to be a reference for banks to develop sustainability practices and programs. Furthermore, the existence of sustainability regulations can increase banks' awareness to disclose and implement them.

C. Framework to Assess Banks' Sustainability Practices and Programs

Previous studies have developed frameworks to assess sustainable banking performance comprehensively. Islam et al. (2016) developed a framework to assess sustainable banking performance and applied it to 24 international banks spread across four countries－Australia, Japan, China, and India. Kumar and Prakash (2019) also developed a framework to evaluate sustainable banking performance in India. However, sustainability practices and programs in banks are highly dependent on the region, level of socio-economic development, consumer preference, and regulatory environment (Maimbo and Zadek 2017). Therefore, this study develops a framework to assess sustainable banking performance by elaborating on the regulation of the Financial Services Authority (OJK) and GRI guidelines for the banking sector in Indonesia. This framework was carried out by scoring 40 indicators in 5 groups of sustainability practices and programs, as presented in Table 1.

Table 1 describes sustainability practices and programs in Indonesian banks. The first group describes the availability of products and services that focus on environmental and social issues. The second group describes banks' concern for environmental aspects through initiatives they take to adopt environmental management. The third group reflects how banks carry out social responsibility to realize a sustainable society. The fourth group reflects how banks maintain social and ethical standards through company policies, such as anti-corruption policies,

Table 1. Sustainability banking performance framework

No	Sustainable practices and programs
	Group 1: Sustainable products and services
1	Sustainable financing
2	Climate fund
3	Environmental loan
4	Microfinance
5	Responsible investment
6	Green mortgage
7	Sustainable advocacy services
8	Financial inclusion product
9	Environmentally saving products
10	Green bond

Table 1. Continued

No	Sustainable practices and programs
	Group 2: Management commitment to environmental aspects
11	ISO 14001
12	Sector-specific exclusion
13	Environmental risk management in lending policy
14	Quantitative information about environment care initiatives
15	Adoption of environmentally friendly technologies
	Group 3: Management commitment to social aspects
16	Community involvement program
17	Charity and sponsoring
18	Financial literacy and credit counseling
19	Training and skill development program
20	Community consultations
21	Targets for community investment
22	ISO 26000 certification
23	Health care and sanitation program
24	Access points for financial services in low-populated or remote areas of the country
25	Improve access to financial services for disadvantaged people
	Group 4: Internal socio-ethical policies
26	Policy and procedure concerning Anti-corruption
27	Policy and procedure concerning human rights
28	Policy for business ethics/ values
29	Labor practices
30	Gender equity and diversity
	Group 5: Sustainability code of conduct, reporting, and ESG indexing
31	Sustainability report disclosure
32	Business responsibility report disclosure
33	Environment policy
34	GRI standard
35	Sustainable finance award
36	Adherence to UN Global Compact principles
37	Member association nationally/internationally (IKBI/WWF/UNEP FI)
38	Adherence to NVG disclosure (country-specific guidelines)
39	Sustainable Responsibility Index (SRI) KEHATI
40	Dow Jones Sustainability Index

Source: (Financial Services Authority (OJK) 2017) and (GRI 2014)

human rights, and business ethics. It describes the internal readiness of banks by issuing several policies on activities related to internal socio-ethical conduct. Furthermore, the policy is used as a guideline so that the implementation of sustainable finance does not go out of the established boundary. The last group reflects the extent to which a bank is committed to a globally sustainable code of conduct and engages with all stakeholders to disclose sustainability practices and programs. The last group can also serve

as a reference to assess banks' participation in promoting sustainability and their achievement in sustainability performance.

III. Methodology

The Financial Services Authority No. 51/POJK.03/2017 required commercial banks listed on IDX to implement sustainability by January 1, 2019, which is why this study focuses on them.

The author is also interested in delving deeper on the effects of the COVID-19 pandemic on the stock exchange banking industry, where banks are already subject to reduced and better governance oversight from the Financial Services Authority. Background information for this study comes from Farihah and Hartadinata (2021) who state that Indonesia is a developing nation and that the government has stimulated the economy, particularly the banking sector, through a number of policy packages.

The population of 45 banks was the study's sample. The sample for this investigation was 45 banks made up the study's population. Using purposive sampling, the study's sample was chosen according to the following standards: Banks with no corporate action in 2020 and 2021, as well as (1) banks listed on IDX in 2020 and 2021. There are 42 banks' worth of samples based on these standards.

Secondary data from the banks' official websites is used in this analysis. The information includes annual reports for 2020 and 2021 as well as sustainability. Additionally, a quantitative method is used to assess the data in two stages: content analysis and statistical analysis.

A. Content Analysis

The first stage of the analysis is content analysis. Content analysis is used to measure the value of the Sustainable Banking Index (SBI) variable, which is used to assess the extent of sustainability adoption. Content analysis is carried out by quantifying the amount of information disclosed on the indicator of the framework (Table 1). The keywords used in this analysis are derived from the 40 indicators outlined in the framework. Here, a deep understanding is needed to define each indicator to obtain valid analysis results. Content analysis is carried out as follows:

(1) Determining the weight percentage for each sustainability practice and program

For the continuous performance assessment to be valid and measurable, the weight for each group is needed. In this study, the weight is adjusted to prioritize sustainability goals that have been set by the Financial Services Authority (OJK). The first group, that is, sustainable products and services, is an important variable, so it is given a weight of 40%. This is because the availability of sustainable products and services makes the biggest contribution to the realization of sustainability in banks. The second and third groups are given a weight of 20% each, while the fourth and fifth groups are given a weight of 10% each.

(2) Finding the indicator by reading the sustainability report and annual report carefully

(3) Giving a score for each group

To assess the banks' performance in sustainability, scores are allocated to each indicator in all groups. A maximum score of 20 is awarded to each group. Banks that adopt all sustainability practices and programs on all 40 indicators of the proposed framework can obtain a maximum score of 100. In Groups 1, 3, and 5, there are 10 indicators for each group; hence, the score of each indicator in these groups is 2. In Groups 2 and 4, there are 5 indicators for each group, so a score of 4 can be assigned to each indicator.

(4) Calculating the weighted score

The weighted score is obtained by multiplying the weight percentage (Step 1) and the score in Step 3.

(5) The total score for each bank

The total score is obtained from the sum of the weighted score in Step 4. This total score is called

Table 2. Adoption level of sustainability practice and programs

Stage	Score	Adoption Level
1	0-5	Insignificant adoption (indicates the reluctance of banks to adopt sustainable finance voluntarily)
2	6-10	Early adoption (indicates that the bank is starting to adopt internal environmental management and social responsibility)
3	11-15	Satisfactory adoption (indicates that the bank is actively adopting management practices on environmental and social aspects)
4	16-20	Substantial adoption (indicates that the bank understands and incorporates various aspects of sustainability into its business, and they play an important role in promoting sustainable development)

Sources: (Kumar & Prakash 2019)

SBI. The maximum score of SBI is 20. The total score is then divided into four categories. The score presents the level of banks' performance in sustainability practices and programs (Table 2). This approach can serve as a guideline for the extent to which a bank's adoption level ranges from insignificant to substantial adoption.

B. Statistical Analysis

A statistical analysis of the difference test constitutes the second analysis step. Using the SBI variable, a statistical test is conducted to determine whether there was a difference in the sustainable banking performance of Indonesian banks in 2020 and 2021. In this case, 2020 serves as a transition year before the Sustainable Finance Roadmap Phase II is first implemented in 2021. However, there are still issues with the strategy, most notably the lack of uniform national level programs and the industry's inadequate understanding of the importance of sustainability. The Phase II roadmap intends to assist banks in developing sustainability activities by acting as a guide. Regulations pertaining to sustainability can also strengthen banks' adherence to them in terms of disclosure and implementation. This analysis is carried out through a paired sample t-test with a significance of 5%. The hypotheses of this study are as follows:

H0: There is no difference in the sustainable banking performance of Indonesian banks in 2020 and 2021

H1: There is a difference in the sustainable banking performance of Indonesian banks in 2020 and 2021.

IV. Results and Discussions

A. Analysis of Sustainable Banking Performance in Indonesian Banks in 2020-2021

This section presents the description of sustainable banking performance in Indonesian banks in 2020 and 2021. The following explains the results based on the assessment framework (Table 1).

1. Sustainable products and services

Figure 1 compares the sustainable products and services development of Indonesian banks in 2020 and 2021. The figure depicts that all banks provided sustainable banking products and services in the form of financial inclusion products, sustainable advocacy services, microfinance, and sustainable financing. Only 5% of banks provided environmental-saving products in 2020 and 2021. In this study, the form of the environmental saving products is waste saving that can be converted into money. The number of banks providing green bonds, green mortgages, environmental loans, and climate funds increased in 2021, although the number is still very small (below 50%). This is because the implementation of sustainability in Indonesia in 2015 is still relatively

new, so the market share related to these products is still small. In addition, banks from the internal side need to adapt to developing sustainable products and services.

2. Management commitment to environmental aspects

Figure 2 compares the environmental practices and program reports of Indonesian banks in 2020 and 2021. As depicted in the figure, all banks disclosed information about the adoption of environmentally friendly technology in 2020 and 2021. The number of banks that disclosed quantitative information about environment care initiatives, environmental risk management in lending policy, and sector-specific exclusion increased in 2021. No bank in Indonesia has ISO 14001 certification. The banks perceive that their activities do not have a direct impact on the

environment. However, the banks have made environmental certification a part of the requirement in credit policy, especially for debtors whose activities have a direct impact on the environment, such as debtors engaged in oil palm, agriculture, and mining. This is different from that in other countries such as India (Kumar and Prakash 2019), Australia, Japan, and China (Islam et al. 2016), which have made ISO 14001 certification a part of environmental management.

3. Management commitment to social aspects

Figure 3 compares the social practices and programs of Indonesian banks in 2020 and 2021. According to the figure, all banks carry out healthcare and sanitation program activities, training and skill development programs, financial literacy, and credit counseling, as well as charity and sponsoring. They have improved access to financial services for disadvantaged people and access points for financial services in low-populated or remote areas of the country. For the value to be relatively constant, these activities require substantial funding for implementation. There is no single bank in Indonesia that has ISO 26000, which is the global standard for
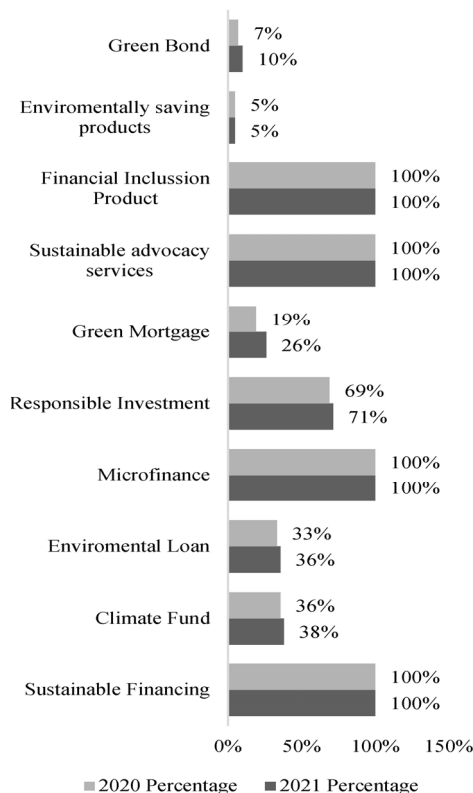

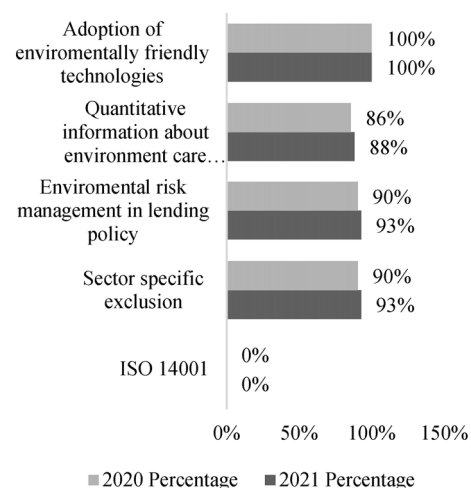**Figure 1.** Sustainable products and services

Figure 2. Management commitment to environmental aspect

implementing corporate social responsibility. ISO 26000 certification is an important part of developing sustainable finance competencies. However, as the implementation of sustainable finance in Indonesia is still relatively new, it will take time for banks to adopt it. Until 2021, only BCA Bank had participated in ISO 26000 training but has not yet participated in certification. Furthermore, the ease of access to remote areas and the ease of access to services for disadvantaged people should be improved.
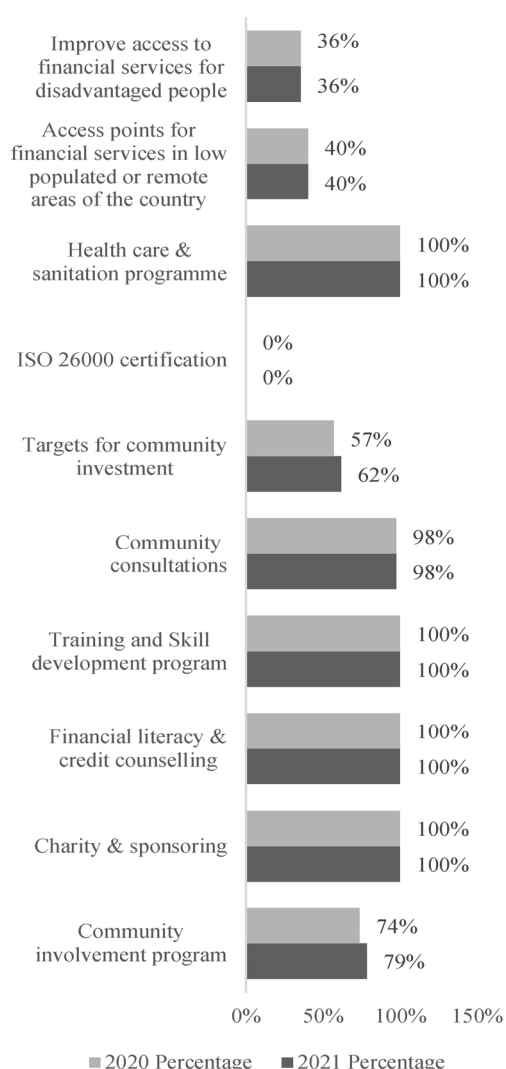
4. Internal socio-ethical policies

Figure 4 compares the internal socio-ethical policies reported by Indonesian banks in 2020 and 2021. According to the figure, all banks have disclosed information about gender equity and diversity, labor practices, policies for business ethics/values, policies, and procedures concerning human rights, as well as policies and procedures concerning anti-corruption. Thus, Indonesian banks have an internal readiness to implement sustainability practices and programs.

5. Sustainability code of conduct, reporting, and ESG indexing

Figure 5 compares aspects of the sustainability code of conduct, reporting, and ESG indexing of the banking sector in Indonesia in 2020 and 2021. As depicted in the figure, the compliance of banks to the sustainability code of conduct increased in 2021. All banks disclosed information on their compliance with the UN Global Compact principle. They also have an environmental policy in their operating activities and published their business responsibility report. As of 2020, there were still 2% of banks that had not complied with the country-specific guidelines and sustainable disclosures;

Figure 3. Management commitment to social aspect

Figure 4. Internal socio-ethical policies

however, as of 2021, all banks had complied. Regarding the postponement of the Sustainable Finance Roadmap Phase II, the banks did not have any obligations related to this in 2020. Then, in 2021, as the first year of the Phase II roadmap, the banks demonstrated their compliance with reporting sustainable financial performance by country-specific guidelines. Furthermore, the number of banks adopting GRI guidelines increased to 62% in 2021.

Figure 5 also depicts that the participation of banks in promoting sustainability is still low. The number of banks involved in member associations nationally or internationally is constant, and the value is

relatively small at 26%. In addition, the figure reveals that the number of banks that have achieved more sustainability performance is still small. Only 26% of the banks have successfully won the sustainable finance awards and only 17% entered SRI KEHATI's national index. However, in 2021, one bank successfully entered the Down Jones sustainable international index. This indicates that Indonesian banks have a high commitment to improving their sustainability performance.

B. Differences in Sustainable Banking Performance of Indonesian Banks in 2020 and 2021

The Sustainable Finance Roadmap Phase II is expected to be a reference for financial services in developing sustainability practices and programs. It can increase banks' awareness to disclose and implement them. Finally, banks can compete to improve their sustainability performance continuously.

Table 3 presents a detailed comparison of the SBI scores of each bank in Indonesia in 2020 and 2021. The score value has a range of 0-20. From this score, the extent of the level of adoption of sustainable finance for each bank can be determined. Based on Table 5, in 2020, the highest SBI score was achieved by BBNI (Bank BNI) with a score of 18.6, placing BNI at the highest level of substantial adoption, while the lowest score was BBYB with a score of 6.6, placing BBYB at the beginning of adoption level. Furthermore, in 2021, the highest score was still achieved by BBNI with a value of 18.6, while the lowest score was achieved by BINA with a score of 9.6, which puts BINA at the beginning of to adoption level. Meanwhile, BBYB demonstrated a continuous performance improvement in 2021 with a score of 11.8, thus placing BBYB at the level of satisfactory adoption.

The results of sustainable banking performance are presented in Table 4. The data are classified into two—data for the first year (2020) and data for the second year of the pandemic (2021). Table 4 reveals
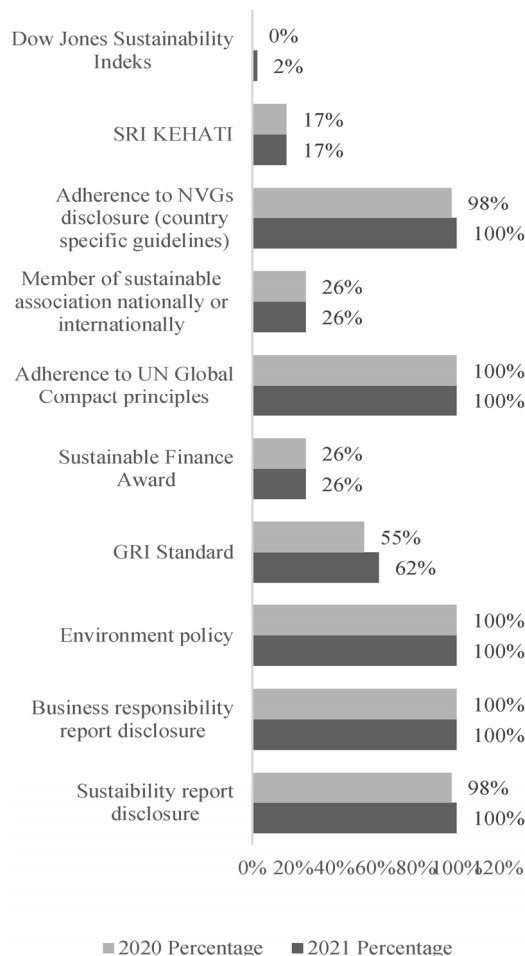

Figure 5. Sustainability code of conduct, reporting, and ESG indexing

Table 3. Sustainable Banking Index (SBI) score and the level of sustainable banking adoption in Indonesian banks in 2020 and 2021

No	Bank Code	2020		2021	
		SBI	Description	SBI	Description
1	AGRO	15.6	Substantial Adoption	15.6	Substantial Adoption
2	AGRS	12.6	Satisfactory Adoption	12.8	Satisfactory Adoption
3	ARTO	11.4	Satisfactory Adoption	13.2	Satisfactory Adoption
4	BABP	11	Satisfactory Adoption	12.2	Satisfactory Adoption
5	BACA	10.2	Beginning to Adopt	10.2	Beginning to Adopt
6	BBCA	17	Substantial Adoption	17.2	Substantial Adoption
7	BBHI	10.2	Beginning to Adopt	10.6	Satisfactory Adoption
8	BBKP	14	Satisfactory Adoption	14	Satisfactory Adoption
9	BBMD	15.2	Satisfactory Adoption	15.2	Satisfactory Adoption
10	BBNI	18.6	Substantial Adoption	18.6	Substantial adoption
11	BBRI	17.8	Substantial Adoption	17.8	Substantial Adoption
12	BBTN	17.6	Substantial Adoption	17.6	Substantial adoption
13	BBYB	6.6	Beginning to Adopt	11.8	Satisfactory Adoption
14	BCIC	12.2	Satisfactory Adoption	13.8	Satisfactory Adoption
15	BDMN	13	Satisfactory Adoption	13.8	Satisfactory Adoption
16	BEKS	12.8	Satisfactory Adoption	12.8	Satisfactory Adoption
17	BGTG	11.8	Satisfactory Adoption	11.8	Satisfactory Adoption
18	BINA	9.6	Beginning to Adopt	9.6	Beginning to Adopt
19	BJBR	15.8	Substantial Adoption	16.6	Substantial Adoption
20	BJTM	14.8	Satisfactory Adoption	14.8	Satisfactory Adoption
21	BKSW	12	Satisfactory Adoption	12	Satisfactory Adoption
22	BMAS	10.6	Satisfactory Adoption	10.6	Satisfactory Adoption
23	BMRI	16	Substantial Adoption	16.8	Substantial Adoption
24	BNBA	12.4	Satisfactory Adoption	12.4	Satisfactory Adoption
25	BNGA	14.2	Satisfactory Adoption	15.8	Substantial Adoption
26	BNII	16	Substantial Adoption	16	Substantial Adoption
27	BNLI	14	Satisfactory Adoption	14.4	Satisfactory Adoption
28	BSIM	13.8	Satisfactory Adoption	13.8	Satisfactory Adoption
29	BSWD	11.4	Satisfactory Adoption	11.4	Satisfactory Adoption
30	BTPN	14.6	Satisfactory Adoption	14.6	Satisfactory Adoption
31	BTPS	15	Satisfactory Adoption	15	Satisfactory Adoption
32	BVIC	12.2	Satisfactory Adoption	12.2	Satisfactory Adoption
33	DNAR	11.4	Satisfactory Adoption	11.4	Satisfactory Adoption
34	INPC	15.8	Substantial Adoption	15.8	Substantial Adoption
35	MAYA	14	Satisfactory Adoption	14	Satisfactory Adoption
36	MCOR	13	Satisfactory Adoption	15.6	Substantial Adoption
37	MEGA	12.4	Satisfactory Adoption	12.4	Satisfactory Adoption
38	NISP	16.8	Substantial Adoption	16.8	Substantial Adoption
39	NOBU	12.2	Satisfactory Adoption	12.2	Satisfactory Adoption

Table 3. Continued

No	Bank Code	2020		2021	
		SBI	Description	SBI	Description
40	PNBN	15.2	Satisfactory Adoption	16	Substantial Adoption
41	PNBS	13	Satisfactory Adoption	13	Satisfactory Adoption
42	SDRA	11	Satisfactory Adoption	11	Satisfactory Adoption

Table 4. Descriptive statistics

		Mean	N	Std. Deviation	Std. Error Mean
Pair 1	SBI20	13.4476	42	2.50611	.38670
	SBI21	13.8857	42	2.29789	.35457

Table 5. Different test results

		t	Df	Sig. (2-tailed)
Pair 1	SBI20-SBI21	-2.930	41	.006

that, on average, the value of SBI in 2020 is 13.4476. While in 2021, the average value of SBI increased to 13.8857. This indicates that, on average, banks were in a satisfactory adoption stage. Banks actively adopted management practices on environmental and social aspects.

Next, the paired sample t-test is performed to understand the difference in sustainable banking performance according to the SBI score. The different test results are presented in Table 5. The test carried out in this study is a two-tailed difference test. Table 5 indicates that the significance value of this study is 0.006 (less than 5%), which means that H0 is rejected. Thus, there are differences in sustainable banking performance as measured by the difference in SBI in the gap year for the implementation of the second OJK roadmap (2020) and after the implementation of the second OJK roadmap (2021).

Financial Services Authority (OJK) has stimulated the implementation of sustainability, starting with the first OJK roadmap for the 2014-2019 period and the second phase roadmap, which is planned to be held in 2020-2024. However, 2020, which should have been the first year of implementing sustainable finance, has been postponed to 2021 due to
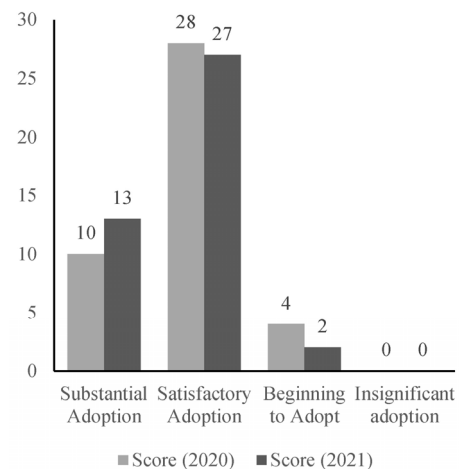
Figure 6. Level of sustainable banking adoption

COVID-19. The results of this study indicate that the OJK's mandatory policy, that is, the Sustainable Finance Roadmap Phase II, has been responded to positively by the banking sector. The existence of a roadmap further clarifies the performance targets that must be taken by the banking sector in implementing sustainability practices and programs. In addition, the existence of the COVID-19 pandemic has not dampened the banks' commitment to implementing it.

Figure 6 depicts the level of sustainable banking adoption by Indonesian banks in 2020 and 2021. As depicted in the figure, the level of adoption increased in 2021. The majority of banks are at a

satisfactory adoption level, which signifies that these banks actively adopt management practices on environmental and social aspects. The number of banks that have substantially adopted these practices increased after the roadmap of the Financial Service Authority for the Second Phase was issued. Further, there was a decrease in the number of banks at the beginning of the adoption level and those at the satisfactory level. The good news is that no bank is at the level of insignificant adoption.

V. Conclusion

There is a difference in the sustainable banking performance in 2020 and 2021, implying that there is a difference in bank performance as measured by SBI between the transition period for the implementation of the second OJK roadmap in 2020 and after the implementation of the second OJK roadmap in 2021. This indicates that the government regulation, that is, the existence of the Financial Services Authority's Sustainable Finance Roadmap Phase II further clarifies the sustainable banking performance target.

This study develops a framework to assess sustainable banking performance by elaborating on the regulation of the Financial Services Authority (OJK) and GRI guidelines for the banking sector in Indonesia. However, sustainability practices and programs in banks are highly dependent on the region, level of socio-economic development, consumer preference, and regulatory environment.

In addition, the principle of sustainable finance is consistent with the post-pandemic economic recovery, so it is an opportunity to rebuild a resilient economy. The positive impacts can be an opportunity for the banking sectors to accelerate the implementation of sustainable finance.

A. Implications

This study investigates the extent of sustainable banking performance in the early years of COVID-19 in Indonesia. Firstly, this study explores the sustainability practices and programs that have been done by all banks. Secondly, this study tests the difference in sustainable banking performance between 2020 and 2021. This study also ranks and categorizes banks providing insight into where each bank stands with regard adoption of sustainable banking performance. This study shows the banks' readiness to implement sustainability practices and programs. Based on the description analysis, it can be explained that banks have the best readiness in terms of internal socio-ethical policies. However, the availability of sustainable products and services such as environmental saving products, green bonds, green mortgages, environmental loans, and climate funds is still lacking. It is because the market share related to these products is still small and banks from the internal side still need to adapt to developing sustainable products and services. The level of sustainable banking adoption has increased has increased from 2020 to 2021. It means that banks have a high commitment to implementing sustainability practices and programs. The findings of this study can help banking officials and regulators assess the readiness of banks to implement sustainability and then formulate strategies to improve the regulatory framework regarding sustainability. Industry leaders may influence the banking sectors to adopt sustainability practices and programs.

According to this study, legislation pertaining to sustainable financing may make banks more conscious of the need to disclose and apply them, giving them a competitive edge in enhancing sustainable banking performance. Banking industry response to OJK's required policy, or the road map for implementing sustainable finance, is favourable. The establishment of a roadmap makes the performance goals that the banking industry needs to meet in order to implement sustainable finance even more clear. The degree of sustainable finance implementation by banks has

received a higher ranking.

This study suggests to scholars that each nation has a unique approach to implementing sustainable banking as mandated by its legal framework. As a result, future studies could modify the frameworks to fit the needs of particular nations.

B. Limitations

This study is based on quantification of sustainability and annual reports so the degree of sustainable banking performance has not been taken into consideration. This study used 40 indicators to measure sustainable banking performance. Future studies can use more indicators of sustainable banking. The findings may change over time. Therefore, the longitudinal study can be attempted in future research to give more insight into sustainable banking performance.

This paper focuses on commercial banks in Indonesia, which is a developing country. Therefore, future research can test the difference in the implementation of sustainable finance in developing and developed countries during a pandemic. Lastly, future research may also focus on conducting longitudinal studies to investigate the long-term impact of Indonesian banks' sustainability practices and programs implemented during the COVID-19 pandemic. This may include tracking key sustainability indicators over time, analyzing trends and patterns in sustainability performance, and evaluating the lasting effects of banks' sustainability initiatives on environmental, social, and financial outcomes beyond the immediate crisis period.

Acknowledgments

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