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Enhancing Sustainable Banking Practices: Implementing the Besgi Framework to Indonesian Bank

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ABSTRACT: Climate change, a global issue largely caused by human activities, is now beginning to be addressed by the G20, including financial institutions. Indonesia, as part of the G20, is implementing a sustainable finance program to improve the financing, durability, and competitiveness of financial services institutions. This study evaluates the adoption of sustainable banking practices in Indonesia within the context of global climate change initiatives. Using the Banks' Environmental, Social, Governance, and Indirect Impact (BESGI) framework, which provides a comprehensive assessment of banks' ESG performance using the Multidimensional Synthesis of Indicators (MSI) aggregation method. The BESGI performance of 14 Indonesian banks from 2020-2022 was assessed, revealing varying results of fluctuating data with Mandiri scoring the highest in year 2021 and BTN the lowest in year 2020. The findings indicate a growing emphasis on sustainable finance within the Indonesian banking sector in terms of financing and investment. The BESGI Score has insignificant results on banks' performance and stability. However, further research is essential to comprehend the implications of these practices on the performance and stability of banks.

KEYWORDS: Banking sector, Climate change, ESG score, G20, MSI aggregation method, Sustainable finance.

INTRODUCTION

The effects of climate change have prompted Indonesia to establish a legal framework to support sustainable finance, in response to its obligations under the Paris Agreement and in recognition of the significance of sustainable finance in combating climate change. This includes the publication of rules and recommendations for green and sustainable financing, promoting investments in environmentally sustainable projects, and aiding in climate mitigation and adaptation by encouraging financial institutions to incorporate environmental and social factors into their lending and investment practices. Based on POJK No.51/POJK.03/2017 the sustainable finance program in Indonesia aims to improve the financial service industry's resilience and competitiveness, support environmentally friendly investment, and contribute to the national commitment to address the global warming challenge by carrying out climate change mitigation and adaptation in business activities towards a competitive low carbon economy. These efforts reflect Indonesia's commitment to addressing the impact of climate change through sustainable finance initiatives. Indonesia issued its first sovereign green sukuk (Islamic Bond) in 2018, reaching $1.25 billion. The five-year issuance attracted investors from conventional, Islamic, and green sectors. The Green Bond and Green Sukuk Initiative supports Indonesia's goal of reducing greenhouse gas emissions based on Islamic Law principles. The proceeds will go to selected green projects, attracted by 32% of the Islamic market, 25% Asia, 15% EU, 18% USA, and 10% Indonesia.

This commitment reflects a proactive approach to addressing environmental and social concerns. The BESGI framework developed by Ielasi et al. (2023), specifically designed for the banking sector, offers a more comprehensive assessment of banks' ESG performance, considering both the direct and indirect impacts of banks' actions. By utilizing the BESGI framework, researchers, bank managers, and supervisory authorities can gain insights into the overall level of sustainability performance of banks, allowing for a more robust and tailored assessment compared to traditional ESG scores. This can support efforts to drive sustainable practices and responsible investment decisions within the financial sector, aligning with Indonesia's sustainable finance commitment and providing a more accurate and relevant indicator for scoring in the banking sector.

The BESGI score ranges from 0 to 1 and includes 29 indicators divided into 8 dimensions, 5 areas, and 2 domains, with the additional areas of Financing and Investment compared to the traditional ESG Score. This research focused on 14 Indonesian banks based on KBMI 3 and 4 from the year 2020-2022. The BESGI score was then applied to measure its significance toward performance and stability. Performance indicators were ROA, ROE, and NIM, while stability indicators were z-score and NPL.

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BACKGROUND

The United Nations report in July 2023 indicates that the era of global warming has officially ended, and the era of global boiling is starting. The average surface temperature during the first three weeks of July reached a record high of almost 17˚C, becoming the hottest month in human history. The report highlights the need for global action on emissions, climate adaptation, and climate change, including reaching net zero emissions by mid-century. Indonesia signed the Paris Agreement in 2016, setting a Greenhouse Gas emission reduction target of 29% unconditional (own effort) and 41% conditional (with adequate international support) by 2030. The government has incorporated the sustainable development framework into its Medium and Long-Term Development Plan, which includes four aspects: solid political and legal institutions, improved community welfare, advanced economic structure, and preservation of biodiversity. To achieve an economic growth average of 5.4-6.0 percent per year throughout 2020-2024, financing of investment needs is pursued through deepening the financial sector, increasing financial inclusion, expanding financial products, developing financial sector infrastructure, and optimizing alternative financing.

Otoritas Jasa Keuangan (OJK) plays a role in achieving this commitment through its sustainable finance program, which seeks to increase financing and the durability and competitiveness of financial services institutions. The Sustainable Finance Roadmap sets forth the end goal of sustainable finance in Indonesia for the medium term (2015-2019) and long term (2015-2024) by the financial services industry under OJK's supervision. Sustainable finance refers to financial services that integrate environmental, social, and governance (ESG) criteria into investment decisions, lending practices, and other financial activities. The recent initiative of OJK to optimize alternative financing by composed Indonesia Green Taxonomy 1.0 in collaboration with 8 ministries and other parties in early 2022. This dynamic/living document is meant to develop standard definitions and green criteria from economic sector activities that support climate change mitigation and agenda in Indonesia.

An important factor in evaluating and measuring sustainable finance is the ESG score. ESG ratings for companies that issue securities on the financial markets have become very popular recently. These ratings are typically developed by organizations with expertise in gathering and analyzing data on the sustainability aspects of business operations, based on, among other things, the content of both public and private corporate documents, meetings with management, reports from supervisory authorities, reports from NGOs, and newspaper articles (Ielasi et al., 2023).

The different methodological choices regarding the indicators and the pillars to be included in the measure, the way to weigh them, and the normalizing process to apply to produce a wide range of metrics, with a low level of correlation (Berg et al., 2022; Hughes et al., 2021). The second reason why results obtained by literature that refer to ESG scores produce conflicting results is related to how the scores are applied in the analysis. The effectiveness of the scores to proxy different corporate results can be affected by the scope of the analysis and the original purpose of the ESG rating companies (Micheal E. Porter et al., 2019). Ielasi et al. (2023) argue BESGI Framework can cover ESG rating specifically for the bank sector. The BESGI score offers a more tailored and comprehensive assessment of banks' ESG performance, considering both direct and indirect impacts, and utilizing a specific methodology for the banking industry.

Furthermore, there was various research that found a relationship between ESG scores and with bank's performance and stability. The positive impact of a higher ESG score is meant to encourage banks to increase ESG score that relates to better profitability ratios such as net interest margin and better stability ratios such as z-score. By utilizing new methods of scoring, this research also tries to find the relation between the BESGI score with banks' performance and stability.

SUSTAINABLE FINANCE IN INDONESIA

OJK certainly has the role to realize the commitment through a sustainable finance program. The program is implemented through cooperation with various parties to create financial support for institutions performing sustainable finance principles. The sustainable finance program is not only intended to increase financing but also to enhance the resilience and competitiveness of financial services institutions. Furthermore, to achieve it through systematic measures, OJK has cooperated with several related institutions to draft a Sustainable Finance Roadmap.

The roadmap is intended to explain targeted conditions about sustainable finance in Indonesia for a medium-term period (2015-2019) and a long-term period (2015-2024) for the financial services industry under OJK`s supervision, also to set up and create a milestone of improvement for sustainable finance. This roadmap will function as a reference for OJK, practitioners in the financial

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services industry, and other parties having interests in supporting sustainable development, especially government, industry players, and international institutions (Hadad Muliaman D., 2015).

The Phase II Roadmap (2020-2024) focuses on creating a comprehensive sustainable finance ecosystem that involves all related parties and promotes cooperation at various levels. To accelerate ESG implementation, we need to prepare initiatives that support innovations that are in line with the Sustainable Development Goals. This is the foundation for the Sustainable Finance Roadmap Phase II (2021 - 2025), which has become an integral part of the blueprint for the future development of Indonesia's financial services sector. The sustainable finance initiative developed through the Roadmap Phase II will integrate seven major components into one ecosystem. The key to a successful sustainable finance ecosystem is based on developing and implementing all seven supporting elements. However, priorities are needed to implement ecosystems in the phase II Roadmap, which include:

1. Development of a green taxonomy**,** which aims to classify sustainable financing and investment activities in Indonesia. This classification is the basis for all stakeholders in Indonesia in carrying out sustainable economic activities. The formulation of the green taxonomy is carried out through the formulation of a national task force of sustainable finance composed of relevant ministries/institutions and related stakeholders. The taxonomy will accommodate the overall existing guidelines regarding the green sector.
2. Implementation of ESG aspects into risk management to increase resilience and mitigate environmental and social risks that may affect the financial industry's business processes. This effort is carried out through reporting on environmental, social, and governance aspects, developing key performance indicators, and supporting increasing the overall capacity of human resources.
3. Real program development is intended to present success stories of innovative green scheme development to be replicated to enhance the role of the financial industry in sustainable financing. The implementation of real programs is carried out in collaboration with related ministries/ institutions and other stakeholders. This is in line with the development of the government's leading economic sector and serves as the basis for further development of green financing schemes.

THE BESGI FRAMEWORK

Compared to traditional ESG scores, the BESGI score developed by Ielasi et al. (2023) is specific to the banking industry not just for the weights assigned to indicators, but for the main contents. The score is measured by considering the structural features of the financial sector, and peculiarities of bank products/services, also considering the shared regulation of the field in terms of reporting and accounting (Finger et al., 2018). It directly accounts for industry materiality, thanks to the choice of indicators and areas that are more relevant and material to companies within the financial industry. The BESGI score presents other originality terms. The contribution of this study is then manifold. The large number of indicators and granularity in the data used by ESG rating agencies highlights how the calculation of the traditional scores typically requires the strong contribution of the companies being evaluated which can affect the results. On the other hand, the BESGI score is built on public information, and it aims to be a model applicable to all banks, national and international, characterized by different legal forms and sizes. The model variables are selected considering the information that a bank usually makes available in public documentation making it possible to apply the model also to non-listed companies, for which no other assessments are available.

Most indicators included in the methodology are taken from the global reporting standards issued by the Global Reporting Initiative. The model is thus highly replicable. The number of indicators within the BESGI scoring model is quite low compared to traditional ESG scores to avoid flattening results and to better assess the degree of heterogeneity of the banks' performances in the various pillars investigated. Indicators are specifically selected, as well as the areas. Given the peculiarities of the banking industry and their role in capital allocation, the BESGI score also includes an assessment of the indirect impacts resulting from banks' financing and investing activities. To evaluate the overall ESG engagement, the BESGI scoring model, unlike other tools such as scoreboards of indicators or other indices, measures simultaneously the bank's internal processes and behavior in terms of ESG issues, and the attention paid by the bank to the level of sustainability of the counterparties that it contributes to finance. To the best of our knowledge, the BESGI score is the first model to include indicators specifically aimed at capturing the indirect impacts of bank activities. Lastly, the BESGI score contributes to the discussion on the methodological approach to be applied to the calculation of sustainability scores, proposing an innovative methodology that allows to overcome some limitations of the traditional ESG scoring models: this study employs the Multidimensional Synthesis of Indicators (MSI) aggregation method to summarise indicators into a one-dimensional value (M. Biggeri et al., 2019; M. Biggeri & Bortolotti, 2020; U. Biggeri et al., 2021; Mauro et al., 2018). By

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applying this methodology, the aggregation of areas avoids some of the common pitfalls of composite indices, such as the use of the arithmetic mean, in which the marginal contribution of one dimension remains constant both as the dimension itself varies and as all other dimensions vary.

SUSTAINABLE FINANCE, BANKS' BUSINESS MODELS, AND REGULATION

The importance of sustainable finance incorporates environmental, social, and governance (ESG) principles into business decisions and investment strategies. Banks are shifting towards sustainability and responsible financing to meet present needs without compromising future generations' needs. They are incorporating new models and frameworks to assess environmental, social, and governance impacts. These banks are tailoring their models to regional sustainability needs and regulations, ensuring long-term viability and responsible business practices while maintaining financial stability.

According to Sudrajad and Hübner (2018), research conducted in the ASEAN banking sector found the trend to shift to non-traditional income channels through mostly fee and to some extent trading income sources, where both items exhibit a slight upward trend. The non-interest income components comprise fees and commissions, trading and derivatives, and other non-interest income. Non-deposit short-term funding comprises deposits from banks, repos and cash collateral, and other non-deposit short-term funding. On the bank funding side, a slightly positive trend is also observed in all elements of non-traditional short-term funding.

Banks are crucial financial institutions but often fail due to a lack of capital reserves (Sudrajad, 2021). To maintain financial stability, prudential regulation and supervision of banks are the main objectives of the three-pillared Basel framework. Although sustainability isn't specifically addressed by the Basel framework, it's becoming increasingly clear that sustainable finance and environmental, social, and governance (ESG) factors are critical to the financial system's long-term stability.

The evolution of Basel regulation described by Sudrajad (2021) started in 1987, The Basel Committee on Banking Supervision (BCBS) aimed to harmonize capital standards in the banking industry, leading to the Basel I Accord in 1988. This agreement aimed to strengthen international banking system stability and create global regulatory standards. The key achievement of Basel I is the "bank capital ratio," which defines bank capital into core and supplementary capital. Credit risk is determined based on banks' risk-weight assets, with a minimum of 8% of total capital as risk-weighted assets.

In 2004, Basel II was proposed to improve regulatory capital requirements by considering financial innovation and risk sensitivity in calculating risk-weighted assets. It proposed two methodologies: the internal rating-based approach (IRB) and the standardized approach (SA). Basel II strengthened regulation in the regulatory capital requirement, requiring banks to hold more capital for high-risk portfolios and providing guidance for securitization in the rapidly growing banking industry. The revised framework consists of three pillars: capital charge, regulatory flexibility, and market discipline.

The Basel II framework aimed to improve regulatory capital requirements and address financial innovation after the first accord. Implemented in 2006 and 2007, it failed to prevent the 2008 global crisis. The Basel III framework aims to strengthen global capital and liquidity regulations and improve the banking sector's ability to absorb shocks from financial and economic distress. It includes an extra layer of common equity, a countercyclical buffer, a leverage ratio, liquidity requirements, and a proposal for "too-big-to-fail" banks.

Sustainable finance principles align with the Basel Pillars in several ways:

1) Pillar 1 (Minimum Capital Requirements): Sustainable finance practices can influence the minimum capital requirements by considering environmental and social risks in the assessment of credit, market, and operational risks. This aligns with the need to incorporate ESG factors into risk management practices, potentially impacting the calculation of capital reserves.
2) Pillar 2 (Supervisory Review Process): The supervisory review process under Pillar 2 involves evaluating a bank's risk management processes. Integrating sustainable finance principles into risk management aligns with the supervisory review process, as it demonstrates a comprehensive approach to identifying and managing risks, including those related to environmental and social factors.
3) Pillar 3 (Market Discipline): Sustainable finance practices can enhance market discipline by promoting transparency and disclosure of ESG-related risks and opportunities. This aligns with Pillar 3's focus on disclosure and market discipline, as it provides stakeholders with relevant information to assess a bank's risk profile, including its exposure to environmental and social risks. The BESGI framework incorporates the third Basel pillar as indicators measured in the transparency & and disclosure dimension which includes as governance area.

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RESEARCH METHODOLOGY

This study will use the BESGI framework to determine BESGI's scores and then a regression model to examine the effect of BESGI scores on banks' performance and stability, in this case, BESGI Scores from the results of calculation act as independent variables and dependent variables such as Return on Asset (ROA), Return on Equity (ROE), and net Interest Margin (NIM) include as financial performance and Z-Score and Non-Performing Loan (NPL) include as financial stability.

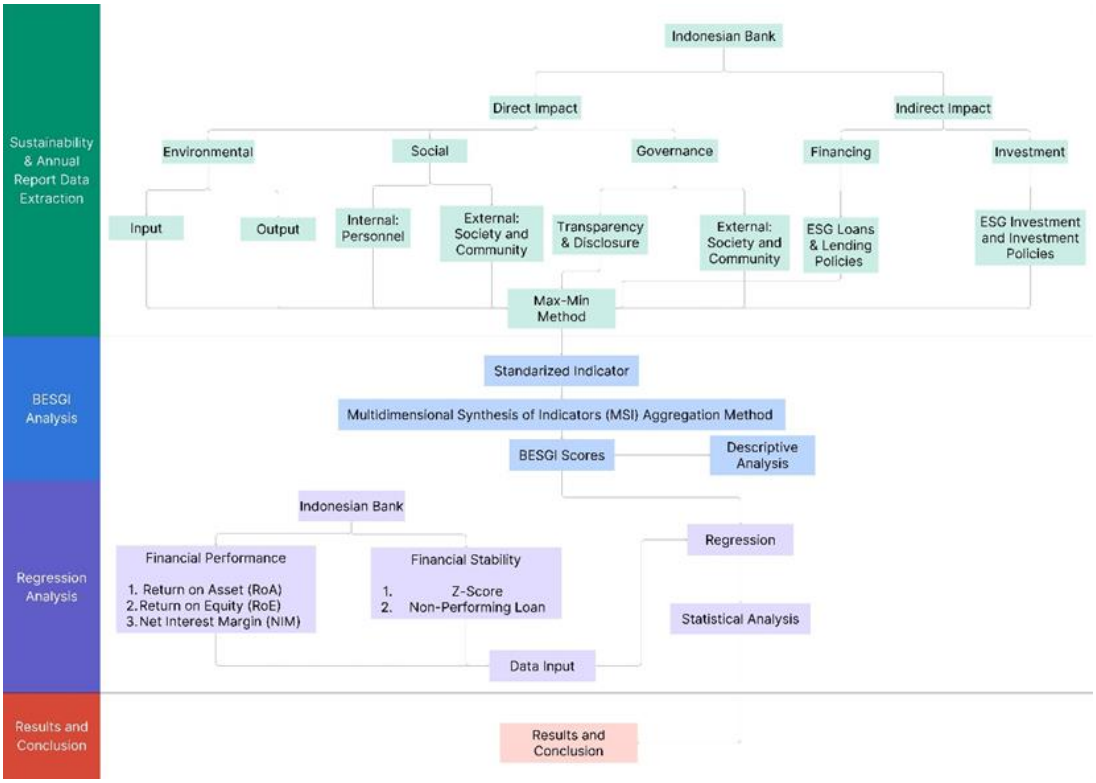

Figure 1. Research Design

The BESGI Model refers to the aggregation method measured using Multidimensional Synthesis of Indicators (MSI). This method of aggregation is an approach that has characteristics similar to the geometric mean, but which overcomes some important limitations. The main idea is that the weighting of dimensions is implicit in the data and the aggregation is based on the bank's achievements in each dimension, rather than being predetermined. The first step to measure the BESGI score is to standardize each indicator using the max-min method. Then we aggregate indicators at the dimension level using the arithmetic mean of the scores and then aggregating dimensions at the area level. Subsequently, the areas were aggregated in the BESGI Score using the MSI method. The formula for calculating the BESGI score is as follows:

$$BESGIit = 1 - \left[\frac{1}{5}\sum_{jt}(1 - xjit)^{\mu it}\right]^{1/\mu it}$$

Where: BESGIit is the BESGI score for bank i in year t. xjit is the standardized value of indicator j for bank i in year t. μ it is the number of dimensions for bank i in year t.

After the BESGI Score obtained for each bank annually, then the author try to measure the effect of BESGI Score to banks' performance and banks' stability using Regression econometric model is written as:

$$Y = \beta 0 + \beta 1 BESGI + \beta 2 CAR + \beta 3 SIZE + \beta 4 LEV + e$$

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Table 1. Description of Variables

Variable	*Definitions*
Dependent Variable (Financial Performance)	
Return on Assets	Net Profit / Total Assets
Return on Equity	Net Income / Shareholder Equity
Net Interest Margn (NIM)	Subtracting interest expenses from interest revenue and then dividing the amount by the total assets earned
Dependent Variable (Financial Stability)	
Z-Score	(k+μ)/σ, where k is equity capital as a percent of assets, μ is returned as a percent of assets, and σ is the standard deviation of return on assets as a proxy for return volatility
NPL	Non-performing loan to total gross loan
Independent Variable	
BESGI Score (BESGI)	Banks' Environmental, Social, Governance, and Indirect Impacts measured in this study
Control Variables	
Capital Adequacy Ratio (CAR)	Measured by (Tier 1 Capital + Tier 2 Capital)/Risk Weighted Assets
Firm Size (SIZE)	A control variable measured by the total assets
Leverage (LEV)	Total leverage

RESULT

In observations between the year 2020-2022, Figure 2 shows the BESGI Score for a total 14 banks. Upon analyzing the graphical representation based on Figure IV.10, it is observed that the Indonesian banks with respect to sustainable finance appear to be fluctuating. OJK has required financial industries to report sustainability reports since 2019 through POJK No. 51/POJK/03/2017 (Departemen Penelitian dan Pengaturan Perbankan Otoritas Jasa Keuangan, 2018) however, the research findings that the reporting within the BESGI framework has an upward trending from year 2020 and reached the highest in the year 2021, then downward trending to year 2022. According to IFC (2022), Indonesia's financial institution coverage in 3 framework areas which are climate risk management, ESG integration, and financing sustainability sequentially, is still lacking in tracking, reporting, and disclosure.

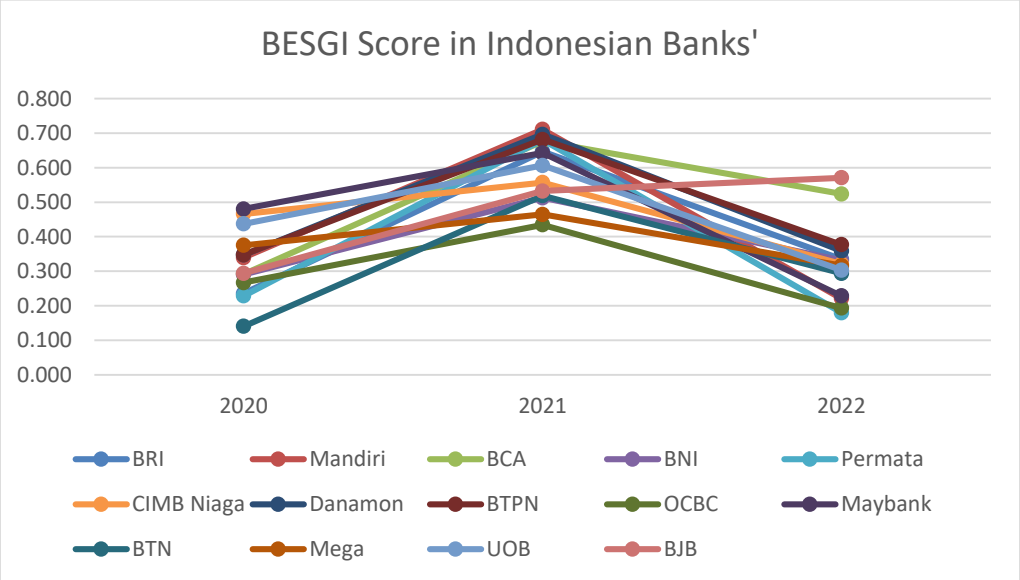

Figure 2. The BESGI Score Trend in Indonesian Bank

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BESGI Score is compiled from 27 indicators which consist of 8 dimensions, 5 areas, and 2 domains. To observe more in detail, Table 2 summarises the main results for the BESGI score and its subindices and dimensions, by year. The average BESGI Score has generated fluctuating data with the highest in the year 2021. The highest domain score is generated from the indirect impact index, with the investment sub-index being the highest and most stable in all three years. This result provides insight that the Indonesian banking sector is concerned more with investment.

Table 2. Scores and Dimension Average

	2020	*2021*	*2022*
BESGI Score	0,325	0,597	0,325
Direct Impact Index	0,23	0,51	0,28
Indirect Impact Index	0,55	0,78	0,58
Environmental Sustainability Index	0,14	0,31	0,26
Environment: Inputs	0,15	0,14	0,21
Environment: Outputs	0,24	0,64	0,39
Social Sustainability Index	0,22	0,56	0,29
Internal Personnel	0,04	0,53	0,20
Society and Community Engagement	0,62	0,68	0,53
Governance Index	0,47	0,60	0,45
Openness and Disclosure	0,71	0,91	0,78
Administrative Bodies	0,33	0,70	0,19
Lending Types and Policies	0,35	0,71	0,49
Investment Types and Policies	0,93	0,88	0,88

In the ESG index (direct impact), the BESGI Score includes several indicators that relate to bank operational activities and management. Concerning the direct impact index components, the governance sub-index is the highest, while the environment sub-index remains the lowest in all three years. This result is in line with the Bumi Global Karbon reports on the news by Isjwara, R. (2020) that Indonesian banks put more emphasis on governance disclosure, such as risk management, and less on environmental and social aspects. On the other hand, some indicators in environment components are not provided by Indonesian banks with values of 0. For instance, the lowest score of environment components was obtained from the indicator: amount of waste produced per employee, only BJB provided the data as needed. Another indicator is: the percentage of electricity from renewable sources, only 4 banks (BCA, BNI, Danamon, and UOB) have shifted electricity usage resources to solar panels. The other banks' effort is still to reduce electricity usage.

After gathering the BESGI score, the authors tried to see its effects on banks' performance and stability using regression on the equation. Banks' performance included ROA, ROE, and NIM, while banks' stability included z-score and NPL.

Table 3. Descriptive Statistics

Variable	*Obs*	*Mean*	*Std. dev.*	*Min*	*Max*
BESGIScore	39	.4172018	.1720749	.1407188	.7105084
ROA	39	.0189385	.0100086	.005	.0422
ROE	39	.1192769	.0648504	.026	.2349
NIM	39	.0518821	.0109221	.0306	.077
ZScore	39	17.08167	4.598079	6.512453	25.03592
NPL	39	.0088333	.0058535	.002	.0256
CAR	39	.2396487	.047161	.168	.357

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LEV	39	.1273513	.0415542	.0512	.2013
SIZEinBill~n	39	176734.4	285990.1	2430	1054002

Table 4. Regression Result of BESGI Score Effect on Banks' Performance and Stability using STATA MP 17

	Coefficient	Std. err.	t	P>t	[95% conf.	interval]
ROA						
BESGIScore	.0035007	.0087837	0.40	0.693	-.0143499	.0213514
CAR	.0378758	.0466371	0.81	0.422	-.0569021	.1326537
LEV	-.0430243	.0537741	-0.80	0.429	-.1523064	.0662577
SIZEinBillion	1.47e-08	5.51e-09	2.67	0.012	3.51e-09	2.59e-08
_cons	.0112808	.0084139	1.34	0.189	-.0058182	.0283799
ROETier1						
BESGIScore	.0398417	.0503936	0.79	0.435	-.0625704	.1422539
CAR	.0978829	.2675651	0.37	0.717	-.4458749	.6416407
LEV	-.7902272	.3085115	-2.56	0.015	-1.417198	-.1632565
SIZEinBillion	7.66e-08	3.16e-08	2.42	0.021	1.24e-08	1.41e-07
_cons	.1662891	.048272	3.44	0.002	.0681887	.2643896
NIM						
BESGIScore	.0131018	.0101518	1.29	0.206	-.0075291	.0337327
CAR	-.0423289	.053901	-0.79	0.438	-.1518689	.067211
LEV	.0911824	.0621496	1.47	0.152	-.0351208	.2174856
SIZEinBillion	9.36e-09	6.37e-09	1.47	0.151	-3.59e-09	2.23e-08
_cons	.0432944	.0097244	4.45	0.000	.0235321	.0630568
ZScore						
BESGIScore	.2813408	2.671708	0.11	0.917	-5.148223	5.710904
CAR	-1.519018	14.18544	-0.11	0.915	-30.34731	27.30927
LEV	89.57595	16.35629	5.48	0.000	56.33598	122.8159
SIZEinBillion	5.89e-06	1.68e-06	3.51	0.001	2.48e-06	9.29e-06
_cons	4.880236	2.559224	1.91	0.065	-.3207325	10.08121
NPLnett						
BESGIScore	-.0019822	.0056574	-0.35	0.728	-.0134794	.009515
CAR	.0254052	.030038	0.85	0.404	-.0356394	.0864498
LEV	-.0285335	.0346348	-0.82	0.416	-.09892	.0418529
SIZEinBillion	-5.27e-09	3.55e-09	-1.49	0.147	-1.25e-08	1.94e-09
_cons	.0081373	.0054192	1.50	0.142	-.0028759	.0191505

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Overall, the BESGI score has insignificant effects on all dependent variables being measured. Compared to journal reference by Ielasi et al. (2023), shows a similar insignificant effect toward equity to total asset ratio and risk-weighted asset ratio. The main determinant seems to be related to the size of the institution: larger institutions perform better, overall than small ones, probably due to their greater investment capacities, but also in terms of disclosure. The largest banks, often listed, are also those for which legislation requires a higher level of transparency, including on ESG issues. In this research, the size is not being measured toward the BESGI score.

CONCLUSION

BESGI Score in 14 Indonesian banks from 2020-2022 generates fluctuating data, with the highest in the year 2021 obtained by Mandiri amounting to 0,711, and the lowest in the year 2020 obtained by BTNa amounting to 0,141. The highest domain was obtained by the Indirect Impact Index which consists of 2 areas: Financing and Investment with the highest in the Investment. The highest average value of the direct impact index was obtained by the Governance area and the lowest are the Environment.

The significant level of the BESGI framework doesn't appear in every dependent variable in this research. This is because the data observed is still limited with the total bank observed of 13 banks with a 3-year range. In this equation model, the author tried to test whether the new scoring model, namely the BESGI score influences banks' performance and stability. The result is the null hypothesis is not rejected which sometimes statistically may be a type II error. Where the BESGI score didn't influence banks' performance and stability when it actually did. If there is an increase in the number of observations could confirm whether the result is still insignificant or generating a new outcome.

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