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Article

Towards sustainable governance: Do banking sectors practice sustainable finance beyond compliance?

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Abstract: This study aims to examine whether banks are compliant with adopting sustainability regulations and guidelines, and how they disclose their sustainable finance activities in sustainability reporting by providing case of Indonesian banking. Previous research provided discussions on the role of governance in supporting many variables as quantitative studies, but failed to demonstrate on going practices of how banking industries implement sustainable finance governance. Hence, this study provides originality by analyzing the extend of disclosures in order to evaluate their commitments in responding to sustainability regulations and guidelines, through disclosures of economic, environment, social, and governance (EESG) information in annual and sustainability reports. The samples were undertaken by examining the contents of sustainability and annual reports published for the financial year 2016 to 30 June 2021, for the Indonesian banks listed in business category 4, business category 3, and international banks, with the total of 202 reports. The results indicate that the implementation of sustainable finance in EESG information increases annually with social performances are the highest information disclosed, while the governance and economic information received the lowest level of disclosure. Results of this study will benefit policymakers, banks, and related companies to understand sustainable finance governance, and reveal the importance the role of banking industries to support Sustainable Development Goals (SDGs). Providing the insights of the ongoing discussions are expected to suggest following actions for further policies to support the implementation of sustainable finance, in particular to establish sustainability governance as a foundation of commitments, beyond complying to regulations.

Keywords: sustainable finance; sustainability governance; regulations; standards; compliance

1. Introduction

In recent years, sustainable investment practices have gained significant momentum and have been integrated into corporate strategies and policies, including banking strategies and policies (Beare et al., 2014; King et al., 2016; Tilt et al., 2021). It is widely recognized that a company's financial performance is closely linked to its sustainable economic development. As a result, companies are encouraged to voluntarily disclose information related to their sustainability to enhance transparency and accountability, and help investors make informed decisions. Despite these efforts, the Global Reporting Initiative (GRI) sustainability reporting framework remains the most widely adopted disclosure and reporting framework for sustainability capabilities, providing companies with a standardized way to report on their EESG performance (Janggu et al., 2014; Munoz et al., 2017; Stacchezzini et al., 2016).

Companies in both developed and developing countries are recognizing the importance of incorporating sustainability governance into their operations. While the transformation process may be slow in some cases, there is a growing understanding that sustainable business practices can improve financial performance, mitigate risks, and enhance brand reputation (Gokten and Gokten, 2018; Lawrence and Thomas, 2018). As a result, many businesses are seeking to align their strategies and policies with sustainability goals, such as the United Nations Sustainable Development Goals (SDGs) (Illiyyina et al., 2021; Lambin and Thorlakson, 2018). This shift towards sustainable business models requires companies to assess their impact on society and the environment, and to adopt a proactive approach towards managing EESG risks (Bennett et al., 2019; Patterson et al., 2017).

Research has consistently shown a positive correlation between environment, social, and governance (ESG) performance and financial performance across a range of industries, including banking in developing countries (Genedy and Sakr, 2017). In addition, studies have highlighted the importance of EESG disclosure in driving stakeholder trust and corporate value. This has led to an increasing number of investors incorporating ESG criteria into their investment decisions. As a result, companies that prioritize sustainability and proactively manage their ESG risks are better positioned to attract investment and enhance their long-term financial performance (Zumente and Lāce, 2021). Despite the positive developments in sustainable business practices, achieving true sustainability remains a complex and ongoing process. While some companies are making strides towards greater ecological and social sustainability, many others still have a long way to go in integrating sustainability into their operations (Lagoarde-Segot, 2019). Further, governments must play a key role in creating an enabling environment for sustainable business practices by developing policies and regulations that incentivize sustainable behavior (Lambin and Thorlakson, 2018).

Sustainable finance has emerged as a crucial aspect of global economic development, recognizing the need for environmentally and socially responsible financial practices (Meutia et al., 2020; Schumacher et al., 2020; Steckel et al., 2017). The link between the financial sector and sustainable development is indirect but has significant implications, given the scale and reach of the financial industry. Socially responsible financial products, including investments, microcredit, and financial products aimed at reducing energy use and greenhouse gases, are increasingly gaining traction in the management literature, with numerous studies documenting the benefits of corporate sustainability and social responsibility (Ahlström and Monciardini, 2022).

While the benefits of sustainable finance are well-documented, the voluntary nature of sustainability reporting in many countries means that financial institutions may not be fully committed to integrating sustainability into their operations (Zetzsche and Anker-Sørensen, 2022). This is especially true in the case of the banking sector, where sustainability reporting research is still limited, particularly in Asian countries such as Indonesia, where issues such as poverty and deforestation are significant concerns.

However, recent government regulations and standards have signaled a shift towards greater sustainability governance practices in the financial sector. In Indonesia, for instance, the government has mandated that banks submit sustainable financial action plans and sustainability reports in support of the United Nations' Sustainable Development Goals (SDGs) (Dosinta and Astarani, 2021; Hasan et al., 2022). This has prompted financial institutions to adopt sustainable finance initiatives and disclose information related to environmental, social, and governance (ESG) factors in their reporting. Nevertheless, the interpretation of what constitutes "green" projects among financial institutions remains inconsistent, underscoring the need for greater clarity and consistency in sustainable finance practices.

Against this backdrop, this study aims to analyze the commitment of banks to adopt sustainability regulations and guidelines, as a part of governance implementation in order to implement sustainable finance through disclosures of ESG factors in bank annual and sustainability reports. By examining the current state of sustainability practices in the Indonesian banking sector, this study seeks to understand how regulatory measures and voluntary practices influence financial institutions' efforts towards achieving sustainable finance beyond merely of compliance. The findings of this study will contribute to the ongoing discussions on sustainable finance, offering insights for policymakers and financial institutions on how best to integrate sustainability into their operations and support the achievement of the SDGs.

2. Literature review

2.1. Sustainable development goals

Achieving the SDGs requires significant investment in sustainable development initiatives, including improving infrastructure, education, and health systems, as well as protecting the environment (Kioupi and Voulvoulis, 2020). However, financing the projects or any companies which support SDGs remains a significant challenge, particularly for developing countries, where there is a significant funding gap. According to the International Monetary Fund (IMF) report 2021, the annual financing gap for developing countries is $2.6 trillion, which requires significant investment in various sectors such as health, education, transportation, electricity, water, and sanitation. This requires a commitment to long-term goals and aligning governance and budget structures with the SDGs financial scheme.

To address the SDG budget gap, formal development assistance and significant increases in development spending are needed in developing countries. In this regard, the involvement of the banks is critical. The banks can support developing countries in financing sustainable development projects by providing technical assistance, expertise, and funding, and by leveraging resources from other development partners. Therefore, the banks can play a crucial role in bridging the SDGs budget gap and supporting sustainable development in developing countries.

2.2. Sustainable finance

Sustainable finance is a critical element for achieving the SDGs as it aims to align economic, social, and environmental interests for sustainable economic growth (Johnson and O'Connor, 2019; Setyowati, 2020). Policy makers must prioritize comprehensive sustainable finance to address the financing gap required for achieving the SDGs (Albrecht et al., 2021). The implementation of sustainable finance should focus on several objectives, in particular is sustainability governance to providing financing for the SDGs, mitigating social and environmental risks, promoting social and environmental protection, and developing sustainable financial products and services, improving the values of corporate social responsibilities/CSR (Nugroho et al., 2019; Pyka and Nocoń, 2021). Corporate social responsibility is important as the fundamental way of thinking to implement sustainable finance, in particular for green financing (Meutia et al., 2020; Niculescu, 2017).

Apart from the CSR, banks should also change their ways of investment, shifting from the business as usual into more responsible business. Under the United Nation, the six Principles for Responsible Investment offer possible actions for any financial institutions to incorporate environmental, social, and governance (ESG) issues into more responsible investment practices.

2.3. Annual sustainability reporting

The concept of sustainable finance is closely related to governance and disclosures. Annual sustainability reporting is one of the key components of sustainable finance, as it provides transparency and accountability on a company's EESG performance and helps stakeholders assess the company's contribution to sustainable development (Amidjaya and Widagdo, 2020; Ozili, 2021; Pasko et al., 2021).

As the first sector to submit sustainability reporting in Indonesia, banking plays an important role in maintaining the stability of economic and financial growth in developing countries (Lai and Stacchezzini, 2021; Landrum and Ohsowski, 2018). In Indonesia, the Financial Services Authority (OJK) requires all banks to submit an annual sustainability report, which must include information on the banks' sustainability performance and practices (OJK, 2017). The sustainability report also provides information for stakeholders about the bank's efforts to balance economic, environmental, social and governance objectives (Higgins and Coffey, 2016). Stakeholders can recognize the values of bank' or companies' sustainable practices through reports (Gunawan, 2015).

In Indonesia, the sustainability reporting regulation is a key component of the OJK's sustainable finance initiative, which aims to promote sustainable finance practices in the banking sector (OJK, 2019). Some of the guidelines and standards used in Indonesia for sustainability reporting are the OJK regulation (POJK 51/POJK.03/2017), followed by the GRI and the Sustainability Accounting Standard Board (SASB). According to Gokten and Gokten (2018) and Lawrence and Thomas (2018), a good corporate sustainability report discloses all the items needed based on the regulations and standards to which the organization is committed.

2.4. Institutional theory

Institutional theory explains how social norms and institutional standards develop (Suddaby, 2010). Institutional theory is concerned with organizations' relationships with their institutional environment and response to social expectations (Meyer and Höllerer, 2014). The organization's absorption of these expectations is reflected in its practices and features (Herold, 2018; van Wijk et al., 2019). According to institutional theorists, the pressure from all external or internal sources changes how organizations operate internally, leading them to adapt their structures, rules, and practices. This adaptation response can be symbolic or substantive.

As an institution, banks have been forced to adopt and implement disclosure procedures by national governments, external and internal stakeholders. However, institutional heterogeneity (logical differences) contributes to the diversity of motivations and disclosure practices (Osman et al., 2018). The determinants of disclosure practices, such as the political and institutional environment of a country, as well as the size, value, and age of banks, have a substantial impact on disclosure practices such as sustainability reports or ESG reports (Umanto et al., 2016).

2.5. Stakeholder theory

Stakeholder theory has been extensively explored in accounting research and practice, in particular to explain sustainability reporting practices. Stakeholder theory was put forward by Freeman et al. (2020) with several key ideas. First, companies consist of a network of relationships between different stakeholders. Thus, stakeholders are groups or individuals who can influence or be affected by an organization. Second, the main task of managers is to create value for stakeholders. This aims to align different stakeholders to create common interests between these stakeholders. Third, stakeholder theory implies that most business decisions have ethical contents and vice versa. Fourth, companies are built around certain goals based on cooperation from stakeholders (Barney and Harrison, 2020; Hörisch et al., 2020).

Sustainability practices are considered to be able to support value creation for stakeholders. Sustainability requires companies to respond not only to their shareholders, but also to other shareholders. In response to this, there has been an increase in sustainability reports (Lam and Yap, 2019), which effectively engage in the dialogues with stakeholder groups of investors and the public (Bepari and Mollik, 2016; Gunawan and Susilo, 2021; Hörisch et al., 2014). Since sustainability reports are voluntary in adopting many disclosure standards, aside from regulation by countries, stakeholders find it difficult to determine which companies are "good" (Pachoud et al., 2020). The all 'good' information is considered not credible communication tools for many readers and it has been criticized for showing little actual substance, limited transparency, or balance information (Esteban-Arrea and Garcia-Torea, 2022). Hossain et al. (2016) stated that although reporting quality has improved over the past ten years, but they are still patchy and reliability is still questioned.

3. Research methodology

3.1. Research sampling

The research samples consisted of public banks in Indonesia categorized as business category 4, business category 3, and foreign banks. The banking sector, including both national and foreign banks, was chosen in this study due to the increasing importance of integrating sustainability in banking for ensuring long-term growth in any country. The analysis in this study focused on sustainability reports and annual reports published during the 2016 financial year up to 30 June 2021, taking all the both reports available, aiming to gather saturated samples as much as population.

The Bank of Indonesia classifies conventional banks into four business categories based on their core capital. These categories consist of business category 1, 2, 3, and 4. Business category 4 banks are considered the healthiest banks with lower business risks, while business category 1 banks are the lowest. Hence, category 4 and 3 indicate that banks have dominant (big) assets and good accountability, as well as credibility. Category 4 is the biggest assets group, followed by category 3, 2, and 1. The business category is a grouping system based on core capital in order to increase national banking resilience and competitiveness. In this case, business category 4 banks have a core capital of more than USD180 million, making them the highest category of public banks in Indonesia.

3.2. Content analysis

In this study, the 202 sustainability reports of 144 sample companies were analyzed using the content analysis method. Content analysis is a research technique that focuses on the actual content of reports or other documents to measure the required presence, absence, or level of information. It has been consistently used in previous research on social and environmental reporting (Elo and Kyngäs, 2008; Hsieh, 2020; Landrum and Ohsowski, 2018). Nevertheless, it is important to acknowledge that subjectivity-related concerns can impact the reliability and validity of content analysis (Spoto et al., 2023). Reliability in content analysis can be categorized into three types: stability, reproducibility, and accuracy (Krippendorff, 2019). Stability measures how consistent the analysis results are when applied to the same data at different time points. Reproducibility assesses the degree of agreement between results obtained using different methods that follow the same principles of analysis, such as employing common instructions for different coders when applied to the same data. Accuracy measures the extent to which the analysis method aligns with a predefined or known standard. These reliability concerns are intimately tied to the issue of validity (Krippendorff, 2019).

To mitigate subjectivity, it is recommended to involve multiple evaluators in the content analysis process (Krippendorff, 2019) and encourage replication of standard coding for multiple texts, although norms should be established for each study (Krippendorff, 2019). To this end, the following guidelines for conducting content analysis were established (Gunawan and Abadi, 2017):

a. Reading sustainability report: Begin by thoroughly reading the sustainability report from the first page to the last to ensure that all relevant sections are considered for analysis.
b. Identify the guideline indicator index: If such an index is available, content analysis can be facilitated by cross-referencing disclosures with the guideline indicator index. In this study, indicators used for analyzing disclosure content were drawn from various sources, including POJK 51, GRI-Financial Standard (FS), SASB guidelines, and SDGs, which are widely recognized regulations and standards.

c. Scoring: After selecting the appropriate items based on disclosed information, assign scores following the provided scoring measurement guidelines. These assessment standards are established using the provided scoring guide shown in **Table 1**:

Table 1. Scoring guide.

Score	Criteria
0	If the bank does not disclose any information that refers to evaluation standards
1	If the bank provides information but only provides a narrative description
2	If the bank provides information in the narrative description and informs the nominal value of a particular currency
3	If the bank provides a narrative description and specific unit measurements (such as weight, volume, size and percentage)
4	If the bank provides a narrative description and presents pictures, charts, graphs or tables

Source: This study.

d. Filtering out all non-relevant information: The process involves excluding irrelevant information to enhance text categorization in sustainability reporting, ensuring efficient analysis without oversimplification (Krippendorff, 2019).

e. Concluding: After scoring, thematic category scores are computed and aggregated to yield an overall disclosure score, offering insights into a company's sustainability reporting performance in Indonesia. The justifications used in assessing the bank disclosure levels are as **Table 2**:

Table 2. The justifications used in assessing the bank disclosure levels.

Disclosure Level	Status
≥75%	Good
≥50% and <75%	Passable
≥25% and <50%	Deficient
<25%	Poor

Source: This study.

Validity is a crucial aspect for assessing the quality of content analysis (Almanasreh et al., 2022). In the context of validity, Krippendorff (2019) stressed that if two different methods measuring the same concept yield highly correlated variables, those variables are considered valid indicators of that concept. We paid close attention to how effectively categories aligned with conclusions and the wider applicability of results to theory (i.e., generalisability) (Gunawan and Abadi, 2017). It is essential for the results of content analysis to maintain objectivity (Almanasreh et al., 2022). This requires adhering to a predetermined research design and ensuring reliability, replicability, validity, generalizability, and deductive reasoning. Content analysis should be based on verifiable factual statements obtained from a sample, eliminating dependency on individual subjectivity or emotional judgment, thus enabling the content analysis process to adeptly tackle both theoretical and practical challenges (Gunawan and Abadi, 2017).

A comprehensive guideline was developed based on the discussed aspects of content analysis, in order to ensure the consistent and systematic execution of the content analysis process. The guideline is as follows (Gunawan and Abadi, 2017):

a. Rater Selection: Eight raters, selected from master students who had expertise in sustainability accounting, were responsible for the collection and coding of sustainability reports. The eighth raters were involved in interpreting sentences into numbers, following Krippendorff (2019) suggestion to reduce subjectivity in scoring.
b. Assignment to Raters: The rater assignment involved selecting three supervisors responsible for overseeing data collection and content analysis progress. The remaining team members were divided into two groups, each comprising five raters. Group one analyzed sustainability reports from sustainability assurance companies (100 report), while group two assessed reports from banking (100 reports). This process was applied to a total of 202 reports, and any quantitative discrepancies identified during the analysis were reviewed and adjusted.
c. Briefing: Chosen assessors, who serve as raters, participate in a series of three briefings. During the initial briefing, they delve into the guidelines and each item on the disclosure list, with the researcher providing explanations for each item along with illustrative sentences. In the second briefing, raters are mentored in executing the content analysis process, evaluating the scope of sustainability reporting. In the third briefing, they are tasked with conducting content analysis procedures to assess reporting principles, all while being supervised by the researcher. These briefings not only familiarize the raters with the procedures but also enhance their confidence by engaging in discussions about scoring techniques.
d. Supervision: Researchers supervise and monitor the process through in-person meetings, along with frequent email and mobile communications during the quantitative data collection and assessment phase. Besides the disclosure list, they document all relevant details, such as company awards and future sustainability reporting commitments. Raters promptly handle any uncertainties that emerge during the information gathering.
e. Verification: The next step involves cross-checking the quantitative data and scores from the content analysis. Rater "X" reevaluates the data assessed by Rater "Y," and vice versa, with each working independently. Any inconsistencies in the quantitative data assessment are identified and rectified by a third Rater (Z rater). If issues persist with the results from the three raters, the final score is determined by the Rater Leader and the researcher.

Additional verification and validation were carried out through semi-structured interviews, which were conducted either in person or via video conferencing, accommodating participants' availability and preferences. The interviews were conducted with a strong emphasis on ensuring anonymity and confidentiality, with each participant being informed about the study's purpose, their involvement, and their right to withdraw at any point. These interviews, involving the sustainability financing team at the Bank, yielded valuable insights into their roles, their understanding of sustainability, their perspectives on the Bank's sustainability reporting practices, and their recommendations for enhancing sustainability reporting in the future. To ensure the robustness of the findings, the data gathered from these interviews were crossreferenced with the data obtained from the content analysis of the Bank's sustainability reports.

4. Results

4.1. Numbers of reports

The banking industry in Indonesia has experienced a significant transformation in terms of sustainability. In business category 4, eight major banks which together control 46% of total banking assets in the country, in November 2015, committed to being pioneers in the 'First Mover on Sustainable Banking' initiative, driven by the OJK and WWF-Indonesia. Within the framework of this category, the numbers of annual reports (AR) and sustainability reports (SR) remained stable between 2016 and 2019. However, there was a slightly increase in 2020 with a total of 7 AR and 6 SR, although there was a slight decrease in 2021.

In the business category 3, SR reports from 2016 to 2018 tended to be low. However, starting from 2019, there has been a significant increase, indicating a shift or perhaps new incentives or regulations that encourage entities in this category to be more active in reporting their sustainability. For foreign banks, their SR reports remained stable with six reports annually from 2019 to 2021. If we look at the general trend, the numbers of SR reports were relatively stable from 2016 to 2019, but there was a significant spike in 2020 with more than 30 reports, indicating new awareness or regulations that encouraged greater sustainability transparency. Given these overall trends, it is clear that the Indonesian banking sector has moved steadily towards more sustainable operations (**Table 3**).

Table 3. Numbers of reports.

Bank	**2016**		**2017**		**2018**		**2019**		**2020**		**2021**	
	AR	SR	AR	SR	AR	SR	AR	SR	AR	SR	AR	SR
Business Category 4	7	5	7	5	7	5	7	7	7	7	7	6
Business Category 3	20	8	20	8	20	9	20	17	21	19	21	18
Foreign Banks	9	0	9	0	9	0	9	6	9	6	9	6
TOTAL	36	13	36	13	36	14	36	30	37	32	37	30

Source: This study.

4.2. Sustainable finance disclosures based on EESG performances of POJK 51

Sustainable Finance Disclosures Based on EESG Performances of POJK 51 was shown in **Figure1**. Banks classified under the Business Category 4 have exhibited a persistent upward trend in the disclosure of social aspects, reaching its pinnacle in 2021 with a disclosure rate of 77%. This finding demonstrates that prominent financial institutions in Indonesia exhibited a high degree of receptiveness towards stakeholder expectations regarding the disclosure of their social consequences. In contrast, it is seen that banks classified under the Business Category 3 category exhibited a parallel pattern, wherein their reports primarily emphasised social issues.

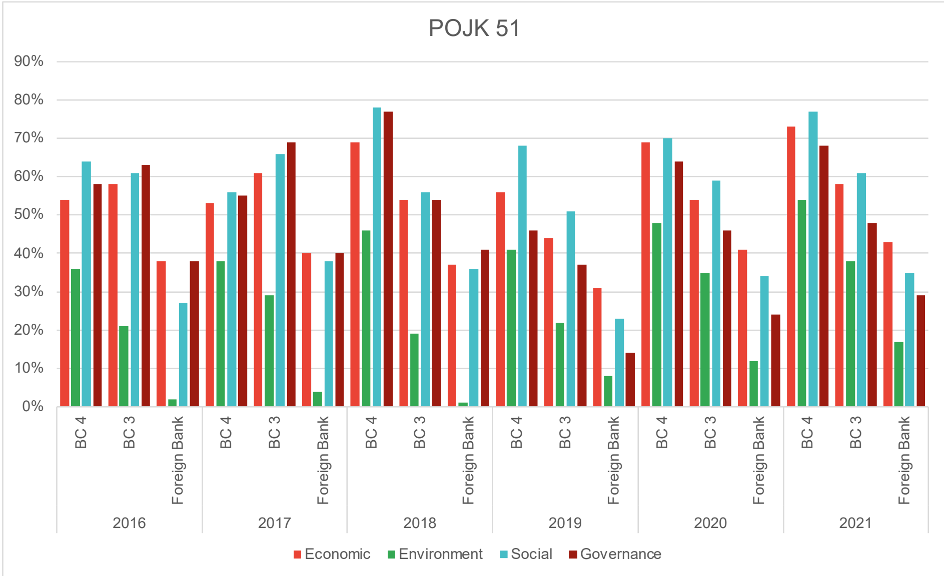

Figure 1. Sustainable finance disclosures based on EESG performances of POJK 51 (results from content analysis).

In the year 2021, there was a notable rise in the amount of disclosure pertaining to social elements, with a recorded percentage of 61%. This increase signifies a heightened recognition of social responsibility within the medium-sized banking sector. Foreign banks, in comparison to domestic banks, prioritised economic considerations to a greater extent, as evidenced by their maximum level of disclosure reaching 43%. This result may indicate their heightened emphasis on the economic ramifications at a global scale.

However, one interesting finding is the gradual increase in disclosure of environmental aspects across all bank categories. Although currently still relatively low, consistent growth shows that banks in Indonesia are starting to recognize the importance of their role in supporting environmental initiatives. In conclusion, while Indonesian banks have made good efforts in disclosing their social and economic impacts, there is still room to improve disclosures about their environmental impacts. With increasing global pressure on environmental issues, it is hoped that banks in Indonesia will continue to increase their commitment to environmental sustainability.

4.3. Sustainable finance disclosures based on EESG performances of GRI-FS

Figure 2 shows the sustainable finance disclosures based on EESG performances of GRI-FS. The introduction of legislation pertaining to the disclosure of ESG issues in Indonesia in 2019 has resulted in notable alterations in the structure and content of sustainability reports produced by banks. Following the year 2019, there was a notable surge in the disclosure of environmental issues, marking a shift from the previously dominant focus on social aspects in reports. In the year 2019, it was observed that the Business Category 4 had a significant prevalence in the disclosure of environmental factors and foreign banks.

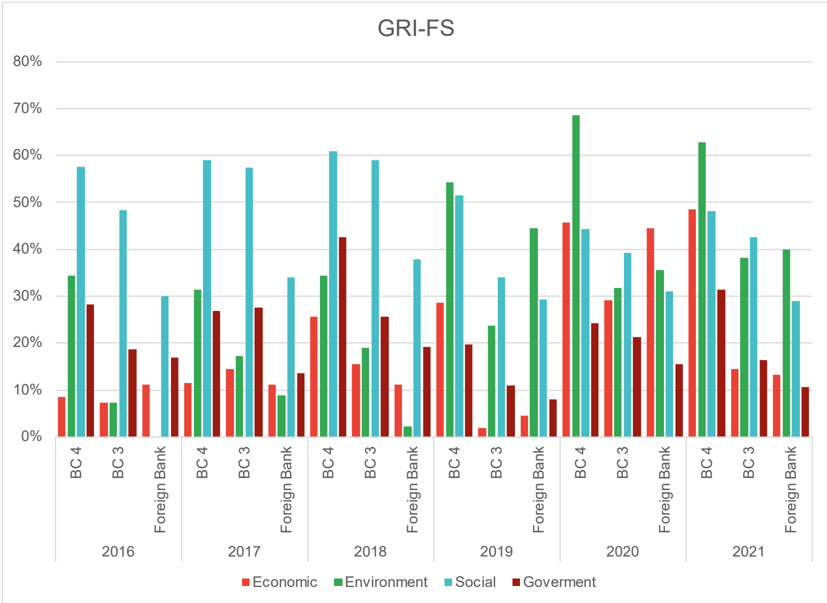

Figure 2. Sustainable finance disclosures based on EESG Performance of GRI FS (results from content analysis).

Conversely, the Business Category 3 category was primarily characterised by a focus on the disclosure of social issues, accounting for 34% of the total disclosures. In the year 2020, the Business Category 4 category experienced a rise in the level of disclosure pertaining to environmental factors, reaching 69%. Similarly, the Business Category 3 category witnessed an increase in the disclosure of social characteristics, reaching 39%. In contrast, foreign banks prioritised economic factors, accounting for 44% of their focus. In the year of 2021, both Business Category 4 and foreign banks once again prioritized environmental factors, while Business Category 3 maintained its emphasis on social features, experiencing a notable growth of 43%. The growing recognition and comprehension among banks about the implementation of ESG factors in their funding was seen in their heightened focus on environmental and social issues. Nevertheless, it is worth noting that economic and governance components exhibited the least amount of transparency across all bank categories, suggesting significant potential for enhancement in future reporting periods.

4.4. Sustainable finance disclosure based on EESG performances of SASB

Figure 3 shows the sustainable finance disclosures based on EESG performance of SASB. Significant alterations in the structure of bank sustainability reports have been observed in Indonesia following the introduction of legislation pertaining to the disclosure of EESG information in 2019. Following the year 2019, there was a notable surge in the disclosure of environmental issues, contrasting the earlier prevalence of social components in reports. In the year 2019, it was observed that the Business Category 4 category exhibited a significant emphasis on the disclosure of environmental factors and foreign banks. On the other hand, the Business Category 3 category was predominantly characterized by the disclosure of social issues, accounting for 34% of the total disclosures.

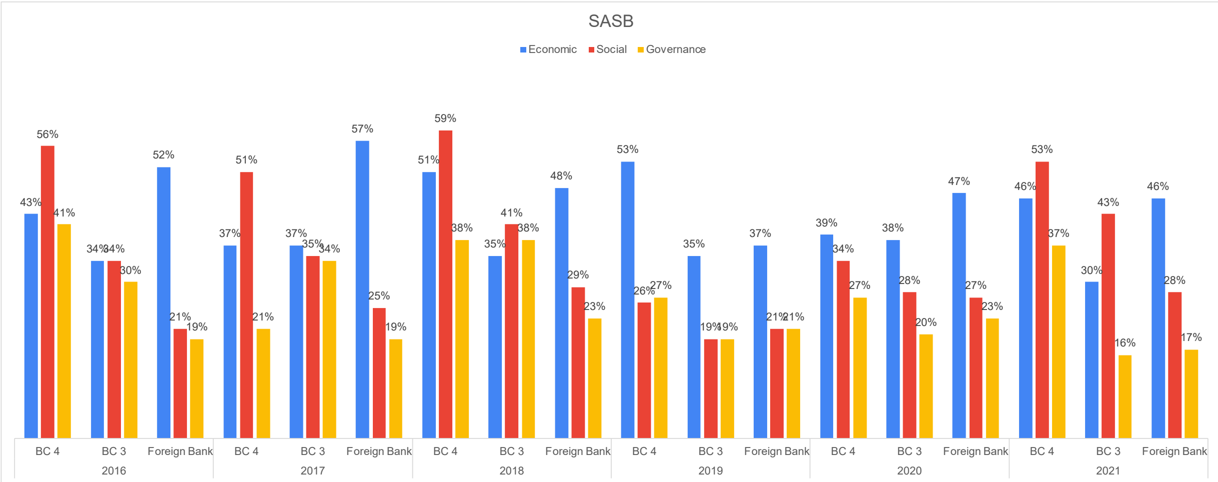

Figure 3. Sustainable finance disclosures based on EESG Performance of SASB (results from content analysis).

In the year 2020, the Business Category 4 category had a rise in the extent of disclosure pertaining to environmental factors, reaching a percentage of 69%. Conversely, the Business Category 3 category experienced an increase in the disclosure of social characteristics, reaching a percentage of 39%. In contrast, international banks placed a greater emphasis on economic factors, accounting for 44% of their focus. In the year of 2021, both Business Category 4 and international banks once again prioritized environmental considerations. Additionally, Business Category 3 will maintain its focus on social factors, experiencing a notable growth of 43%. The growing recognition and comprehension among banks about the implementation of Environmental, Social, and Governance (ESG) factors in their funding is seen in their heightened focus on environmental and social issues. Nevertheless, it is worth noting that economic and governance components exhibit the least amount of disclosure across all bank categories, implying a significant scope for enhancement in the forthcoming reporting period. The SASB serves as a significant reference point for assessing the extent to which sustainable financial disclosure is achieved. Since the year 2019, there have been notable alterations in regulatory measures with the implementation of POJK51/2017. The alterations are expected to have an impact on the manner in which banks communicate their information, with a heightened emphasis on adhering to the POJK51/2017 regulations rather than the SASB standards. The potential explanation for the observed decrease in certain disclosure features may be attributed to the implementation of the SASB.

In terms of the economic dimension, it was observed that foreign banks held the highest market share in 2016, accounting for 52%. This was followed by Business Category 4, which held a market share of 43%, and Business Category 3, which held a market share of 34%. Nevertheless, there was a decline in the presence of foreign banks in 2017 and 2018, with a reduction to 57% and 48% respectively. Conversely, Business Category 4 exhibited variations, starting at 37% in 2017 and subsequently rising to 51% in 2018. In 2017, the percentage for Business Category 3 remained constant at 37%, but in 2018, it experienced a tiny decline to 35%. During the period from 2019 to 2021, Business Category 4 demonstrated a notable level of performance in terms of disclosure, achieving a rate of 53% in 2019. This was followed by international banks, who attained a disclosure rate of 47% in 2020. In the same year, Business Category 3 exhibited a disclosure rate of 38%.

In terms of the social aspect, B Business Category 4 consistently exhibits a prevailing trend, with a majority share of 56% in 2016, 51% in 2017, and 59% in 2018. In Business Category 3, the economic element, which initially stood at 34% in 2016, exhibited a rise to 35% in 2017 and experienced a significant surge to 41% in 2018. Foreign banks, despite starting from a lower initial percentage, witnessed a rise from 21% in 2016 to 25% in 2017 and further to 29% in 2018. During the period from 2019 to 2021, Business Category 4 exhibited the highest market share of 53% in 2021, followed by Business Category 3 with a share of 43%. Foreign Banks, on the other hand, recorded a market share of 28%.

In terms of governance information, Business Category 4 witnessed a significant decrease from 41% in 2016 to a mere 21% in 2017, followed by a recovery to 38% in 2018. The percentage for Business Category 3 stayed constant at 30% in 2016 and 34% in 2017, but experienced an increase to 38% in 2018. The percentage of Foreign Banks exhibited stability at 19% for a duration of two consecutive years, thereafter experiencing a minor increase to 23% in the year 2018. Between the years 2019 and 2021, Business Category 4 exhibited the highest level of disclosure, reaching 37% in 2021. In contrast, Business Category 3 and Foreign Banks recorded disclosure rates of 20% and 23% respectively in the year 2020. The category of governance had the lowest amount of disclosure across the three bank categories, with Business Category 3 banks and foreign banks reporting the lowest percentages of 16% and 17% respectively in 2021.

4.5. Sustainable development goals

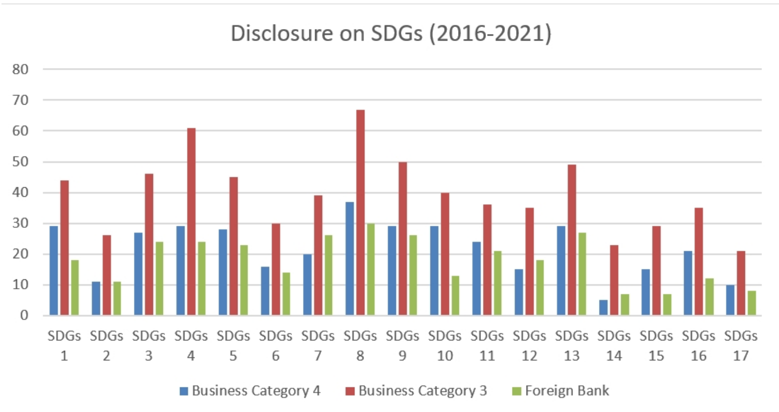

Figure 4. Disclosures on SDGs (results from content analysis).

Figure 4 shows the disclosures on SDGs. From the data provided, it can be analyzed that the SDGs 3 (Health and Welfare) had the highest level of commitment from the business and foreign bank, with a total commitment of 107 entities (11 from Business Category 4 and 96 from Business Category 3). The high level of commitment to SDGs 3 (Health and Well-Being) showed that many businesses and financial institutions were paying close attention to issues related to human health and well-being. This could include support for public health programs, providing access to affordable health services, and investment in medical research and innovation. Good health is fundamental to productive individuals and societies, and healthy businesses understand the importance of safeguarding the well-being of their employees and consumers.

On the other hand, the SDGs that had the lowest level of commitment were SDGs 15 (Life on Land), with a total of only 34 entities committed (5 from Business Category 4 and 29 from Business Category 3). This indicates that the issue of preserving life on land may not receive sufficient attention in the context of business commitments and financial institutions. The high level of commitment to SDGs 3 (Health and Well-Being) showed that many businesses and financial institutions were paying close attention to issues related to human health and well-being. This could include support for public health programs, providing access to affordable health services, and investment in medical research and innovation.

However, it is important to remember that this level of commitment does not necessarily reflect the urgency or importance of each SDG. Priorities and focus may vary based on business type, geographic location, and challenges faced by each entity. Still, this analysis provides an overview of the SDGs which have received increasing attention, and the SDGs need more attention in the future.

4.6. Progress on disclosure of sustainable finance portfolio and green portfolio

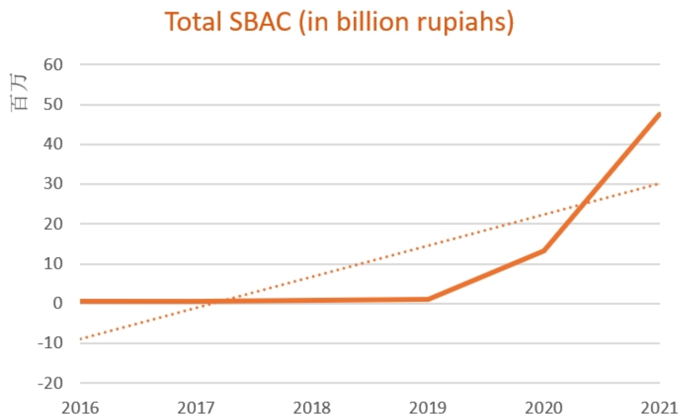

Figure 5. Disclosure of sustainable business activities categories (SBAC) (results from content analysis).

Figure 5 shows the analysis of the disclosure of sustainable business activities categories (SBAC). The trajectory of reporting sustainable business activities in millions of rupiah between the years 2016 and 2021 exhibited remarkable progress. In the year 2016, the total value of sustainable investment amounted to 273,087 million rupiahs. However, in the subsequent year, **Figure 5** experienced a decline and reached 187,387 million rupiahs. Subsequently, a notable surge occurred. In the year 2018, there was a growth in investment amounting to 775,520 million rupiahs, which subsequently experienced a further increase in the following year, reaching a total of 1,175,057 million rupiahs.

The year 2020 had a notable surge in investment, with a remarkable sum of 13,273,789 million rupiahs being allocated. The apex of this upward trajectory was observed in the year 2021, whereupon sustainable investment surged to 47,581,044 million rupiahs, surpassing the previous year's investment by over thrice. The impact of external occurrences, like as the COVID-19 pandemic, may have exerted a significant influence on the cultivation of company consciousness towards sustainability. The presented data indicates a noticeable change in the business paradigm, wherein enterprises are progressively recognizing that the attainment of sustainability objectives is crucial for generating a beneficial influence on both society and the environment in forthcoming times. Given the substantial expansion of sustainable investment, it is our expectation that enterprises would persist in prioritizing sustainable endeavors and assume a pivotal role in advancing sustainable development in the forthcoming period.

Table 4. Disclosure of SBAC, EFBA, and SME (in IDR/Rupiah, otherwise stated).

Financing Portofolio	Business Category 4	%	Business Category 3	%	Foreign Bank	%	Grand Total
2016							
SME Sector	335,604,000	83.16%	67,434,187	16.71%	514,526	0.13%	403,552,713
Green Portfolio	106,680,000	99.73%	289,000	0.27%	0	0.00%	106,969,000
Sustainable Finance Portfolio	442,284,000	86.63%	67,723,187	13.27%	514,526	0.10%	510,521,713
2017							
SME Sector	377,161,000	85.80%	61,957,659	14.09%	472,131	0.11%	439,590,790
Green Portfolio	207,380,000	96.95%	6,515,159	3.05%	0	0.00%	213,895,159
Sustainable Finance Portfolio	584,541,000	89.45%	68,472,818	10.48%	472,131	0.07%	653,485,949
2018							
SME Sector	419,140,000	79.08%	95,538,514	18.03%	15.346.330	2.90%	530,024,844
Green Portfolio	74,309,416	29.52%	166,898,983	66.31%	10,492,451	4.17%	251,700,850
Sustainable Finance Portfolio	493,449,416	63.12%	262,437,497	33.57%	25,838,781	3.31%	781,725,694
2019							
SME Sector	752,022,000	88.43%	91,080,821	10.71%	7,279,619	0.86%	850,382,440
Green Portfolio	272,349,030	83.88%	49,205,656	15.16%	3,120,589	0.96%	324,675,275
Sustainable Finance Portfolio	1,024,371,030	87.18%	140,286,477	11.94%	10,400,208	0.89%	1,175,057,715
2020							
SME Sector	807,099,493	6.36%	11,872,047,410	93.61%	3,406,280	0.03%	12,682,553,183
Green Portfolio	262,907,729	44.47%	326,313,904	55.19%	2,014,209	0.34%	591,235,842
Sustainable Finance Portfolio	1,070,007,222	8.06%	12,198,361,314	91.90%	5,420,489	0.04%	13,273,789,025
2021							
SME Sector	913,043,220	2.25%	39,631,003,080	97.74%	3,092,656	0.01%	40,547,138,956
Green Portfolio	272,221,640	3.87%	6,760,863,396	96.12%	820,976	0.01%	7,033,906,012
Sustainable Finance Portfolio	1,185,264,860	2.49%	46,391,866,476	97.50%	3,913,632	0.01%	47,581,044,968

Source: This study.

Table 4 shows the disclosure of SBAC, environmental financial-based activities (EFBA), and SME. The examination of financial portfolios in recent years reveals noteworthy trends in the distribution of investment funds. The category pertaining to the SME sector exhibited a notable decline in the proportion of the overall portfolio across successive years, suggesting a shift in investment strategy. On the other hand, the Category 3 Business category has exhibited significant expansion over a period of time, indicating a heightened level of enthusiasm and dedication towards this particular industry. Nevertheless, the Foreign Bank category maintained a somewhat restricted and inconsequential position within the broader portfolio.

The other two categories, namely green portfolio and sustainable finance portfolio, showed relatively stable portfolio composition, with lower fluctuations than other categories. The year 2020 played a pivotal role in our analysis, as it witnessed notable alterations in the distribution of money. The proportion of businesses classified under Category 3 exhibited a substantial increase, reaching 93.61%, but the SME sector witnessed a notable decrease, accounting for only 6.36% of the whole portfolio. The aforementioned modifications indicated substantial adjustments in investment strategy during the course of the year.

The year 2021 demonstrated the sustained prevalence of Business Category 3, which accounts for 97.74% of the total. The SME sector was seen a downward trend in its portfolio composition. Furthermore, the aggregate value of the portfolio exhibited a consistent upward trend over time, experiencing a notable surge from the year 2020 to 2021.

In general, our research demonstrates a strategic reallocation of investment dollars, characterized by a heightened emphasis on Business Category 3 and a notable reduction in the allocation towards the SME Sector. The category of Foreign Banks continues to provide a small contribution to the overall portfolio. The rise in portfolio value is indicative of the expansion of the overarching investment strategy.

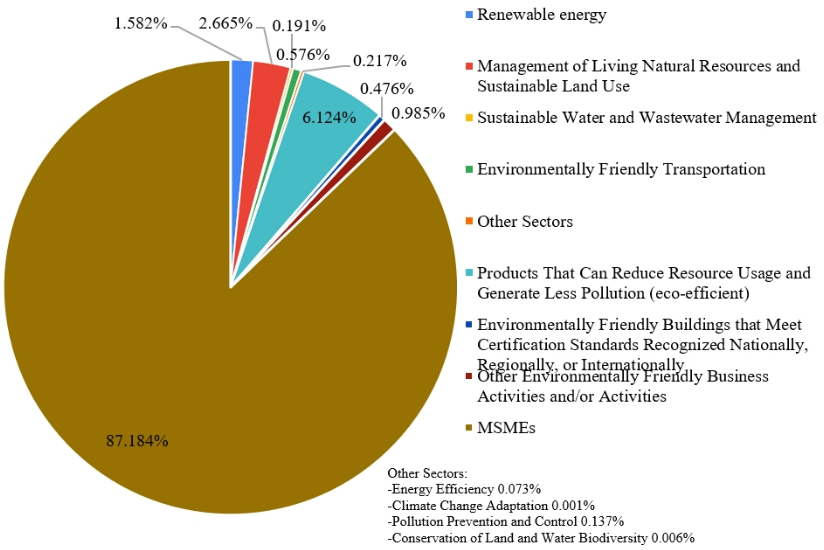

Figure 6. Percentage of green portfolio financing by sector (results from content analysis).

Figure 6 shows the percentage of green portfolio financing by sector. The highest aspect of sustainable financing was the SME sector, which received a total of USD3,380 million, accounting for 87.18% of the total sustainable financing. This financing was aimed at assisting the development of micro, small, and medium businesses. The next largest financing category was for Products that Reduce the Use of Resources and Produce Less Pollution (eco-efficient), with a total financing of USD237 million, which was 6.124% of the total sustainable financing. The Management of Biological Natural Resources and Sustainable Land Use category received the third-largest financing, with USD103 million, accounting for 2.665% of the total sustainable financing.

Financing in this category was still dominated by oil palm plantations and processing of ISPO/RSPO certified palm oil. On the other hand, the lowest financing disclosed was for Climate Change Adaptation, with a total financing of USD48,688, which was only 0.001% of the total sustainable financing. Despite the relatively small financing figures, there has been an increase in financing for this sector compared to 2020, when there was no support for Climate Change Adaptation. It is worth noting that many banks had not disclosed the amount of financing provided for green portfolio financing and had only informed that they supported green financing in several sectors. Additionally, some banks disclosed the total amount of sustainable financing without providing a breakdown of the financing aspects.

5. Discussion

The global trend towards sustainability in the banking sector has been driven by the recognition that sustainability issues pose significant risks to financial stability and the long-term viability of businesses (Halimatussadiah et al., 2018; Klimontowicz, 2019; Pyka and Nocoń, 2021). As a result, banks worldwide are increasingly adopting sustainable finance practices and reporting to demonstrate their commitment to sustainability and address these risks. Indonesia's banking sector has also made significant progress in sustainable finance reporting practices in recent years, particularly with the implementation of the national standard POJK 51, which requires banks to disclose their EESG performance and support sustainable finance through the implementation of SBAC and EFBA portfolios (Qudriyah et al., 2021).

This research underscores that sustainable reporting within the Indonesian banking sector places a considerable emphasis on the social perspective. As underscored by Gunawan et al. (2021), the disclosure of social performance in sustainability reports exerts the most substantial impact on overall company performance, which can be attributed to several factors. Firstly, Indonesian banking practices tend to prioritize social aspects, including customer relations, labor practices, and community empowerment. Additionally, the consumer-centric nature of Indonesian banking places significant emphasis on data privacy and customer satisfaction. Financial literacy and financial inclusion are integral to banking operations and are frequently included in sustainability reports. Sustainability reports, especially from banks in Business Categories 4 and 3, are primarily dominated by data and information derived from corporate social responsibility (CSR) activities targeted at employees and the community. This could be due to the obligation of banks to engage in environmental and social responsibility (CSR) activities. Indonesia has regulations mandating companies to engage in social and ecological responsibility, explicitly targeting community empowerment. Relevant regulations include Article 74 of the Limited Liability Company Law No. 40 of 2007 and Government Regulation No. 47 of 2012 on Social and Environmental Responsibility (CSR). For instance, state-owned enterprises (BUMN) and regional-owned enterprises (BUMD) are required to empower communities through Partnership and Community Development Programs (PKBL). One of the bank representatives mentioned in interviews that BUMN entities are required to prepare and submit PKBL reports to the Ministry of State-Owned Enterprises.

The second-highest disclosure of EESG information is related to economic perspectives, driven by financial reporting requirements that reference income and operational revenue following accounting standards as the primary foundation for bank reporting. In contrast to social and environmental information, which lacks specific reporting standards, financial reporting tends to be more static, and the quality of content varies among sample banks.

Governance-related disclosures are more internally focused, encompassing a company's vision, mission, values, organizational profile, association memberships, as well as the roles, responsibilities, and competence development of management. None of the sample banks describe sustainability governance within their organizations, and the implementation of sustainability governance in these banks typically does not extend to the appointment of directors. They remain responsible for sustainability governance performance within the bank. In contrast, Hu and Loh (2018) drew from cross-sectional data of Singapore-listed companies and shed light on the significant correlations between board governance factors, such as board capacity, board independence, and board incentives, and sustainability disclosure. Their study provided guidance both companies and policymakers seeking to enhance sustainability reporting through robust board governance practices. Interviews with banks revealed that, currently, sustainability management did not yet lead to the measurement of the bank's sustainability performance or portfolio. However, in line with the plan outlined in Financial Services Authority Regulation (POJK) 51/2017, sources emphasized the need for internal adjustments to align with sustainable financial principles. Nevertheless, they reported that training on sustainable finance should be conducted collaboratively with the bank's management board.

The environmental aspect registers the lowest average reporting level among EESG-related financial disclosures in all bank categories. Limited transparency in environmental reporting may stem from banks' concerns about environmental NGOs' criticisms, causing them to be more cautious in disclosing ecological information. Future environmental reporting should place a strong emphasis on addressing supply chains and comprehensively addressing the manifold environmental impacts that stem from the industry. Banks may not also fully comprehend environmental issues within their activities, which pertain to operations (resource and energy usage) as well as their financing practices (Gunawan et al., 2021). For example, efforts to reduce operational impacts related to buildings, energy, paper consumption, and transportation are currently not a priority. Furthermore, the introduction of environmentally friendly financial potential is still in its early stages.

The continuous increase in sustainable finance portfolio financing disclosure by business categories 4 and 3, and foreign banks is a positive development that aligns with the global trend towards increasing attention on sustainability. However, the dominance of palm oil financing in the sustainable natural resource management and land use category highlights the need for more diversified and sustainable financing in this sector. This is consistent with previous research that has shown that the financing of environmentally harmful activities, such as palm oil production, is still prevalent in the banking sector (Nurfatriani et al., 2019).

The low disclosure in the climate change adaptation sector indicates a need for more financing and awareness among banks regarding the types of financing that are relevant to this sector. This finding is also consistent with prior research that has found that financing for climate change adaptation is still relatively low compared to financing for mitigation (Boujedra et al., 2024). Nonetheless, it is essential to recognize that mitigation and adaptation are strategic complements, and an integrated climate change policy, involving early mitigation investments followed by substantial adaptation spending, is more cost-effective. In conclusion, while there have been some positive developments in sustainable finance reporting practices in Indonesia's banking sector, there is still room for improvement and further efforts are needed to address sustainability challenges.

Nearly all banks in Indonesia have disclosed their commitments to the SDGs, illustrating their contribution to sustainable development. However, there is still room for improvement in terms of the quality and quantity of SDG disclosures, particularly with regards to goal 14 (life below water). Banks can increase their contribution by implementing programs or engaging in activities that support this goal. The high proportion of sustainable financing directed towards the SME sector reflects the banks' efforts to support the development of small businesses, which is crucial for economic growth and job creation in Indonesia. However, the relatively low financing figures for climate change adaptation highlight the need for more financing and awareness among banks regarding the types of financing that are relevant to this sector (Mahlawat and Batra, 2020; Mittal and Raman, 2022).

The dominance of palm oil financing in the Management of Biological Natural Resources and Sustainable Land Use category highlights the need for more diversified and sustainable financing in this sector. Banks can explore financing opportunities in other sectors, such as sustainable forestry, agroforestry, and agriculture (Feridun and Talay, 2023), to promote biodiversity conservation and reduce environmental degradation. The institutional theory and stakeholder theory provide insights into the factors that shape banks' sustainability reporting practices, and organizations should consider the expectations and needs of their stakeholders in their reporting (Naynar et al., 2018), which may vary depending on the regulatory environment and stakeholder expectations in different countries (Tilt et al., 2021).

Semi-structured interviews with the sustainability financing team at the bank provided valuable insights into their roles and responsibilities, their understanding of sustainability, their perception of the bank's sustainability reporting practices, and their recommendations for improving sustainability reporting in the future. The interviews revealed that the sustainability financing team played a critical role in implementing sustainable finance practices in the bank, which is consistent with the broader significance of such teams in the banking industry for promoting green investments and financing practices (Feridun and Talay, 2023).

The team members had a deep understanding of sustainability and its importance for the bank's business and stakeholders. The sustainability financing team expressed satisfaction with the bank's sustainability reporting practices, particularly in terms of compliance with national standards. They acknowledged that the implementation of POJK 51 had provided a framework for sustainable finance reporting, which helped the bank improve its reporting practices. However, they also identified some areas for improvement, such as the need for more robust reporting on environmental aspects and SDGs. Recognizing the pivotal role that bank reporting on SDGs plays in bridging the finance gap and advancing the global aim of achieving the SDGs by 2030, the team members recommended the bank to strengthen its support for SDGs, particularly in areas where the bank had not yet made significant contributions, such as climate change adaptation.

Indonesia's progress in sustainable finance reporting practices is in line with the global trend towards increasing attention on sustainability, and other countries in the region, such as Malaysia and Singapore, have also implemented initiatives to promote sustainable finance practices (Coleton et al., 2020; Migliorelli, 2021). For example, Malaysia has launched the Sustainable and Responsible Investment (SRI) sukuk framework to encourage the issuance of green sukuk, while Singapore has introduced the Green Finance Action Plan to support the development of green finance. These initiatives demonstrate the increasing importance of sustainable finance practices in the Southeast Asian region and the need for coordinated efforts to address sustainability challenges (Haji-Othman et al., 2021; Ibrahim et al., 2016). Beyond the Southeast Asian region, Italy has established a National Dialogue on Sustainable Finance, specific regulations on climate risk management, and a regulation laying down provisions on the system of governance.

Further, the World Bank Group's long-term finance unit has played a pioneering role in the global promotion of sustainable finance through activities such as data provision, analytical work, instrument design, and technical assistance aimed at assisting regulators and investors in client countries to foster environmentally friendly financial systems. By adopting sustainable finance practices and reporting, banks can contribute to sustainable development and address the risks posed by sustainability issues, such as climate change, social inequality, and environmental degradation.

The global trend towards sustainable finance is being driven by a growing recognition that sustainability issues pose significant risks to financial stability and the long-term viability of businesses (Tilt et al., 2021). This is particularly relevant in Southeast Asia, where the region is vulnerable to climate change and other sustainability challenges. The adoption of sustainable finance practices by banks can help mitigate these risks and support the transition to a more sustainable economy (Boujedra et al., 2024).

In summary, the progress made by Indonesia's banking sector in sustainable finance reporting practices is a positive development that is in line with the global trend towards sustainable finance. Other countries in the region, such as Malaysia and Singapore, have also taken steps to promote sustainable finance practices. The adoption of sustainable finance practices by banks can help mitigate the risks posed by sustainability issues and support the transition to a more sustainable economy. By considering the expectations and needs of their stakeholders and adopting sustainable finance practices, banks can contribute to sustainable development and address the risks posed by sustainability issues.

6. Conclusion

The banking industry in Indonesia has made significant strides in sustainable finance reporting, reflecting their compliance to the regulation and beyond compliance, referring to the standards or guidelines. This progress is evident in the increasing number of annual and sustainability reports produced by major banks, particularly those in business categories 3 and 4. The commitment of these banks, controlling a significant portion of the country's banking assets, towards the 'First Mover on Sustainable Banking' initiative is commendable. The introduction of regulatory frameworks like POJK 51/2017 has been instrumental in regulating sustainable finance practices. The increase in sustainability reporting, especially in 2020, indicates a growing awareness, education, and regulatory pressure for transparency in sustainable operations.

However, the sector faces challenges in achieving a balance across all aspects of sustainability. While there has been commendable progress in social and economic disclosures, environmental disclosures are lag behind. This indicates a need for a more holistic approach to sustainability that equally emphasizes environmental impacts, including improving learning courses in sustainable finance. The analysis of sustainable finance disclosures based on EESG performances across different banking categories reveals varied focuses. Business Category 4 banks show a strong tendency towards social disclosures, whereas foreign banks emphasize economic aspects. The gradual increase in environmental disclosures across all categories is a positive sign, but more efforts are needed to enhance transparency in this area. The Sustainable Finance Disclosure based on SASB points to a similar trend, with an increasing emphasis on environmental issues post-2019. However, economic and governance components still show the least amount of transparency, indicating potential areas for improvement.

The study of SDGs commitments reveals a strong focus on SDG 3 (Health and Well-being) but less attention to others like SDG 15 (Life on Land). This suggests the need for a more balanced approach to addressing various sustainability challenges and willingness to support the target, beyond mandatory approach. The examination of the sustainable finance portfolio and green portfolio shows a significant increase in sustainable investment, especially in 2021. This growth is indicative of the evolving business paradigm, where sustainability is becoming a key factor in business strategies. The SME sector, although experiencing a decline in portfolio proportion, remains a significant focus area for sustainable investment.

7. Limitations and further research

This study encounters several limitations that should be considered when interpreting its findings. Firstly, the research is limited to the analysis of publicly available sustainability and annual reports from Indonesian banks, which may not encompass all dimensions of sustainable finance and governance practices. This approach might overlook informal or internal practices that are not publicly disclosed. Secondly, the focus on banks within specific business categories might not represent the broader banking industry in Indonesia, potentially limiting the generalizability of the conclusions. Additionally, the timeframe of this study which covers reports published from 2016 to 2021, restricts the ability to capture long-term trends and the most recent developments in sustainable finance. Finally, the qualitative nature of content analysis is inherently subjective, which might introduce biases in interpreting the data, underscoring the need for caution in extrapolating these findings to wider contexts.

Besides, this study provides significant suggestions, in particular to the policy maker. Since sustainability practices are more driven by regulations, developing concise and clear directions are essential to be issued by the regulators. In this case, the Financial Services Authority is one of the powerful bodies which may take actions of providing appreciations and penalties to any financial institutions for their compliance and incompliance. Supports from financial associations or forums are also important to provide continuous learning and advocation.

Further study may consider to select other standards which are growing remarkably, in example ESG rating and measurements. Since sustainability with the ESG performance is still in early stage for most of the developing countries, education should be conducted continuously and insights studies are needed more. The areas of sustainability assurance and due diligence are two of the most potential studies, while on the other hand, the risks of greenwashing ESG disclosures need to be examined to prevent unethical behaviors.

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