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Green Finance Practices in Funding Policies of Leading Telecommunications Companies in Indonesia: Case Study of Infrastructure Subsidiaries

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ABSTRACT : *This study examines the green financing policies of the Indonesian Telecommunications Company, focusing on integrating Environmental, Social, and Governance (ESG) criteria. The research assesses the eligibility of subsidiaries for green funding, evaluates the effectiveness of green financial mechanisms, and analyzes their impact on sustainability practices. It also explores how subsidiaries align with the broader ESG objectives of the company. A comprehensive framework was developed to integrate ESG aspects into the company's funding policies. This includes steps such as submission and review of funding applications, company performance assessments, integration of financial and ESG assessments, and continuous monitoring and evaluation. Data collection involved analyzing financial records, ESG reports, and conducting stakeholder interviews. Findings indicate that adopting a structured approach to green financing, with regular ESG assessments and enhanced reporting, can significantly improve sustainability performance and align with global standards. This approach ensures financial health and supports sustainable business practices. Consequently, the Indonesian Telecommunications Company is positioned as a leader in sustainable business practices within the telecommunication industry, contributing positively to national and global sustainability efforts. The study provides valuable insights for optimizing funding strategies, enhancing ESG performance, and promoting long-term business excellence.*

KEYWORDS - *Green Financing, Environmental, Social, and Governance (ESG), Sustainability, Telecommunication Industry, Analytic Hierarchy Process*

I. INTRODUCTION

Climate change causes a significant rise in the average global temperature, resulting in adverse effects on economic growth worldwide. These facts not only compel governments to prioritize carbon emission control and sustainable development, but also prompt financial institutions and individual investors to change their investment approach. As a result, green finance and environmental, social, and governance (ESG) are rapidly growing (W. Li et al., 2024). ESG standards evaluate a business's sustainability and impact beyond financial performance. ESG standards cover environmental, social, and governance criteria, focusing on factors like energy consumption, pollution, and climate change. Social standards assess a business's impact on society, emphasizing labor rights and diversity. Governance standards ensure compliance with laws and promote fair management. Implementing ESG standards is crucial for investors, businesses, and consumers. Over 80% consider ESG criteria when making investment decisions, and companies with strong ESG practices are more attractive to customers and employees. Adopting ESG standards ensures long-term business viability, attracts investors, and fosters innovation (Kostic, 2023).

Economic development is closely linked to environmental climate, and a global consensus exists on developing a low-carbon economy for sustainable development. China's economy is transitioning from high-speed growth to high-quality development centered around dual carbon goals (carbon peaking and carbon neutrality). The Chinese government has proposed concepts and policies to balance economic growth and environmental protection, including low-carbon cities, circular economy, and green finance. Green finance is a tool that provides financial support and environmental benefits, aiming to raise funds from financial institutions to economic entities involved in environmental protection projects and activities (T. Zhang, 2023). Green finance is a financial sector that integrates environmental and social responsibility into financial activities. It strengthens the peer effect of corporate ESG disclosure, encouraging companies in the same industry or similar characteristics to adopt common trends or standards. Green finance favors enterprises with strong ESG performance when allocating capital, encouraging them to prioritize ESG information and voluntarily disclose it to secure additional financial support. Successful companies that obtain green financial backing through ESG disclosure may inspire others to increase their ESG disclosures to avoid market marginalization. Green financial practices also enhance the standardization and transparency of ESG disclosure, improving the efficiency and accuracy of reporting (Liang & Yang, 2024).

Over the past ten years, telecommunications industry at internationally faced significant transformations, facilitating several digital advancements. The fast spread of high-speed internet, mobile devices, big data, cloud technologies, over-the-top media services, and 5G mobile networks has been the driving force behind these changes (Grishunin et al., 2022). The digital era has merged conventional telecommunications companies with digital service providers, focusing on economic activities and value-added benefits. Sustainability and environmental social governance (ESG) are essential values in business strategies, enhancing sustainable economic growth. ESG disclosure patterns in the telecommunications industry and approaches to implementing ESG practices, which are crucial for establishing a competitive advantage(Jasni et al., 2020). Companies such as NTT, Orange, Telefónica, Verizon, and Vodafone have observed a rise in the issue of green bonds within the telecommunications sector. Investors recognize that incorporating ESG (Environmental, Social, and Governance) standards into organizations can enhance employee motivation, attract highly skilled personnel, align with customer preferences for sustainable products, decrease operating expenses, and broaden potential prospects (Nikolaeva-Aranovich, 2023).

Indonesia's telecommunications market, with over 230 million mobile internet users, is one of the largest in Southeast Asia. The sector contributed over 800 trillion Indonesian rupiah to the national Gross domestic product (GDP) in 2022. The industry includes mobile and fixed broadband subscriptions and mobile phone services. As Indonesia becomes more digitized, the telecommunications market is expected to continue growing (Siahaan, 2024). A leading government-owned telecommunications company in Indonesia, referred to as ITC (Indonesian Telecommunications Company) for confidentiality at the request of the data provider, is actively advancing the national economy with the goal of achieving digital sovereignty through innovative initiatives. ITC expresses support for the government's endeavors to enhance domestic development performance and achieve sustainability through the harmonization of environmental, social, and governance (ESG) goals. ITC invites stakeholders to participate in pursuing sustainability goals for a brighter future in the dynamic business world. The Indonesian Telecommunications Company (ITC) currently lacks a formal funding policy that incorporates green financing, which is increasingly essential in today's business environment. From the case study above, to build a competitive advantage in the telecommunications industry, highlights the urgency for adopting green financing in the telecommunications industry.

Infrastructure projects in telecommunications involve extensive construction activities, use of resources, and environmental impact. These projects are capital-intensive and have long-term implications for both the company and the communities they serve. The construction industry is a highly hazardous sector, with frequent fatal and non-fatal occupational injuries due to its unique nature. The industry is characterized by constant changes, poor working conditions, and tough environments, such as noise, vibration, dust, and weather exposure. The coordination of interdependent contractors, sub-contractors, and operations increases the risk of injury. Occupational injuries impact safety, health, and economics due to high costs associated with work injuries. Construction safety has gained attention due to the increasing workers' compensation insurance premiums due to the increased medical costs and convalescent care. Studies across industries suggest that injury rates and costs are higher than average in the construction industry (Pinto et al., 2011). Pertamina, an Indonesian state-owned enterprise (SOE), has successfully implemented a green financing framework, which has significantly contributed to its impressive performance. Pertamina's ESG risk rating has also risen to the top position globally within the Integrated Oil and Gas sub-industry, according to ESG Rating agency Sustainalytics. As of December 1, 2023, Pertamina's score improved to 20.7 (Medium Risk) from 22.1 (Medium Risk), with a lower score indicating better risk management. This success highlights the importance of integrating ESG criteria into funding policies to enhance risk management and sustainability performance (Green Financing Framework, 2022). This research uses an infrastructure company as a case study due to its high-risk nature and the significant impact of ESG integration on sustainability performance in telecommunications industry.

This thesis aims to analyze the green financing policies of the Indonesian Telecommunications Company (ITC), focusing on the integration of environmental, social, and governance (ESG) factors. It will cover funding eligibility criteria, green financial mechanisms effectiveness, and their impact on subsidiaries' sustainability practices. The study will also examine the operations of ITC's infrastructure subsidiaries also known as ITC Property and their alignment with ITC's broader ESG goals. The objectives are to develop a comprehensive framework for integrating green financing, evaluate the eligibility of ITC's infrastructure subsidiaries for green funding, and identify strategies for subsidiaries to align with ITC's sustainability spirit.

By conducting this comprehensive analysis, the Indonesian Telecommunications Company (ITC) aims not only to enhance the sustainability of its funding policies but also to demonstrate its commitment to sustainable business practices. The findings from this study will provide valuable insights for the company, helping it to optimize its funding strategies and strengthen its sustainability initiatives. Moreover, this research will contribute to the wider discourse on how organizations can effectively integrate ESG principles into their operations, setting new standards for long-term business excellence in the telecommunications industry.

II. LITERATURE REVIEW

Initial research indicated that renewable energy financing could be a viable solution to address the use of fossil fuels. Nevertheless, the advancement of the clean energy sector is contingent upon adequate funding, mostly because of the nascent stage of clean energy technology and the need on technical research and development strategies. The main challenge in expanding sustainable energy is obtaining sufficient funding, which is hindered by market inefficiencies and the need for significant initial strategic investment. Resolving the challenge of funding is crucial for promoting the expansion of the industry (M. Li & Lin, 2024). Firms make decisions regarding green investments by considering the economic, environmental, and social advantages. Passive green investment is motivated by governmental legislation and public awareness of the environment, whereas proactive green investment aims to enhance social standing and enhance environmental responsibility performance. Investing in pollution control at the production source is likely to create additional advantages and contribute to both the environment and the economy (W. Zhang et al., 2024).

Green finance is an economic practice that encourages environmentally friendly growth. It is backed by the government and carried out by the financial industry. Its objective is to build a correlation between economic advancement and environmental preservation, promoting both economic expansion and sustainable development. Research has demonstrated that green financial products can effectively promote the economic growth of financial markets (Sachs, 2019). Studies have demonstrated that organizations with higher environmental ratings experience benefits such as enhanced access to funding, lower borrowing costs, greater emphasis on environmentally conscious innovation, and stimulated economic growth (R. Zhang et al., 2021). Green funding additionally aids firms' endeavors to perform research and trials on environmentally-friendly technologies (Zhao et al., 2024).

Chen and Xie (2022) examine the influence of a company's Environmental, Social, and Governance (ESG) score on its financial performance. The authors analyze the correlation between the disclosure of environmental, social, and governance (ESG) information and the financial performance of Chinese enterprises listed on the stock market between 2000 and 2020. The study use Bloomberg's ESG ratings as an exogenous variable and utilizes the staggered Difference-in-Differences (DID) method to mitigate endogeneity concerns. The findings indicate that the disclosure of environmental, social, and governance (ESG) factors enhances the financial performance of companies. The impact is more pronounced in firms that have ESG investors and those that have been established for a longer period of time, attract significant media attention, and incur substantial agency fees. The study also investigates the moderating impact of diverse ESG investors. The study additionally reveals a positive correlation between superior ESG performance of companies and greater Tobin's Q ratios. Furthermore, ESG investors are found to have a beneficial moderating influence (Chen & Xie, 2022).

The study examines the influence of Environmental, Social, and Governance (ESG) performance on the value and profitability of companies. The analysis utilizes data from 1,720 organizations spanning the period from 2013 to 2021, employing a panel data fixed effects model. The findings indicate a direct correlation between ESG composite scores and firm value, with Social and Governance factors also demonstrating a positive correlation. Nevertheless, there is no correlation between the environment and the worth of a corporation, primarily because it takes a significant amount of time to see tangible outcomes or involves substantial investment expenses. The study provides evidence in favor of stakeholder theory, since shareholders, investors, creditors, and governments anticipate corporations to allocate greater resources towards environmental, social, and governance (ESG) initiatives. The research indicates that corporate management should allocate additional resources, while policymakers should implement further measures to bolster support for ESG (Aydoğmuş et al., 2022).

The study reveals that ESG disclosure scores positively impact financial performance, market valuation, and debt cost for firms. Sustainable initiatives minimize conflicts among stakeholders and align business objectives, increasing financial performance. Participation in social activities also generates higher financial performance by having a favorable relationship with ROA and market value. Investment in ESG activities attracts more investors, leading to more business activity, investable money, and cash flow. Addressing stakeholder needs through enhanced ESG disclosure provides a competitive advantage over industry peers. Transparency about sustainability efforts reduces debt cost, as lenders consider information related to sustainability practices when assessing risk and creditworthiness. Emerging markets firms should consider redesigning policies, processes, and governance practices to adopt environment-friendly practices (Malik & Kashiramka, 2024).

This study investigates the influence of ESG disclosure scores and their individual components on the overall value of companies operating in the telecommunications industry. Bloomberg offers ESG disclosure scores for major publicly traded companies, which are determined by the level of a company's ESG transparency. The study determined that both the overall ESG factor and individual governance component significantly influence the value of telecommunication firms. However, the disclosure of environmental and social aspects does not have any notable impact. The valuation of companies is more influenced by governance ratings than by social concerns or environmental scores, potentially because of variations in transparency. Disclosing ESG scores has a substantial and favorable impact on the value of companies, which could motivate governments, organizations, and financial institutions to invest in activities related to corporate social responsibility (Nikolaeva-Aranovich, 2023)

The research demonstrates that organizations that take into account environmental, social, and governance (ESG) risk aspects enhance their business assessments by utilizing the EV/EBITDA ratio, especially in the telecommunications sector. This is very beneficial in advanced countries, specifically in European markets. Research indicates that organizations' endeavors in sustainable development promote effective commercial practices while simultaneously addressing social issues. Minimizing environmental, social, and governance (ESG) hazards enhances the competitive advantage of corporations. The results may motivate corporations to see non-financial transparency as a significant measure of long-term sustainability (Khorin & Krikunov, 2021). When Environmental, Social, and Governance (ESG) factors are regarded as essential components of a company's future operations, stakeholders provide a higher evaluation to the company. This research is expected to bolster investors' confidence in companies that have made advancements in environmental, social, and governance (ESG) practices(Khorin & Krikunov, 2021b). ESG disclosure patterns in the telecommunications industry and approaches to implementing ESG practices in telecommunications companies. Both of these aspects appear to be important for building competitive advantage, in addition to addressing issues raised by interested stakeholders (Jasni et al., 2020).

Industry-specific sustainability accounting standards are developed and distributed by the Sustainability Accounting Standards Board (SASB). The IFRS Foundation's International Sustainability Standards Board (ISSB) took over management of the SASB Standards in August 2022. To guarantee that these guidelines continue to be applicable and helpful to investors as well as preparers, the ISSB has pledged to uphold, improve, and develop them. In an effort to close the gap between financial and sustainability performance, the SASB guidelines place a strong emphasis on the financial materiality of sustainability challenges (Sustainability Accounting Standard Sustainable Industry Classification System ® (SICS ®), 2023).

The purpose of SASB Standards is to assist organizations in providing information regarding sustainability-related risks and opportunities that may reasonably have an impact on the organization's cash flows, cost of capital, or access to financing in the short, medium, or long term. An organization chooses which Industry Standard(s), disclosure subjects, and related metrics to report based on how they apply to its operations. Generally speaking, an organization should adhere to the SASB Standard specified in SICS® for its principal industry. Nonetheless, businesses that conduct a significant amount of business in several SICS® industries ought to consult and take into account the suitability of the metrics and disclosure subjects found in supplementary SASB Standards. It has been determined that the disclosure subjects and related metrics included in this Standard are likely to be beneficial to investors. However, the reporting body is ultimately in charge of determining what constitutes a materiality (Sustainability Accounting Standard Sustainable Industry Classification System ® (SICS ®), 2023). Industry-specific standards are provided by the Sustainability Accounting Standards Board (SASB) to enable efficient management and reporting of sustainability-related risks and opportunities. Important sustainability disclosure subjects and metrics that are anticipated to have an effect on the financial performance of businesses in this area are identified in the SASB standards for the Engineering and Construction Services sector. These measures are intended to improve openness and give stakeholders and investors useful information. As a thorough guide for evaluating and disclosing on ESG (Environmental, Social, and Governance) performance in this business

The Analytic Hierarchy Process is a comprehensive theory of measurement. It is employed to calculate ratio scales by comparing discrete and continuous pairs in multilevel hierarchical structures. These comparisons can be derived from either empirical measurements or a foundational scale that represents the relative intensity of preferences and emotions. The Analytic Hierarchy Process (AHP) focuses specifically on deviations from consistency and the quantification of these deviations, as well as the interdependence within and between the groups of parts in its structure. Its most extensive utilization has been observed in the field of multicriteria decision making, as well as in planning and resource allocation, and dispute resolution. The Analytic Hierarchy Process (AHP) is a versatile framework that allows for both deductive and inductive reasoning, eliminating the need for syllogistic logic. This is achieved by simultaneously considering multiple elements, taking into account interdependence and feedback, and making numerical compromises to reach a synthesis or conclusion (Saaty & Vargas, 2001).

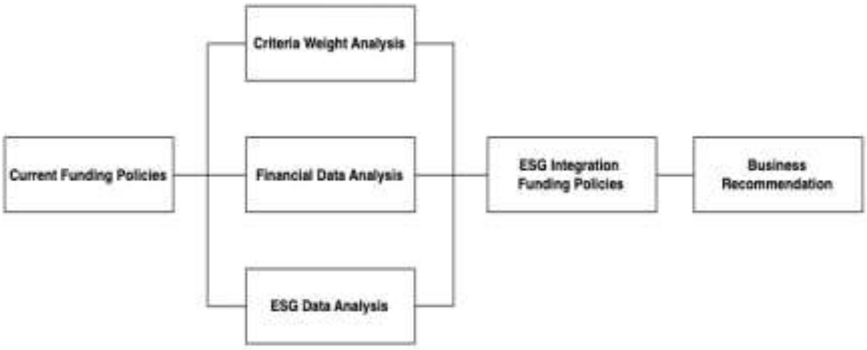

Figure 1. Conceptual Framework

This conceptual framework as shown in Fig. 1 outlines how the Indonesian Telecommunications Company can enhance its financial performance and sustainability by integrating Environmental, Social, and Governance (ESG) criteria into its current funding policies. The expected outcome of integrating ESG criteria into the funding policies includes improved financial performance and enhanced sustainability. This reflects a balanced approach that combines traditional financial metrics with new ESG indicators. The ultimate goal of the framework is to achieve better financial health and long-term sustainable business practices.

III. RESEARCH METHODOLOGY

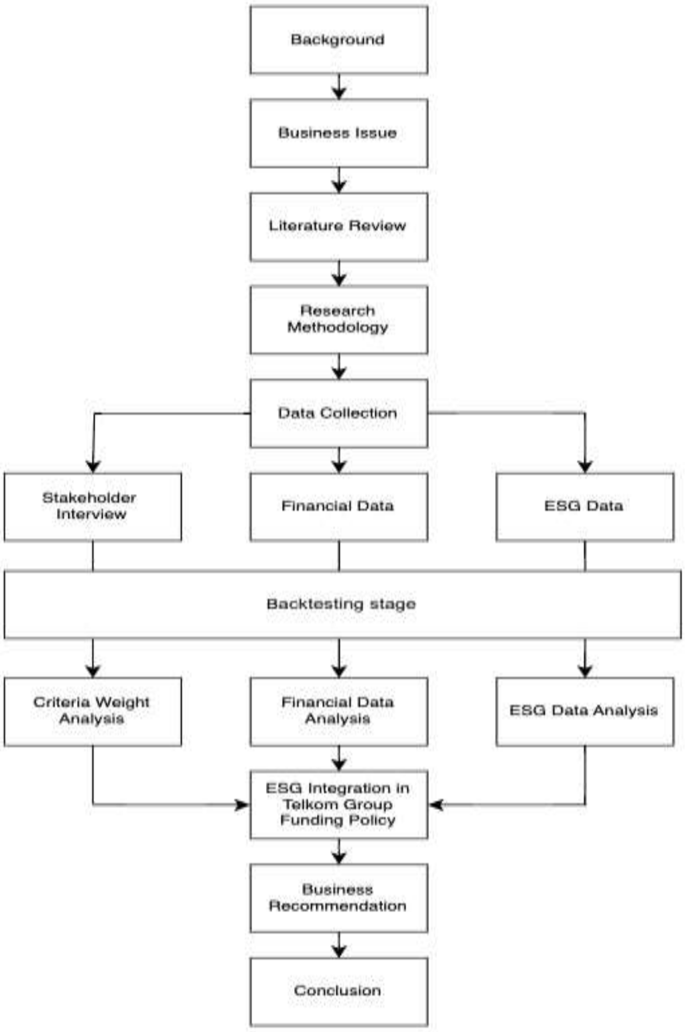

Figure 2. Research Design

The research design as shown in Fig. 2 outlines the systematic steps undertaken in this study to effectively integrate Environmental, Social, and Governance (ESG) criteria into the Indonesian Telecommunications Company's funding policies. An extensive background investigation is done at the outset of this study in order to comprehend the significance of sustainability and the backdrop of the telecommunications sector. The specific business problem, which is that the Subsidiary does not match the financial ratio requirements for funding from the Indonesian Telecommunications Company, is then identified.

After that, a comprehensive analysis of the literature is done to see what has been written about pertinent subjects like SASB standards, green finance, ESG integration, and how they affect financial performance. This review aids in the creation of a conceptual framework and offers a theoretical basis for the study.

The mixed-methodologies technique used, which combines qualitative and quantitative methods to provide a thorough analysis, is described in full in the research methodology section. A key component of this research strategy is data collecting, which includes financial data, ESG data, and stakeholder interviews. The backtesting stage follows, where the collected data is validated against historical data to ensure its accuracy and reliability. This step is crucial for confirming the robustness of the data and the subsequent analysis. To acquire their opinions on ESG aspects and financial requirements, structured questionnaires are distributed to important persons from several departments within the Indonesian Telecommunications Company, such as Treasury and Budget Policy, Strategic Accounting, Corporate Finance, and Risk and Sustainability.

Stakeholder interviews are useful in ascertaining the relative weight or importance of various ESG criteria. In order to evaluate the current financial performance, the Subsidiary's financial data for the years 2021 and 2022 is also gathered and examined simultaneously. SASB standards pertinent to the Engineering & Construction Services sector are also used in the collection of ESG performance data.

A thorough analysis is subsequently performed on the obtained data. Calculating important financial ratios and locating regions that don't adhere to regulations are part of financial analysis. Based on SASB guidelines, ESG scoring is used to assess the Subsidiary's ESG performance. The financial and ESG criteria are integrated through the use of the Analytic Hierarchy Process (AHP), allowing for a rigorous and quantitative evaluation to rank financing opportunities and needs.

By following this structured research design, the study aims to provide a robust framework for integrating ESG criteria into the Indonesian Telecommunications Company’s funding policy, thereby supporting sustainable business practices and improving the financial and sustainability performance of the Subsidiary.

IV. RESULTS AND DISCUSSION

IV.1. Criteria Weight Analysis

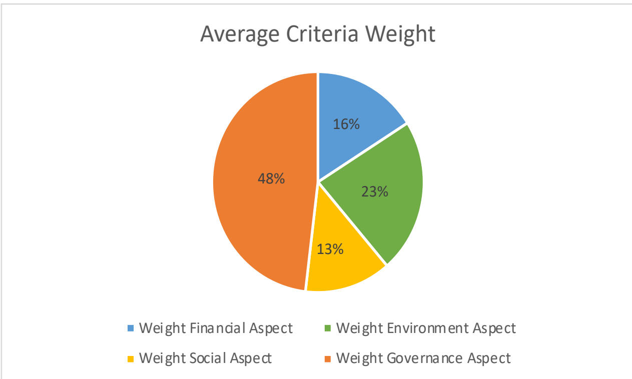

Figure 3. Average Criteria Weight

The criteria weight analysis for evaluating funding within the Indonesian Telecommunications Company involves four key aspects: Financial, Environmental, Social, and Governance. The aggregated data from multiple departments, such as Treasury & Budget Policy, Strategic Accounting Policy, Risk Management & Sustainability, and Corporate Finance, provides valuable insights into the key priorities and factors influencing funding decisions. The analysis of these criteria weights provides critical insights into how funding decisions can be optimized to align with the strategic priorities of the Indonesian Telecommunications Company.

The Governance aspect is the most heavily weighted criterion, comprising 48% of the total weight. This significant emphasis on governance highlights the importance the Indonesian Telecommunications Company places on robust corporate governance practices. Effective governance is essential for ensuring transparency, accountability, and ethical management, which are foundational for long-term sustainability and investor confidence. This high weighting indicates that the Indonesian Telecommunications Company prioritizes governance to mitigate risks, enhance operational efficiency, and maintain a positive reputation, all of which are crucial for securing funding.

The Environmental aspect accounts for 23% of the total weight. This substantial weighting reflects the Indonesian Telecommunications Company's commitment to environmental sustainability. Given the increasing global focus on climate change and environmental impact, prioritizing environmental criteria is essential for aligning with regulatory requirements and stakeholder expectations. By emphasizing environmental performance, the Indonesian Telecommunications Company can attract ESG-focused investors, comply with environmental regulations, and contribute to sustainable development goals. This focus also helps in mitigating environmental risks and reducing the company's ecological footprint.

The Financial aspect holds a 16% weight, indicating that while financial health is important, it is balanced against other criteria. This suggests that the Indonesian Telecommunications Company values a holistic approach to funding decisions, where financial performance is considered alongside environmental, social, and governance factors. Financial criteria ensure that the company maintains profitability, liquidity, and overall financial stability, which are necessary for sustaining operations and growth. However, the relatively lower weight compared to governance and environmental aspects suggests that financial metrics are not the sole determinants of funding decisions.

The Social aspect is the least weighted criterion at 13%. Despite being the smallest proportion, the inclusion of social criteria underscores the Indonesian Telecommunications Company's recognition of the importance of social responsibility. Social performance metrics could include employee welfare, community engagement, and social impact initiatives. Prioritizing social aspects can enhance the company's reputation, foster positive community relationships, and ensure compliance with social regulations. It also supports long-term sustainability by addressing the social dimensions of business operations.

Currently, the Indonesian Telecommunications Company primarily uses financial aspects to determine funding decisions. This traditional approach focuses on profitability, liquidity, and financial stability to ensure that subsidiaries can sustain operations and repay debts. While this method ensures a sound financial basis for funding, it overlooks other critical dimensions of business performance that contribute to long-term sustainability and risk management. The integration of these criteria into the funding policy of the Indonesian Telecommunications Company indicates a comprehensive approach to evaluating funding requests. By incorporating ESG (Environmental, Social, Governance) aspects along with financial metrics, the Indonesian Telecommunications Company can ensure that funding decisions support sustainable and responsible business practices. This holistic approach aligns with global trends where investors and stakeholders increasingly prioritize ESG considerations in their investment decisions.

IV.2. Financial Data Analysis

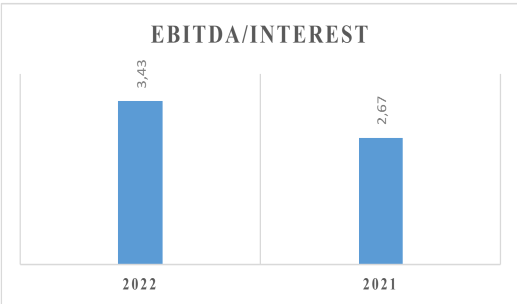

Figure 3. Subsidiary EBITDA/Interest Chart 2021-2022

The above graphic depicts the EBITDA/Interest ratio for the Subsidiary between the years 2021 and 2022. EBITDA, an acronym for Earnings Before Interest, Taxes, Depreciation, and Amortization, is a crucial metric that measures a company's operational profitability. The interest component of EBITDA represents the expenses incurred in servicing the company's debt. The EBITDA/Interest ratio provides helpful insights about the company's capacity to pay its interest costs using its operating earnings.

In 2021, the EBITDA/Interest ratio was recorded at 2.67, indicating that the company's earnings were 2.67 times its interest obligations. By 2022, this ratio had improved to 3.43, showing a positive trend in the company's ability to cover its debt servicing costs. The increase from 2.67 in 2021 to 3.43 in 2022 suggests that the Subsidiary has made significant improvements in its operational efficiency or profitability.

However, it is important to note that both these figures fall short of the minimum requirement of 4 times set by the Indonesian Telecommunications Company for its subsidiaries to qualify for funding. This indicates that the company may still face challenges in adequately covering its interest obligations. This requirement is crucial as it ensures that the subsidiaries have a substantial buffer to cover their interest payments, thereby reducing the risk of financial distress.

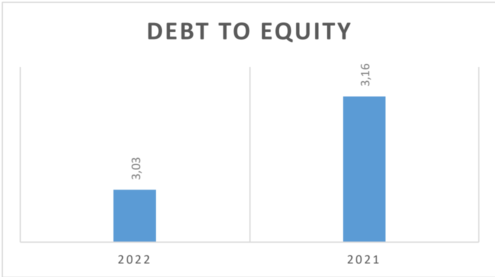

Figure 4. Subsidiary Debt to Equity Chart 2021-2022

The provided graphic depicts the Debt to Equity ratio for the Subsidiary between the years 2021 and 2022. The Debt to Equity ratio is a crucial financial measure that evaluates the overall liabilities of a company in relation to its shareholder equity. This metric offers valuable information about the company's financial leverage and risk level. A lower ratio signifies a more favorable equilibrium between debt and equity financing, which is typically favored by investors and creditors.

In 2021, the Debt to Equity ratio for the Subsidiary was recorded at 3.16, indicating that the company's debt levels were 3.16 times its equity. In 2022, this ratio slightly improved to 3.03, reflecting a minor reduction in the company's financial leverage. However, both these figures significantly exceed the maximum requirement of 2 times set by the Indonesian Telecommunications Company for its subsidiaries to qualify for funding. This requirement ensures that subsidiaries maintain a balanced and sustainable capital structure, minimizing financial risk.

In conclusion, while the Subsidiary has shown a slight improvement in its Debt to Equity ratio from 2021 to 2022, it still remains well above the required threshold of 2 times. This necessitates strategic interventions to reduce financial leverage, improve equity financing, and align with the Indonesian Telecommunications Company's funding criteria to ensure long-term financial sustainability and operational efficiency.

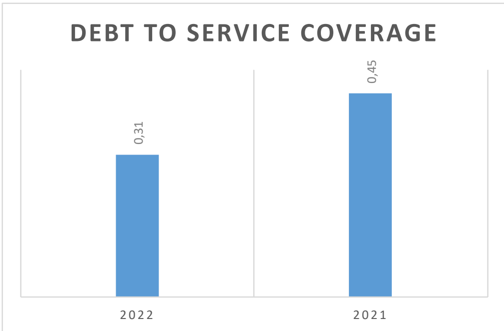

Figure 5. Subsidiary Debt to Service Coverage Chart 2021-2022

The above graphic depicts the Debt to Service Coverage ratio (DSCR) for the Subsidiary between the years 2021 and 2022. The Debt to Service Coverage ratio quantifies a company's capacity to fulfill its debt commitments using its operating income. It is determined by dividing the operational income by the total debt service commitments. This ratio is crucial in assessing the financial health of a company, as it indicates whether the company generates sufficient income to cover its debt payments.

In 2021, the DSCR for the Subsidiary was recorded at 0.45, indicating that the company's operating income was only 45% of its total debt service obligations. In 2022, this ratio further declined to 0.31, showing a decrease in the company's ability to cover its debt payments from its operating income. Both these figures are significantly below the minimum requirement of 1.25 times set by the Indonesian Telecommunications Company for its subsidiaries to qualify for funding. This requirement ensures that subsidiaries have enough operating income to cover their debt obligations comfortably, reducing the risk of default and financial distress.

In conclusion, the Debt to Service Coverage ratio for the Subsidiary has significantly declined from 2021 to 2022, and it remains well below the required threshold of 1.25 times. This situation necessitates immediate strategic interventions to improve operating income, manage debt obligations more effectively, and align with the Indonesian Telecommunications Company's funding criteria to ensure long-term financial sustainability and operational efficiency.

IV.3. ESG Data Analysis

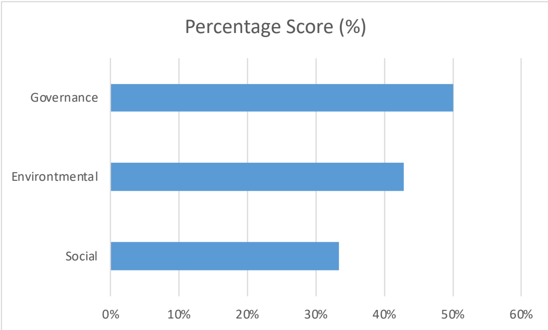

Figure 6. Subsidiary ESG Disclosure

The Subsidiary scored 4 out of 8 in the Governance aspect. This reflects a fair governance framework but also highlights areas for enhancement. The company has projects certified to third-party multi-attribute sustainability standards, demonstrating a commitment to sustainable building practices. Additionally, the Subsidiary has established policies to prevent bribery, corruption, and anti-competitive behavior. However, the assessment reveals gaps in tracking and disclosing active projects and backlogs in countries with low rankings in Transparency International's Corruption Perception Index, as well as monetary losses from legal proceedings associated with charges of bribery, corruption, and anti-competitive practices. Improving transparency, enforcing stricter ethical standards, and strengthening risk management practices can contribute to better governance performance.

The Subsidiary achieved a score of 3 out of a possible 7 in the Environmental aspect. This indicates a moderate level of performance in environmental sustainability. The company has established processes to comply with environmental regulations and manage environmental risks associated with project design, siting, and construction. Furthermore, the Subsidiary incorporates operational-phase energy and water efficiency considerations into its project planning and design. However, there are areas needing significant improvement, such as maintaining and disclosing backlogs of hydrocarbon and renewable energy projects. The lack of data on these critical metrics suggests a gap in tracking and reporting environmental impacts comprehensively. Enhancing initiatives such as renewable energy adoption, waste reduction programs, and comprehensive environmental impact assessments could help improve this score.

In the Social aspect, the Subsidiary scored 2 out of 6. This is the lowest among the three ESG criteria, indicating significant room for improvement in social responsibility. The assessment highlights deficiencies in tracking and disclosing defect- and safety-related rework costs, monetary losses from legal proceedings related to safety incidents, and the total recordable incident rate (TRIR) for both direct and contract employees. While the company tracks and discloses fatality rates, the lack of comprehensive safety performance data suggests inadequate management and reporting of workforce health and safety. To improve this score, the Subsidiary should develop robust employee wellness programs, increase community involvement initiatives, and enhance safety management practices, including comprehensive tracking and reporting of safety incidents.

Benchmarking is a strategic tool used to compare a company's performance against its peers to identify areas of improvement and competitive advantages. For ITC Property, benchmarking against APLN aims to assess its industry position, identify best practices, make informed decisions, and enhance competitiveness. APLN is chosen due to similar market dynamics, regulatory environments, and economic conditions, and the revenue gap between the two companies is not too wide. The analysis will also consider MTEL, a subsidiary of ITC, to determine its priority for funding. The AHP (Analytic Hierarchy Process) method will be used to analyze this benchmarking, providing a clear position/score of ITC Property relative to APLN and MTEL. This analysis will provide valuable insights into ITC Property's strengths and weaknesses, as well as its eligibility for funding. By applying AHP, ITC Property can better align its strategies to enhance performance, secure funding, and achieve sustainable growth.

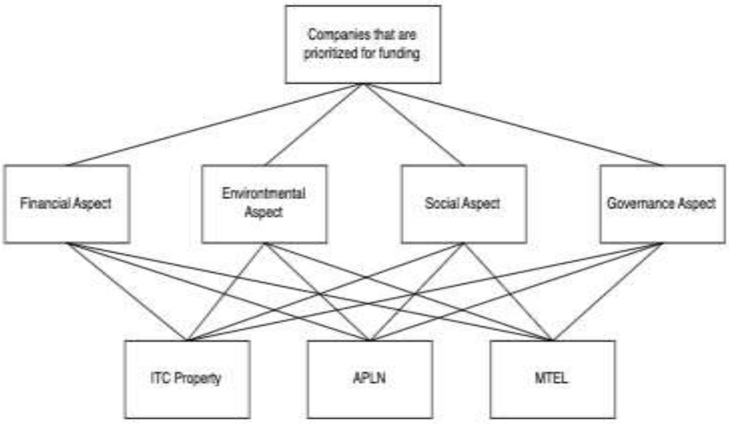

Figure 6. AHP Hierarchy Tree

The hierarchy tree diagram for the AHP (Analytic Hierarchy Process) analysis represents a structured approach to evaluating and prioritizing companies for funding based on multiple criteria. At the top level, the goal is to identify and prioritize companies that meet the funding criteria, referred to as "Companies that are prioritized for funding." This objective is supported by four key criteria in the second level: Financial Aspect, Environmental Aspect, Social Aspect, and Governance Aspect. n the third level, the alternatives being evaluated are ITC Property, APLN, and MTEL (a subsidiary of ITC). Each of these companies is connected to all the criteria, indicating that they will be evaluated against all aspects. The AHP method involves making pairwise comparisons of these criteria for each company to determine their relative importance and to calculate a composite score. This score will help identify which company is more aligned with the funding priorities and should be prioritized for funding.

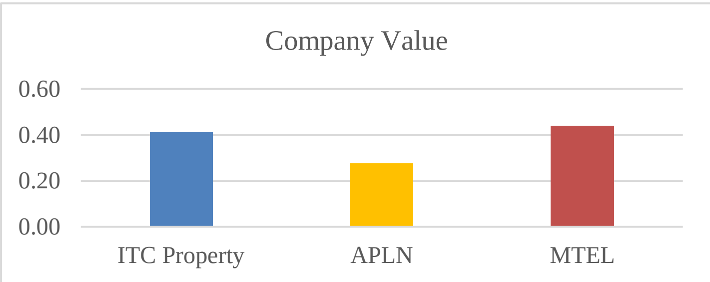

Figure 7. Company Value from AHP Process

The overall company value of ITC Property indicates a potential for accessing green funding, given its strong governance and social performance. These aspects are critical in demonstrating a commitment to sustainability, which is highly valued in green funding assessments. The higher scores in governance and social aspects suggest that ITC Property has a solid foundation in ethical business practices and social responsibility. These strengths can be leveraged to build a compelling case for green funding.

To enhance its eligibility for green funding, ITC Property must focus on improving its financial and environmental performance. By addressing its weaknesses and leveraging its strengths, ITC Property can enhance its competitiveness and attract green funding, aligning with ITC Property's strategic goals and contributing to long-term sustainable growth.

IV.4. Comprehensive framework for integrating green financing in Indonesian Telecommunications Company Group Funding Policy

The objective of developing a comprehensive framework for green financing integration at the Indonesian Telecommunications Company aims to incorporate environmental, social, and corporate governance (ESG) aspects into the company's funding policies. This integration ensures that funding decisions align with global sustainability standards, attract ESG-conscious investors, and support the long-term strategic goals of the company. The following are the proposed funding steps for the Indonesian Telecommunications Company as shown in the graphic below:

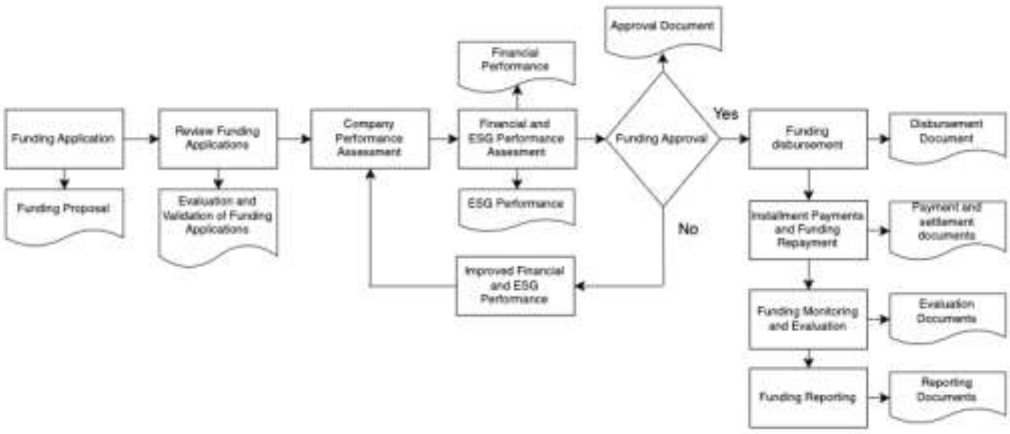

Figure 7. Proposed Framework for integrating green financing in ITC Funding Policy

The following are the funding steps in the green financing integration framework in the Indonesian Telecommunications Company Funding Policy:

1. Funding Application

Subsidiaries or project managers submit detailed proposals outlining the project specifics, objectives, and required financial resources. This step ensures that the project's goals align with the Indonesian Telecommunications Company's strategic and sustainability objectives, setting a solid foundation for the entire funding process.

2. Funding Application Review

An initial review and validation of the submitted proposals. This phase ensures that the proposals meet basic eligibility criteria and align with the Indonesian Telecommunications Company's strategic goals. By maintaining the quality and relevance of the projects considered for funding, this step acts as a preliminary filter, ensuring only viable proposals proceed.

3. Company Performance Assessment

A comprehensive assessment focusing on both financial and ESG aspects. Financial performance evaluations include profitability, liquidity, and financial stability, while the ESG performance assessment examines the company's adherence to environmental sustainability, social responsibility, and governance standards. This step provides a holistic view of the company's capability to manage the project effectively and sustainably.

4. Financial and ESG Performance Assessment

The results from the financial and ESG assessments are integrated to provide a comprehensive evaluation of the project or subsidiary's viability. This ensures a balanced consideration of both financial health and sustainability impacts, supporting projects that are not only economically viable but also contribute positively to the Indonesian Telecommunications Company's sustainability goals

5. Funding Approval Process

The necessary documentation for fund release is prepared, and the funds are disbursed. Proper documentation during this phase ensures transparency and accountability in financial transactions, supporting the successful execution of the projects.

6. Improved Financial and ESG Performance (if the Funding application is not approved and will be returned to the Company Performance Assessment process)

Approved and will be returned to the Company Performance Assessment process)

For proposals not initially approved, companies must address the feedback provided, enhancing their financial and/or ESG performance to meet the required standards. The improved proposal is then resubmitted for re-evaluation, fostering a culture of continuous improvement and adherence to best practices within the Indonesian Telecommunications Company.

7. Funding Disbursement

The necessary documentation for fund release is prepared, and the funds are disbursed. Proper documentation during this phase ensures transparency and accountability in financial transactions, supporting the successful execution of the projects.

8. Installment Payments and Funding Repayment

Repayment schedules are established, and ongoing payments are monitored. Detailed documentation of payments and repayments ensures financial discipline and accountability, helping to mitigate the risk of defaults and financial mismanagement.

9. Funding Monitoring and Evaluation

Continuous monitoring and evaluation of funded projects are conducted to ensure adherence to planned objectives and performance metrics. Regular evaluations help identify issues early and allow for timely interventions, ensuring that the projects remain aligned with the Indonesian Telecommunications Company's strategic goals and deliver the expected outcomes.

10. Funding Reporting

Generating regular reports to provide updates on the project's progress, financial status, and ESG impact. These reports are shared with stakeholders to maintain transparency and engagement, demonstrating the Indonesian Telecommunications Company's commitment to responsible and sustainable business practices.

IV.5. Conducting assessments of each subsidiary and enhancing ESG disclosures in the Annual Reports of the subsidiaries.

Conducting comprehensive financial assessments is essential to evaluate the financial health of each subsidiary and ensure they meet the financial thresholds required for green funding. Key financial metrics such as the EBITDA/Interest ratio, Debt to Equity ratio, and Debt to Service Coverage ratio are critical indicators of operational profitability, liquidity, and overall financial stability. By conducting detailed financial evaluations, the Indonesian Telecommunications Company can identify areas for improvement and provide targeted feedback to enhance financial performance. This process ensures that subsidiaries are financially capable of executing projects and managing funds effectively, thereby reducing financial risks.

In addition to financial assessments, it is vital to assess the environmental, social, and governance performance of each subsidiary to ensure alignment with sustainability goals. Implementing a standardized ESG assessment framework based on SASB (Sustainability Accounting Standards Board) Standards tailored to the specific industries of each subsidiary allows for a thorough evaluation of performance across key ESG aspects. These comprehensive assessments provide detailed reports on ESG performance, identifying gaps and areas for improvement, and offering feedback to enhance ESG practices. This process ensures that subsidiaries operate sustainably and responsibly, meeting global best practices and stakeholder expectations.

Enhancing the quality and comprehensiveness of ESG disclosures in the annual reports of each subsidiary is also critical. Aligning these disclosures with SASB Standards ensures that the information is investor-focused and industry-specific, providing transparent and comparable sustainability information. Annual reports should include detailed descriptions of initiatives, policies, and outcomes related to environmental sustainability, social impact programs, and governance practices. Using specific metrics from the SASB Standards to report on key ESG performance indicators relevant to each subsidiary's industry enhances the transparency and detail of the disclosures. Engaging with stakeholders to gather feedback on ESG disclosures helps continuously improve the quality and relevance of the information provided. Enhanced ESG disclosures will attract ESG-conscious investors by demonstrating a commitment to sustainability and responsible business practices, ensure compliance with environmental, social, and governance regulations, and build trust with stakeholders by enhancing the corporate reputation of each subsidiary.

IV.6. Strategies to Enhance Alignment with Indonesian Telecommunications Company Sustainable Business Objectives

To enhance the alignment of the Indonesian Telecommunications Company subsidiaries with the company's commitment to achieving sustainable business practices, several strategies and best practices can be adopted. These strategies focus on integrating sustainability into core business operations, enhancing transparency, and fostering a culture of continuous improvement in ESG (Environmental, Social, and Governance) performance.

1. Develop and Implement Comprehensive ESG Policies

Developing and implementing comprehensive ESG policies is crucial. Subsidiaries should establish clear frameworks for ESG initiatives that outline specific goals, responsibilities, and procedures for environmental, social, and governance practices. These policies must align with the Indonesian Telecommunications Company's overarching sustainability objectives and be regularly reviewed and updated to reflect evolving standards and stakeholder expectations. Engaging stakeholders in the policy development process ensures relevance.

2. Conduct Regular ESG Assessments and Audits

Regularly conducting ESG assessments and audits is crucial for consistently monitoring and analyzing ESG performance. Utilizing standardized evaluations, such as those based on frameworks like SASB (Sustainability Accounting Standards Board) Standards, aids in the identification of strengths, shortcomings, and areas that require improvement. Employing third-party auditors can improve the reliability and impartiality of these evaluations. Disseminating the findings to all parties involved and formulating strategies to tackle identified deficiencies guarantees ongoing enhancement.

3. Enhance ESG Reporting and Transparency

Enhancing ESG reporting and transparency is another critical strategy. Standardizing ESG reporting across all subsidiaries using globally recognized frameworks such as SASB and GRI (Global Reporting Initiative) ensures comprehensive, accurate, and accessible reports for all stakeholders. Detailed disclosures on environmental impacts, social initiatives, and governance practices in annual reports, using clear and comparable metrics, enable stakeholders to assess performance effectively.

4. Foster a Culture of Sustainability

Cultivating a sustainable culture within the company enhances the dissemination of knowledge and consciousness on sustainability at all hierarchical levels. Implementing training programs, workshops, and sustainability campaigns help foster a business culture that places sustainability as a top priority, thereby engaging employees. To achieve this objective, it is important to acknowledge and incentivize people and teams who display outstanding dedication to sustainability. Additionally, promoting innovation and encouraging initiatives that foster sustainable business practices will also contribute to this goal.

5. Implement Green Financing and Investment Practices

Adopting green financing and investment policies that give priority to projects with robust environmental, social, and governance (ESG) credentials promotes sustainable initiatives and investments. By incorporating ESG performance as a crucial factor in funding criteria and establishing a green financing framework that clearly defines the standards and procedures for assessing and financing sustainable projects, transparency and accountability in fund allocation are guaranteed.

V. CONCLUSION

The research aimed to evaluate the integration of environmental, social, and governance (ESG) aspects into the Indonesian Telecommunications Company’s funding policies, assess the green funding eligibility of its subsidiaries, and identify strategies for its subsidiaries to support sustainable business practices. The analysis conducted provides comprehensive insights and practical recommendations that align with these objectives.

1. Comprehensive framework for green financing integration, integrating environmental, social, and corporate governance aspects into its funding policies

The Indonesian Telecommunications Company can expand its funding policies to incorporate ESG criteria effectively through the development of a comprehensive green financing framework. This framework ensures that funding decisions are aligned with global sustainability standards, attract ESG-conscious investors, and support the Indonesian Telecommunications Company’s long-term strategic goals. The proposed framework consists of several critical steps, including the submission and review of funding applications, assessments of company performance, integration of financial and ESG performance assessments, and continuous monitoring and evaluation. This structured approach guarantees that both financial health and sustainability impacts are considered, fostering a balanced and responsible funding mechanism.

2. Assessing Subsidiary Eligibility for Green Funding

A thorough assessment of each subsidiary's financial health and ESG performance is crucial for determining their eligibility for green funding. Financial assessments should include key ratios such as EBITDA/Interest, Debt to Equity, and Debt Service Coverage Ratio. Subsidiaries that do not meet these financial thresholds should be provided with targeted feedback for improvement. Additionally, implementing standardized ESG assessments based on the Sustainability Accounting Standards Board (SASB) Standards allows for a detailed evaluation of environmental, social, and governance performance. This ensures that subsidiaries operate sustainably and responsibly, aligning with the Indonesian Telecommunications Company's overarching sustainability goals.

3. Strategies to Support Sustainable Business Practices

Several strategies can enhance the alignment of the Indonesian Telecommunications Company’s subsidiaries with its commitment to sustainability. Developing and implementing comprehensive ESG policies, conducting regular ESG assessments and audits, enhancing ESG reporting and transparency, fostering a culture of sustainability, and adopting green financing and investment practices are essential. These strategies not only integrate sustainability into core business operations but also enhance transparency and foster continuous improvement in ESG performance. Engaging stakeholders in policy development and implementation ensures relevance and effectiveness, promoting a shared commitment to sustainability across all subsidiaries.

By implementing these recommendations, the Indonesian Telecommunications Company can significantly enhance the sustainability performance of its subsidiaries, align with global best practices, and achieve its long-term strategic goals. This integrated approach will position the Indonesian Telecommunications Company as a leader in sustainable business practices within the telecommunications industry, contributing positively to national and global sustainability efforts.

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