Article
Do Sustainability Activities Affect the Financial Performance of Banks? The Case of Indonesian Banks

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Abstract: The disclosure of information on environmental, social, and governance (ESG) risks is increasingly important in financial and banking entities and the evaluation of its impact by supervisors. Therefore, the purpose of this study is to analyze the relationship between sustainability and financial performance in a geographical context that has not been studied. Specifically, this study examines the relationship of environmental, social, and governance (ESG) performance to the financial performance of Indonesian banking companies during the period 2010–20. As a methodology, we used panel data (ESG data from Thomson Reuters), statistical correlations, and regression models. Financial performance was measured by Return on Assets (ROA), Return on Equity (ROE), and Tobin’s Q (TQ). The findings show that ESG is negatively related to all dependent variables (ROA, ROE, and TQ), but each ESG pillar (environmental, social, and governance) yields different results. The social pillar has a significant positive effect on ROA and ROE, governance has a significant negative effect on TQ, and business environment has no significant impact on financial performance. As to the study’s limitations/implications, the findings advance decision makers’ understanding of the quality of organizations’ contributions to improving ESG reporting in financial reporting. The study’s findings on the relationship between ESG reporting and banks’ financial performance also have implications for stakeholders, ESG policymakers, academics, and assurance providers. While the specific research gap addressed is the relationship between ESG and financial performance in Indonesian banking companies, other interesting issues are the voluntary vs. mandatory nature of these reports and the impact of each modality on the variables considered.

Keywords: ESG; financial performance; banks; sustainability reporting; return on assets; return on equity; Tobin’s Q

1. Introduction

Disclosure of prudential information on environmental, social, and governance (ESG) risks is increasingly important in large institutions that trade securities on a regulated market in different regions, as indicated by research Gutiérrez-Ponce et al. [1] and Gerged et al. [2]. Therefore, the purpose of this study is to analyze the relationship between sustainability and financial performance in a geographical context that has not been studied. In Europe, the European Banking Authority (EBA) has modified the Directive and the Regulation on Capital Requirements (CRR2/CRD5) to improve institutions’ identification, assessment, and management of environmental, social, and governance (ESG) risks and supervisors’ assessment of their impacts. As ESG factors can have a major impact on banks’ bottom line and liquidity and change a bank’s risk profile directly and quickly, the European Commission has defined the scope of ESG risks. Financial institutions are currently struggling to maintain customer loyalty; thus, entities that can differentiate themselves and promote the inclusion of ESG factors in their business strategies will have a substantial competitive advantage, strengthening their reputation.
Investors’ demand for sustainable products has increased in the past decade. In financing, a full range of loans are oriented towards “green lending” and products such as green mortgages, lines of credit, and loans, as well as specialized financing projects linked to ESG criteria. Investment strategies offer green and social bonds to finance environmentally sustainable projects. Considerations of the term “finance” from an ethical point of view—including social, environmental, and climate-related factors—include the current concept of “Sustainable Finance.” A consensus exists that Sustainable Finance conditions economic growth towards more humane balanced development. The term socially responsible investment (SRI) refers to investments that include ESG criteria, as distinct from strictly economic criteria (risk, profitability, and liquidity).

In Indonesia, sustainability reporting (ESG) has been regulated since 2017 by Financial Services Authority Regulation No. 51/POJK.03/2017 [3], which covers the application of sustainable finance to financial services institutions, issuers, and listed companies. This regulation gives the recently stigmatized financial sector an excellent opportunity to convince society that it can play a role essential to all stakeholders (shareholders, employees, managers, etc.) by contributing to sustainable development. The “ideal scenario” for ESG policies involves widespread adoption of higher corporate governance (CG) standards, fewer environmental consequences, and increased social responsibility initiatives, as pointed out by Rivera et al. [4] and López-Arceiz et al. [5]. Although ESG practices aim to address issues important for all parties involved, competing managerial interests may prevent improvement on these issues. Similarly, the need for profitability may prevent adoption of stronger ESG policies.

The relationship between sustainability reporting and financial indicators has been studied in companies from different sectors and regions, obtaining a significant relationship between financial indicators and ESG information by Refs. [1,6,7]. The results of specific studies in the financial sector that relate ESG and financial performance (FP) depend on the regulatory context of each region. Research has shown significant differences between countries in the European Union, Asia, and the Americas following the 2008 financial crisis by Refs. [8–16].

This study analyzes how ESG affects FP in large Indonesian banks. We chose to examine these banks due to their significant contribution to expansion of the Indonesian and Southeast Asian economies. Indonesia is a major nation in Southeast Asia in promoting sustainable finance and sustainability reports to build trust, provide added value, and outline these entities’ corporate strategies. As a pioneer in understanding progress on these sustainability issues in Indonesia, our study attempts to evaluate Indonesian financial institutions’ awareness of the reality of ESG risks and their economic effects by analyzing the relationship between ESG and FP in banking companies. Therefore, this study aims to analyze the relationship between sustainability and financial performance in Indonesian banks that have been little studied so far, thereby filling an important research gap in sustainability for emerging economies.

This study contributes to the literature in several ways. Firstly, it advances earlier research on the relationship between sustainability reporting and varied perspectives on corporate performance. Secondly, the findings increase awareness of ESG policies in Indonesian banking, ultimately impacting the sustainable growth of banking in Southeast Asia. Thirdly, our in-depth analysis of ESG classifies it into three pillars—environmental, social, and governance—to determine which dimension of these pillars dominates in banking.

We analyze the relationship between ESG and FP using ESG data from Thomson Reuters for 2010–20. This time allows us to find ESG information before and after the 2017 Indonesian ESG regulation and learn how financial institutions have been preparing to disclose this type of non-financial information. During this period, five Indonesian banks published ESG data. The independent variable is the ESG score, calculated from ESG’s three pillars; the dependent variables are Return on Assets (ROA), Return on Equity (ROE), and Tobin’s Q (TQ) (ratio between a physical asset’s market value and its replacement value). In addition to addressing a specific research gap, i.e., the relationship between ESG
and FP in Indonesian banking companies, we also examine the impact of the voluntary vs. mandatory nature of these reports on the variables analyzed.

This study is structured as follows: Section 1 introduces the topic; Section 2 presents the literature review and theoretical background; Section 3 discusses the design and research methodology; Section 4 explains the empirical results and discussions; and Section 5 draws conclusions and discusses the implications and limitations of the study, as well as providing recommendations for further research.

2. Literature Review and Theoretical Background

Environmental, social, and corporate governance (ESG) issues have become a critical element of company strategy. Although these issues have been examined from various perspectives, analysis of the relationship between corporate social responsibility (CSR) and FP has produced diverse and contradictory results due to the problems measuring both concepts in different organizational and cultural environments by Refs. [17–19]. A study of sustainability and CSR reports in Turkey by Akdogan et al. [20] finds that Turkish companies prefer to invest in CSR projects that contribute directly to the country’s economic development. In African banks, however, the same CG structures both promote and hinder maximization of shareholder and stakeholder value. At the same time, the literature on ESG performance in the financial sector has increased considerably over the last decade, as shown by Galletta et al. [21], because the banking industry was not considered to be involved in the issue of climate change. This paradigm shift has been driven by regulators, who have raised the issue of sustainability in green finance and encouraged academics to investigate the impact of sustainability in the banking sector. Investigating ESG factors’ influence on the FP of banks in the Middle East, North Africa, and Turkey, El Khoury et al. [22] finds a non-linear relationship between ESG and FP. Examining the impact of voluntary CSR disclosure on FP in the Sub-Saharan banking sector, Siueia [14] finds that voluntary reporting on commitment to CSR could help the banking sector to improve its FP.

In the same line, Gallego-Álvarez and Ortas [23] studied the influence of cultural characteristics of communities on corporate environmental sustainability reporting practices, concluding that business sustainability behaviors are highly sensitive to stakeholders’ pressures and demands, which are ultimately conditioned by cultural environment. Pérez and del Bosque [24] highlight the importance of customers in banks’ social responsibility practices, while Shen et al. [25] find that banks that perform socially responsible activities overwhelmingly outperform non-CSR banks in terms of ROA and return on capital. Analyzing the ethical qualification of the banks in a European sample, Birindelli et al. [26] conclude that banks are now paying more attention to offering socially responsible products, while Carnevale, and Mazzuca [27] conclude that investors appreciate the additional and complementary disclosure provided by the sustainability report. Exploring a global sample of electricity companies’ motives for being socially responsible, Miras-Rodriguez et al. [28] find that the current economic crisis is testing these companies’ real commitment to CSR more than ever, especially when this commitment is stronger than the economic benefit.

Overall, the literature shows progress in stakeholders’ commitment to obtaining ESG information and, thus, companies’ recognition of its disclosure as a source of competitive advantage in the design of long-term strategies [29]. Along the same lines, Nekhili et al. [30] extend analysis to the role human resources (shareholders and employee representatives) plays in the ESG and FP of French companies, while Baldini et al. [31] show that company-level characteristics related to a company’s visibility (analyst coverage, cross-listing, leverage, and size) have a consistently positive effect on ESG disclosure both in general and in each pillar. However, Ching et al. [32] find no association between the accounting and FP variables in Brazil’s listed companies.

Many studies have analyzed the link between ESG and specific FP indicators, such as ROA, ROE, or TQ. For example, Buallay’s [33] investigation of the relationship between ESG and operational (ROA), financial (ROE), and market (TQ) performance in European
banks finds a significant positive impact of ESG on performance; however, measuring each
of the three ESG pillars individually shows that they affect FP differently.

Examining the impact of sustainable company performance on FP in service sector
companies listed on the Bombay Stock Exchange, Baldini [31] obtains a significant negative
relationship of environmental score to ROA and Return on Capital Employed (ROCE).
Similarly, Miralles-Quirós et al. [34] find that investors value each ESG pillar differently,
whereas Menicucci and Paulucci’s [16] study of the impact of ESG in the Italian banking
sector shows a negative impact of ESG policies on operations, albeit obtaining a different
impact for each of the three ESG dimensions. In evaluating the relationship between ESG
and FP in German companies, Velte [35] finds that ESG impacts ROA positively but has no
impact on TQ. Furthermore, examination of the three different components of ESG shows
that the impact of governance performance on financial performance is stronger than that
of environmental and social performance.

The literature has also examined the impact of ESG practices on companies in emerging
countries. For example, Naeem et al. [36] examine 1042 companies from 26 emerging
markets, while García et al. [37] examine whether a company’s financial profile is associated
with superior ESG performance in companies from Brazil, Russia, India, China, and
South Africa (the so-called BRICS countries). Analyzing the impact of ESG management
practices on FP in Malaysian companies listed on Bursa Malaysia, Ali et al. [38] find a
direct relationship between the two variables; however, another study of performance in
Malaysian joint stock companies by Atan et al. [39] finds no significant relationship between
individual or combined ESG factors and company profitability (i.e., ROE) or company
value (i.e., TQ). In research on sustainability reporting in business risk management and its
relationship to business performance in Malaysian oil and gas companies, Shad et al. [40]
conclude that sustainability reports promote competitiveness and enhance business value.
Finally, Mayur and Saravanan [41] examine the performance implications of board size,
composition, and frequency of board meetings on the performance of banks in India.

It is striking that so little research has explored the social responsibility of companies
and the sustainability reports in the area of the world including Indonesia as the region
has been regulated since 2017 and all large and listed companies are required to report on
ESG. One recent study of Tjahjadi et al. [42] uses the Triple Bottom Line (TBL) approach to
investigate the effect of good CG on corporate sustainability performance in non-financial
companies listed on the Indonesian Stock Exchange. Its authors stress that sustainability
information is relatively new in Indonesia and governance and managers must improve on
sustainability performance. Research is, thus, needed to fill this important gap to provide
more in-depth knowledge of this important/developing region and expand knowledge
and literature.

The literature has also studied this issue in developed countries in Europe; an exami-
nation of social responsibility disclosure in Portuguese banks based on legitimacy theory
and conducted by Branco and Rogrigues [43] finds some benefits resulting from changes in
some banks’ social responsibility disclosure (SRD) practices to legitimize their activities.
Similarly, a slightly different approach conducted by Avrampou et al. [44] finds a link
between the reported performance of European banks and their alignment with sustainable
development goals (SDGs).

A comparative study by Buallay [45] on the impact of ESG sustainability reports on
operational, financial, and market performance in the manufacturing and banking sectors
of 80 countries concludes that ESG affects all three types of performance in both sectors,
albeit in opposite directions. Nizam et al. [46] also analyze the role of environmental finance
in the FP of 713 banks from 75 countries worldwide.

The literature on how ESG disclosure affects FP in banking presents mixed findings.
According to Albertini [47], most results indicate that environmental performance improves
FP, though some suggest a neutral or even negative relationship. Numerous studies
demonstrate a positive correlation between banks in emerging and developed countries
by Refs. [9,12,17,25,33,48–52]. Most research concludes that the relationship between ESG
pillars and FP is more complicated than a direct cause-and-effect relationship and that more analysis of each component of ESG strategy is needed due to the potential for strong correlations of the multiple ESG pillars to FP. For example, Buallay’s [33] examination of sustainability reports and performance in 880 banks in developed and developing countries after the financial crisis shows that ESG only improves the accounting and market performance of banks in developed countries.

Another ESG pillar is governance. CG involves establishing mechanisms that add value to the company in different ways and areas. It favors internal decision making, allowing the company to act more quickly and efficiently, and emphasizes making decisions with responsibility, transparency, accountability, and equitable treatment. As CG practices reflect the company’s decision making culture, they have been the object of concern and study in different contexts.

Various authors have studied the influence of governance, business model design, and value chain (i.e., value network, relationships with supply chain partners, and value propositions towards customers) on financial results by Refs. [53–55]. A specific study of banks by John et al. [56] finds that high leverage and a close relationship with shareholders improves governance of financial institutions. Similarly, Grove et al. [57] argue that CG structures ought to align the interests of managers and shareholders, while Kusi et al. [58] argue that CG structures in general promote maximization of shareholder or stakeholder value. In a more fine-grained analysis, Orazalin and Mahmood [59] investigate the effects of different sets of CG practices on bank performance before, during, and after the financial crisis.

Although agency theory argues that managerial and board incentives are a crucial aspect of CG and improve FP, Harkin et al. [60] and Shakil et al. [13] find no connection between FP and the effectiveness of CG. Hussain et al.’s [61] study of the relationship between CG and TBL sustainability performance in US-based companies finds that CG helps to improve the establishment of standards in the economic dimension of sustainability within the framework of Global Reporting Initiative (GRI) standards.

This literature review identifies numerous studies of the effect of CG quality on FP in financial entities by Refs. [10,13,33,60,62–69]. Thus far, this literature agrees that increasing environmental and social investments (e.g., paper and water reduction policies, electricity saving plans) improves banks’ competitive advantages, while environmentally conscious and proactive environmental management can lead to creation of distinctive organizational capabilities to reduce environmental impact as a source of competitive advantage. However, the review identifies few studies on the ESG of companies in Indonesia, even though sustainability reporting has been mandatory since 2017. Despite Tjahjadi and Soewarno’s [42] study on the ESG of non-financial companies in Indonesia, no studies of this topic focus exclusively on Indonesian banking. Our investigation, thus, aims to fill a fundamental research gap for Indonesian banks, which consists of analyzing the relationship between sustainability (ESG) and bank financial performance in the context of emerging economies. Building on previous studies, such as that conducted by Azmi et al. [70], we disaggregate the ESG pillars to determine the relationship between ESG and FP in Indonesian banking companies.

Based on the goals proposed and the literature review, we formulate the following research questions (RQs):

RQ1: How prepared are Indonesian financial institutions to report on ESG after the 2017 regulation?
RQ2: What level of ESG information do Indonesian banks present in each of the three pillars?
RQ3: What level of financial performance (ROA, ROE, TQ, and leverage) do Indonesian banks achieve?
RQ4: What statistical connections and associations exist between ESG and FP in banking companies in Indonesia?
3. Research Methodology

To achieve our research objectives and answer the questions raised, we conducted an exploratory, descriptive, and inferential study. The methods included panel data analysis (ESG data from Thomson Reuters), statistical correlations, and regression models.

3.1. Sources of ESG Data

To obtain a sample of banks in Indonesia for the period 2010–20, we first identified the banking population in Indonesia. The country had 47 banks as of 31 December 2021. Next, we ensured that all banks were active and had not undergone a merger during the observation period. We also established that all banks belonged to the Indonesian banking system (both public and private).

Thirdly, we analyzed the banks that published ESG data (Thomson Reuters) during the observation period. Five banks consistently reported ESG data (2010–20), yielding a total of 55 observations. The criteria followed to determine the sample required that the banks: (1) had been active during 2010–20; (2) had ESG data in Thomson Reuters for 2010–20; and (3) had undergone no merger during the observation period.

3.2. Variable Measurement

This study used ESG data from Thomson Reuters, a reputable global databank with one of the most comprehensive ESG datasets and over 450 historically available distinct ESG variables. Commonly used by researchers, the database’s official website provides a clear and robust methodology for ESG data. Although previous studies of the banking sector used the Refinitiv database by Refs. [10,12,13,16,34], our study was, to the best of our knowledge, the first to examine all three pillars of ESG performance in the Indonesian banking sector. In other words, the sustainability of banks was measured using a Triple Bottom Line (TBL) approach, which was a way of defining the sustainability of a company through a process with three elements: environmental, social, and economic/governance. The results of these three pillars of ESG allowed use to answer the research questions RQ1 and RQ2.

3.3. Independent Variables of the Three Pillars of ESG and Dependent Variables

We based our definition and choice of the independent variables for the three pillars of ESG on previous banking studies by Refs. [10,13,16,33,62]. We included environmental activities (ENVI), social activities (SOC), and governance activities (GOV), as defined in Table 1.

Previous research that tested sustainability reporting in banking also used ROA, ROE, and TQ as dependent variables of FP by [10,15,33,41,46,47,71].

This study used two control variables to examine the relationship between sustainability reports and FP: size and leverage. Size was measured using the natural logarithm of total assets by [33,35,46,72]. Leverage was measured by calculating total debt and was used in previous studies by [25,33,46]. Leverage represents the risk the bank owns; the greater the bank’s debt, the more debt impacts the amount of the bank’s funds available for CSR activities. With the results of these variables, it was possible to answer the research question RQ3.

3.4. Research Hypotheses

We formulated the following research hypotheses based on our research goals and the theoretical background, literature review, and RQs developed for exploratory and inferential study of the relationships between ESG and FP (ROA, ROE, and TQ) in Indonesian banks.
Table 1. Explanation of variables.

<table>
<thead>
<tr>
<th>Variables</th>
<th>Labels</th>
<th>Formula</th>
</tr>
</thead>
<tbody>
<tr>
<td>Independent variables</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Environmental, social, and governance</td>
<td>ESG</td>
<td>Thomson Reuters Index: Combines the environmental, social, and governance indexes.</td>
</tr>
<tr>
<td>Social activities</td>
<td>SOC</td>
<td>T.R. Index: Measures banks’ disclosure of workforce, community, product responsibility, bank effectiveness toward job satisfaction, and safe and healthy workplace, while developing both equal and diversity opportunity.</td>
</tr>
<tr>
<td>Governance activities</td>
<td>GOV</td>
<td>T.R. Index: Consists essentially of balancing the interests of a company’s many stakeholders.</td>
</tr>
<tr>
<td>Dependent variables</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Return on Assets</td>
<td>ROA</td>
<td>Net income after taxes divided by average total assets</td>
</tr>
<tr>
<td>Return on Equity</td>
<td>ROE</td>
<td>Net income after taxes divided by average total equity</td>
</tr>
<tr>
<td>Tobin’s Q</td>
<td>TQ</td>
<td>Market value of equity and total book value of liabilities, divided by total book value of assets</td>
</tr>
<tr>
<td>Control variables</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Size</td>
<td>SZ</td>
<td>Natural logarithm of total assets</td>
</tr>
<tr>
<td>Leverage</td>
<td>LEV</td>
<td>Total leverage</td>
</tr>
</tbody>
</table>

These hypotheses assumed disaggregation of an ESG performance proxy and FP. Hypotheses H1a, H1b, and H1c were proposed as constituents of each of the hypotheses formulated (H1, H2, and H3):

**Hypothesis 1 (H1):** A positive or negative relationship exists between environmental issues and the financial performance (FP) of Indonesian banks.

**Hypothesis 1a (H1a):** A positive or negative relationship exists between environmental activities and bank financial performance as measured by ROA.

**Hypothesis 1b (H1b):** A positive or negative relationship exists between environmental activities and bank financial performance as measured by ROE.

**Hypothesis 1c (H1c):** A positive or negative relationship exists between environmental activities and bank financial performance as measured by (Tobin’s Q).

**Hypothesis 2 (H2):** A positive or negative relationship exists between social issues and the financial performance (FP) of Indonesian banks.

**Hypothesis 2a (H2a):** A positive or negative relationship exists between social activities and bank financial performance as measured by ROA.

**Hypothesis 2b (H2b):** A positive or negative relationship exists between social activities and bank financial performance as measured by ROE.

**Hypothesis 2c (H2c):** A positive or negative relationship exists between social activities and bank financial performance as measured by (Tobin’s Q).

**Hypothesis 3 (H3):** A positive or negative relationship exists between governance issues and the financial performance (FP) of Indonesian banks.

**Hypothesis 3a (H3a):** A positive or negative relationship exists between governance activities and bank financial performance as measured by ROA.

**Hypothesis 3b (H3b):** A positive or negative relationship exists between governance activities and bank financial performance as measured by ROE.
Hypothesis 3c (H3c): A positive or negative relationship exists between governance activities and bank financial performance as measured by (Tobin’s Q).

3.5. Empirical Model

We analyzed the statistical connections and associations that exist between ESG and PF in banking companies in Indonesia to answer the research question QR4; we then contrasted the hypotheses formulated using panel data techniques and the EViews statistical tool. Techniques for panel data modeling were used extensively in numerous banking studies of FP by [10,14–16,33,72]. Panel regressions and either fixed or random effects models improved results by limiting unobserved heterogeneity and enabling analysis of data over a longer period, as determined by Laguir et al. [51].

Panel data also provided a large number of data points, reducing collinearity among independent variables and increasing degrees of self-determination. To determine the suitability of a fixed effects model (FEM) or random effects model (REM), we employed the Hausman test. FEM examined variation within the unit. As each company had a separate set of base levels for the dependent variable, panel regression with fixed effects assumed that the intercept was not a random value. Panel regressions with REM, in contrast, examined fluctuations within each company over time and between companies in the same year. The null hypothesis suggested that FEM and REM were equivalent in Hausman test capabilities, making it impossible to distinguish between the two approaches. When a null hypothesis was rejected, FEM was more suitable because REM was inappropriate.

Based on the studies cited above, this analysis used econometric equations with the following multiple regression models:

\[ FP_{it} = \beta_0 + \beta_1 \text{ESG}_{it} + \beta_2 \text{SIZE}_{it} + \beta_3 \text{LEV}_{it} + e_{it} \]  (Model 1)

\[ FP_{it} = \beta_0 + \beta_1 \text{ENVI}_{it} + \beta_2 \text{SOC}_{it} + \beta_3 \text{GOV}_{it} + \beta_4 \text{SIZE}_{it} + \beta_5 \text{LEV}_{it} + e_{it} \]  (Model 2)

In this research, two models were proposed. The first model analyzed the relationship between ESG and the financial performance of banks. The second model analyzed in depth the relationship between the three ESG pillars (environment, social and governance) and the financial performance of Indonesian banks. Where the dependent variable is financial performance (FP), divided into three proxies (ROA, ROE, and TQ), “\( \beta_0 \)” is the constant and “\( \beta_1-6 \)” is the slope of the controls and independent variables. The independent variable, sustainability reporting, is measured by four indicators (environmental, social, and governance [ESG], environment activities [ENVI], social activities [SOC], and governance [GOV]). The control variables were size [SZ], total assets, and leverage (LEV). “\( e \)” is the random error, “\( i \)” the bank, and “\( t \)” the period. While we proposed only one research model, we divided this model into three parts when conducting regression testing because the dependent variable FP had three indicators: ROA, ROE, and TQ.

4. Results and Discussion

4.1. Descriptive Statistics

The descriptive statistics results show how prepared Indonesian financial institutions are to report on ESG after the 2017 regulation and their level of ESG reporting in each of the three pillars: (environmental, social and governance). In addition, these results allow us to answer the research questions RQ1, RQ2, and RQ3.

Table 2 presents the descriptive statistics for all variables. The ESG average obtained is 59.32. The highest score is 88 out of 100 and the minimum 30, indicating that no bank achieves the maximum ESG score possible. The Governance pillar scores highest of the three, with a mean score of 68.70. The second highest is Social (mean score 61.16) and the lowest Environmental (mean score 40.63). The maximum scores for each ESG pillar indicate that none of the pillars achieves a maximum score of 100. The maximum score for the Environmental pillar is 79, for Social 94, and for Governance 90. These results indicate that banks in Indonesia are making a strong effort to report on their sustainability activities,
though they still have room for improvement. It is significant that from the triple button analysis, the environmental variable is the least informed. This result can be explained because, within the culture of banks, their financial operations are not associated with the environment. This is changing since it is the banks that finance the companies that affect the environment with their activities.

Table 2. Descriptive statistics.

<table>
<thead>
<tr>
<th>Variables</th>
<th>Obs.</th>
<th>Mean</th>
<th>Standard Deviation</th>
<th>Maximum</th>
<th>Minimum</th>
<th>Jarque-Bera Probability</th>
</tr>
</thead>
<tbody>
<tr>
<td>ESG</td>
<td>55</td>
<td>59.32</td>
<td>12.96</td>
<td>88</td>
<td>30</td>
<td>0.829</td>
</tr>
<tr>
<td>ENVI</td>
<td>55</td>
<td>40.63</td>
<td>21.80</td>
<td>79</td>
<td>10</td>
<td>0.062</td>
</tr>
<tr>
<td>SOC</td>
<td>55</td>
<td>61.16</td>
<td>18.28</td>
<td>94</td>
<td>22</td>
<td>0.275</td>
</tr>
<tr>
<td>GOV</td>
<td>55</td>
<td>68.70</td>
<td>13.14</td>
<td>90</td>
<td>34</td>
<td>0.515</td>
</tr>
<tr>
<td>ROA</td>
<td>55</td>
<td>2.47</td>
<td>0.72</td>
<td>3.66</td>
<td>0.38</td>
<td>0.175</td>
</tr>
<tr>
<td>ROE</td>
<td>55</td>
<td>16.94</td>
<td>8.49</td>
<td>35.89</td>
<td>1.50</td>
<td>0.816</td>
</tr>
<tr>
<td>TQ</td>
<td>55</td>
<td>1.11</td>
<td>0.11</td>
<td>1.40</td>
<td>0.94</td>
<td>0.545</td>
</tr>
<tr>
<td>SZ</td>
<td>55</td>
<td>6.444</td>
<td>5.21</td>
<td>1.610</td>
<td>1.182</td>
<td>0.178</td>
</tr>
<tr>
<td>LEV</td>
<td>55</td>
<td>5.545</td>
<td>3.35</td>
<td>9.975</td>
<td>1.383</td>
<td>0.183</td>
</tr>
</tbody>
</table>

The mean return on ROA assets is 2.47 with a standard deviation of 0.72, while the financial return on equity ROE is 16.94 with a dispersion of 8.43. The standard deviation is lower than mean score, indicating that the data are homogeneous and the score deviation level is low. To measure whether the data are normal, we observe whether the Jarque Bera variables distributed normally. Distribution is normal as the variables have a Jarque Bera probability of >5%. ESG scores are 0.829, composed of environmental (0.062), social (0.275), governance (0.515), ROA (0.175), ROE (0.816), TQ (0.545), SZ (0.178), and LEV (0.183).

4.2. Empirical Results

The results of the correlations between all the ESG variables and the ESG triple bottom variables (ENVI, SOC and GOV) as an independent variable; ROA, ROE and TQ as dependent variables; and SZ and LEV as control variables are shown in Tables 3 and 4.

Table 3. Correlations between ESG and financial performance.

<table>
<thead>
<tr>
<th></th>
<th>ESG</th>
<th>ROA</th>
<th>ROE</th>
<th>TQ</th>
<th>SIZE</th>
<th>LEV</th>
</tr>
</thead>
<tbody>
<tr>
<td>ESG Pearson</td>
<td>−0.1957</td>
<td>−0.4704 **</td>
<td>−0.4497 **</td>
<td>0.6218 **</td>
<td>0.5994 **</td>
<td></td>
</tr>
<tr>
<td>Sig</td>
<td>0.1522</td>
<td>0.0020</td>
<td>0.0006</td>
<td>0.0000</td>
<td>0.0000</td>
<td></td>
</tr>
<tr>
<td>ROA Pearson</td>
<td></td>
<td>0.6919 **</td>
<td>0.2590 *</td>
<td>0.2010</td>
<td>0.2187</td>
<td></td>
</tr>
<tr>
<td>Sig</td>
<td></td>
<td>0.0000</td>
<td>0.0562</td>
<td>0.1239</td>
<td>0.1087</td>
<td></td>
</tr>
<tr>
<td>ROE Pearson</td>
<td></td>
<td></td>
<td>0.4050 **</td>
<td>0.0198</td>
<td>0.0504</td>
<td></td>
</tr>
<tr>
<td>Sig</td>
<td></td>
<td></td>
<td>0.0022</td>
<td>0.8861</td>
<td>0.7149</td>
<td></td>
</tr>
<tr>
<td>TQ Pearson</td>
<td></td>
<td></td>
<td></td>
<td>0.0551</td>
<td>0.0842</td>
<td></td>
</tr>
<tr>
<td>Sig</td>
<td></td>
<td></td>
<td></td>
<td>0.6896</td>
<td>0.5409</td>
<td></td>
</tr>
<tr>
<td>SZ Pearson</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>0.7150 **</td>
<td></td>
</tr>
<tr>
<td>LEV Pearson</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>0.0000</td>
<td></td>
</tr>
<tr>
<td>Sig</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Correlation is significant * 5%, ** 1%.
Table 4. Correlation between ESG pillars (ENVI, SOC, GOV) and financial performance.

<table>
<thead>
<tr>
<th></th>
<th>ENVI</th>
<th>SOC</th>
<th>GOV</th>
<th>ROA</th>
<th>ROE</th>
<th>TQ</th>
<th>SIZE</th>
<th>LEV</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>PEARSON</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>ENVI</td>
<td>0.6272 **</td>
<td>−0.1611</td>
<td>−0.0878</td>
<td>−0.1213</td>
<td>−0.1955</td>
<td>0.3581 **</td>
<td>0.3506 **</td>
<td></td>
</tr>
<tr>
<td>Sig</td>
<td>0.0000</td>
<td>0.2400</td>
<td>0.5239</td>
<td>0.3778</td>
<td>0.1527</td>
<td>0.0073</td>
<td>0.0087</td>
<td></td>
</tr>
<tr>
<td>SOC</td>
<td></td>
<td>0.0732</td>
<td>−0.0557</td>
<td>−0.3079 *</td>
<td>−0.3750 **</td>
<td>0.7335 **</td>
<td>0.7183 **</td>
<td></td>
</tr>
<tr>
<td>Sig</td>
<td></td>
<td>0.5951</td>
<td>0.6862</td>
<td>0.0222</td>
<td>0.0048</td>
<td>0.0000</td>
<td>0.0000</td>
<td></td>
</tr>
<tr>
<td>GOV</td>
<td></td>
<td></td>
<td>−0.2291</td>
<td>−0.3212 **</td>
<td>−0.3193 **</td>
<td>0.0514</td>
<td>0.0305</td>
<td></td>
</tr>
<tr>
<td>Sig</td>
<td></td>
<td></td>
<td>0.0925</td>
<td>0.0168</td>
<td>0.0175</td>
<td>0.7095</td>
<td>0.8253</td>
<td></td>
</tr>
<tr>
<td>ROA</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>0.6919 **</td>
<td>0.2590 *</td>
<td>0.2010</td>
<td>0.2187</td>
</tr>
<tr>
<td>Sig</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>0.0000</td>
<td>0.0562</td>
<td>0.1239</td>
<td>0.1087</td>
</tr>
<tr>
<td>ROE</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>0.4050 **</td>
<td>0.0198</td>
<td>0.0504</td>
</tr>
<tr>
<td>Sig</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>0.0022</td>
<td>0.8861</td>
<td>0.7149</td>
</tr>
<tr>
<td>TQ</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>0.0551</td>
<td>0.0842</td>
</tr>
<tr>
<td>Sig</td>
<td></td>
<td></td>
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<td></td>
<td></td>
<td></td>
<td>0.6896</td>
<td>0.5409</td>
</tr>
<tr>
<td>SZ</td>
<td></td>
<td></td>
<td></td>
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<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>LEV</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>0.7150 **</td>
</tr>
<tr>
<td>Sig</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>0.0000</td>
</tr>
</tbody>
</table>

Notes: Correlation is significant * 5%, ** 1%.

Table 3 shows the correlations between ESG variables as independent variables; ROA, ROE, and TQ as dependent variables; and SZ and LEV as control variables. ESG is negatively correlated with bank financial performance (FP) for ROA, ROE, and TQ. These results are consistent when testing for correlation with ESG pillars (Table 4), where ENVI correlates negatively with FP for ROA, ROE and TQ, SOC correlates negatively with FP for ROA, ROE and TQ, and GOV correlates negatively with FP for ROA, ROE and TQ. When banks divert their funds and focus on funding sustainable programs and initiatives, they position themselves at a disadvantage relative to banks that are not committed to such activities.

These results remain consistent when testing for correlation with ESG pillars (Table 4), where ENVI correlates negatively with FP for ROA, ROE and TQ, SOC correlates negatively with FP for ROA, ROE and TQ, and GOV correlates negatively with FP for ROA, ROE and TQ. When banks divert their funds and focus on funding sustainable programs and initiatives, they position themselves at a disadvantage relative to banks that are not committed to such activities.

This result supports the findings of previous studies by Refs. [15,33,73]. As ESG requires substantial financial resources, ESG burdens bank profitability in the short term; this finding is in line with prior research by Esteban-Sanchez et al. [10]. Management should, thus, concern itself with planning, supervising, and evaluating CSR so that it has a significant impact on bank profitability.

Table 5 presents the results of the regression model 1 ESG and financial performance (ROA, ROE, and TQ). The test was administered three times in this regression: firstly, to test ESG against ROA; secondly, to test ESG against ROE; and thirdly, to test ESG against TQ. As these results determine the best model—the Common Effects Model (CEM), FEM, or REM—we chose the FEM as the best for this regression based on the results of the Hausman Test (Table 5) for the three variables of financial performance: ROA, ROE, and TQ (0.0000; 0.0030; 0.0000) < 0.05. The regression results highlight that the relationship between environmental, social, and corporate governance (ESG) performance is not significant in financial performance when measured by ROA and ROE with a value
of \( p (0.96; 0.92) > 5\% \). However, ESG negatively affects TQ with a coefficient of \(-0.0048\) and a \( p \) value of \( 0.029 < 5\% \).

**Table 5. Regression Model 1.**

<table>
<thead>
<tr>
<th>Variable</th>
<th>Coeff. (( p )-Value)</th>
<th>Coeff. (( p )-Value)</th>
<th>Coeff. (( p )-Value)</th>
</tr>
</thead>
<tbody>
<tr>
<td>ESG</td>
<td>-0.0005 (0.96)</td>
<td>-0.0084 (0.92)</td>
<td>-0.0048 ** (0.029)</td>
</tr>
<tr>
<td>Control variables</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>SZ</td>
<td>3.5957 (0.22)</td>
<td>-50.5743 (0.02)</td>
<td>-0.9275 (0.02)</td>
</tr>
<tr>
<td>LEV</td>
<td>-4.3641 (0.15)</td>
<td>37.9430 (0.10)</td>
<td>0.9729 (0.01)</td>
</tr>
<tr>
<td>Adj R-squared</td>
<td>0.4705</td>
<td>0.7761</td>
<td>0.3826</td>
</tr>
<tr>
<td>Prob (F-statistic)</td>
<td>0.0000</td>
<td>0.0000</td>
<td>0.0000</td>
</tr>
<tr>
<td>Hausman test (Prob)</td>
<td>0.0000</td>
<td>0.0030</td>
<td>0.0000</td>
</tr>
</tbody>
</table>

Notes: Significant at \( p \)-value ** < 5\%. Coeff. = t-stat.

The regression of Model 2, which individually analyzes the ESG triple bottom line and its relationship with financial performance (Table 6), indicates that the environmental variable (ENVI) is not significant in the financial performance of banks (ROA, ROE, and TQ) with \( p \) value \((0.81; 0.15; 0.56) > 5\%\).

**Table 6. Regression Model 2.**

<table>
<thead>
<tr>
<th>Variable</th>
<th>Coeff. (( p )-Value)</th>
<th>Coeff. (( p )-Value)</th>
<th>Coeff. (( p )-Value)</th>
</tr>
</thead>
<tbody>
<tr>
<td>ENVI</td>
<td>-0.0012 (0.81)</td>
<td>-0.0566 (0.15)</td>
<td>0.0005 (0.56)</td>
</tr>
<tr>
<td>SOC</td>
<td>0.0202 * (0.05)</td>
<td>-0.0373 (0.63)</td>
<td>0.0042 * (0.01)</td>
</tr>
<tr>
<td>GOV</td>
<td>-0.0112 (0.13)</td>
<td>0.0835 (0.14)</td>
<td>-0.0025 ** (0.03)</td>
</tr>
<tr>
<td>Control variables</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>SZ</td>
<td>2.5067 (0.38)</td>
<td>-42.6263 (0.06)</td>
<td>-1.0370 (0.02)</td>
</tr>
<tr>
<td>LEV</td>
<td>-3.8031 (0.19)</td>
<td>30.7428 (0.17)</td>
<td>1.1364 (0.01)</td>
</tr>
<tr>
<td>Adj R-squared</td>
<td>0.5083</td>
<td>0.7872</td>
<td>0.5124</td>
</tr>
<tr>
<td>Prob (F-statistic)</td>
<td>0.0000</td>
<td>0.000000</td>
<td>0.000000</td>
</tr>
<tr>
<td>Hausman Test</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Model</td>
<td>Fixed Effect</td>
<td>Fixed Effect</td>
<td>Fixed Effect</td>
</tr>
</tbody>
</table>

Notes: Significant at \( p \)-value * < 1%; ** < 5\%. Coeff. = t-stat.

We, thus, reject Hypotheses H1a, H1b, and H1c. These results do not match those of the previous study carried out by Albertini [47]. Stakeholders do not understand that regulated environmental practices and directed investment decisions should provide good future FP, as shown by Duque-Grisales and Aguilera-Caracuel [73] and Buallay [74].

The results, thus, show that environmental activity (ENVI) in Indonesian banking tends to fall short of the compulsory standard approved in 2017. The descriptive statistics in Table 2 provide evidence to support this conclusion as the score for ENVI is only 40 points out of a possible 100.

The social activities variable (SOC) exercises a positive and significant influence on ROA and TQ, with coefficients of 0.0202 and 0.0042 and\( p \) values of 0.05 and 0.01 < 5\%. SOC is not significant for ROE, with a \( p \) value of 0.63 > 5\%. H2a and H2c are, thus, not accepted, in line with previous research conducted by Velte [35]. SOC is not significant for ROE, leading us to reject H2b, which is in line with Miras-Rodriguez et al. [28]. Governance (GOV) is not significant to ROA and ROE, with a \( p \) value \((0.13; 0.14) > 5\%\). Interestingly,
governance is significantly negative for TQ performance with a coefficient of $-0.0025$ and a p-value of $0.03 < 5\%$.

This result is similar to previous research conducted by Esteban-Sanchez et al. [10] and Soana [48]; it shows that executive management or boards of directors engage in governance activities for their own benefit, making these activities a cost burden that reduces the company’s profitability and value by Ref. [33]. This finding aligns with Qureshi et al. [75], who conclude that governance practices in European companies do not impact firm value.

The SIZE (SZ) as a control variable in Regression Model 1 has a significant effect and a negative sign on the financial performance indicators (ROE and TQ) with a value of $p (0.02; 0.02) < 5\%$. It is also in line with Model 2 (Table 6), in which SZ is significant and has a negative sign for the financial indicators ROE and TQ with a value of $p (0.06, 0.02)$. Consequently, the size of banks is inversely related to their Return on Equity (ROE), which measures both a company’s profitability and the relationship between net income and the number of equities; with TQ, it also measures the relationship between the market value of a physical asset and its replacement value. Leverage (LEV) as a control variable in Model 1 (Table 5) has a significant positive effect on ROE and TQ with a value of $p (0.10; 0.01)$, while in Model 2 (Table 6) LEV has a significant positive effect on TQ with a p value of $0.01 < 5\%$.

Table 7 presents the results of the hypotheses formulated on the relationships between ESG and FP in Indonesian banks.

<table>
<thead>
<tr>
<th>Hypothesis</th>
<th>Result</th>
</tr>
</thead>
<tbody>
<tr>
<td>H1a: A positive or negative relationship exists between environmental activities and bank financial performance as measured by (ROA).</td>
<td>Rejected</td>
</tr>
<tr>
<td>H1b: A positive or negative relationship exists between environmental activities and bank financial performance as measured by (ROE).</td>
<td>Rejected</td>
</tr>
<tr>
<td>H1c: A positive or negative relationship exists between environmental activities and bank financial performance as measured by (Tobin’s Q).</td>
<td>Rejected</td>
</tr>
<tr>
<td>H2a: A positive or negative relationship exists between social activities and bank financial performance as measured by (ROA).</td>
<td>Accepted</td>
</tr>
<tr>
<td>H2b: A positive or negative relationship exists between social activities and bank financial performance as measured by (ROE).</td>
<td>Rejected</td>
</tr>
<tr>
<td>H2c: A positive or negative relationship exists between social activities and bank financial performance as measured by (Tobin’s Q).</td>
<td>Accepted</td>
</tr>
<tr>
<td>H3a: A positive or negative relationship exists between governance activities and bank financial performance as measured by (ROA).</td>
<td>Rejected</td>
</tr>
<tr>
<td>H3b: A positive or negative relationship exists between governance activities and bank financial performance as measured by (ROE).</td>
<td>Rejected</td>
</tr>
<tr>
<td>H3c: A positive or negative relationship exists between governance activities and bank financial performance as measured by (Tobin’s Q).</td>
<td>Accepted</td>
</tr>
</tbody>
</table>

5. Conclusions, Implications, Research Limitations

As detailed in the literature review, numerous studies stress that banks must factor the risks of ESG reporting into their risk management frameworks. In addition to regulatory pressures for banks to submit sustainability reports and increased demand for sustainable products from investors, consensus argues that stakeholders should view financial institutions as entities committed to ESG values. In 2016, ESG regulation went into effect for all financial institutions in Indonesia, requiring them to complete sustainability reports. After the financial crisis, regaining customer trust was a significant factor in the development of ESG practices in credit institutions.
The literature review identifies several previous studies analyzing the relationship between ESG and banking FP in developed countries. Our study analyses the relationship between ESG and banking FP using Thomson Reuters ESG data for 2010–2020 for banks in Indonesia. We analyze ESG in depth by dividing it into three pillars (environmental, social, and governance) to determine which specific pillars have a significant effect on FP in banking. Future research could examine which dimensions of the three pillars dominate in banking.

Our descriptive analysis reveals that ESG scores in Indonesian banking remain below mandatory levels. The highest scores for the ESG pillars correspond to governance activities and social activities. Environmental activities had the lowest average, indicating that environmental activities at Bank Indonesia did not receive enough attention.

The results show that ESG is negatively related to all dependent variables (ROA, ROE, and TQ). Although each ESG pillar yields different results, social activities influence ROA and TQ. We, therefore, reject Hypotheses H1a, H1b, and H1c. According to these results, stakeholders do not believe that regulated environmental practices and specific investment decisions will provide good financial returns in the future.

This research has shown that there is a negative and inverse relationship between corporate governance activities and the bank’s financial performance as measured by Tobins Q and, consequently, the H3c is accepted. It has also been shown that corporate governance activities do not explain the financial performance of Indonesian banks in terms of Return on Asset (ROA) and Return on Equity (ROE); thus, hypotheses H3a and H3b are rejected. Unlike previous research findings by Refs. [10,48], this result shows that the executive management or board of directors engage in sustainability activities for their own benefit, making these activities a cost burden that reduces the company’s profitability and value [33]. Managers of financial companies should take care, however, to plan, monitor, and evaluate the sustainability of their activities and the latter’s impact on the profitability of their balance sheets.

This finding aligns with stakeholder theory, which argues that good governance activities for banks’ customers, suppliers, and employees strongly impact the bank’s profitability and market value. The environment, in contrast, is not significant in ROA and ROE. Diverting funds to finance social programs and initiatives puts banks at a disadvantage relative to competitors that do not engage in social activities and whose stakeholders do not believe that environmental practices, specific investment decisions, and other similar initiatives must provide good FP in the future by Refs. [73,74]. As the descriptive statistics demonstrate, environmental activity (ENVI) in Indonesian banking tends to fall below the compulsory standard approved in 2017. Obtaining only 40 out of 100 possible points, the ENVI score indicates that ESG will affect banks’ profitability in the short term, in line with Esteban-Sanchez [10].

Although stakeholders or investors may lack awareness of financial activities’ short-term impacts on the environment, we believe that banks’ environmentally conscious actions will increase their competitive advantage (corporate image, corporate awareness, intangible assets, etc.) in both the short and long term. From a governance perspective, there is no doubt that investors greatly appreciate banks with quality governance. If banks are high-risk companies, high quality governance is imperative.

This study has significant implications for stakeholders, ESG policymakers, and academics. For stakeholders, it clarifies the relationship between ESG disclosure in sustainability reports and the FP of Indonesian banks. For investors, it reveals that relating sustainability reports to FP helps to reduce risks for banks. For policymakers, the results provide new information on the impact and credibility of banks’ sustainability reports, improving understanding of how and why organizations modify their sustainability practices. For academics, the study contributes to an emerging body of literature aligned with sustainability reporting. From a practical perspective, the results advance understanding of financial institutions’ commitment to sustainability and the credibility of transparent and reliable ESG reporting efforts.
For stakeholders, the study demonstrates a relationship between ESG and FP, although the relationship is negative. The average score indicates that banks’ ESG and specific ESG pillar activities are still far from optimal. Management must focus more on environmental conditions, social contributions, and CG to achieve a positive impact on profitability and company value in the long run. Finally, for policy makers, our research helps to identify insight into which ESG pillars banks most frequently address. Our results show that Indonesian banking mostly focuses on social activities, followed by governance activities and, finally, obligations to the environment.

Nevertheless, this paper’s conclusions must be viewed with caution because of its inherent limitations. The main research limitation is unavailability of ESG data in Indonesian banks. Thomson Reuters does not include much data ESG on Indonesian banks. Our conclusions must, therefore, be viewed with caution due to small sample size. Therefore, future research should broaden the sample of banks and extend it to banks from other countries in the same geographic area, such as banks from emerging economies in Asia. Many future research opportunities remain that could enrich understanding of the relationship between ESG and FP. Subsequent studies could contribute to the literature by adding moderating variables (CEO structure, corporate reputation, impact of the COVID-19 phenomenon, etc.) to determine the impact of the relationship between ESG and company performance.

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