THE GOLDEN RATIO OF DATA IN SUMMARY
VOLUME 6, ISSUE 3 (2026)
Website: https://goldenratio.id/index.php/grdis
ISSN [Online]: 2776-6411

DATA IN SUMMARY | ACCOUNTING, MANAGEMENT, BUSINESS, ECONOMICS

Sustainability Reporting from the Perspective of GRI Standards, ISSB/IFRS S1 and S2, and OJK Regulations in Indonesia

Fanti Mariana Siburian[1], Elda Sianturi[2], Keren Eoudia Sitompul[3], Febrison Marbun[4], Hicca Maria Gandi Putri Aruan[5]

[1,2,3,4,5]Accounting Study Program, Universitas HKBP Nommensen, Medan, Indonesia
Email: fanti.siburian@student.uhn.ac.id[1], elda.sianturi@student.uhn.ac.id[2], keren.sitompul@student.uhn.ac.id[3], febrison.marbun@student.uhn.ac.id[4], hicca.aruan@uhn.ac.id[5]

ARTICLE HISTORY

Received: June 17, 2026
Revised: July 21, 2026
Accepted: July 22, 2026

DOI
https://doi.org/10.52970/grdis.v6i3.2415

ABSTRACT
This study aims to analyze the development of sustainability reporting based on the GRI Standards, ISSB/IFRS S1 and IFRS S2, and the Financial Services Authority (OJK) regulations in Indonesia, using PT Pertamina (Persero) as a case study. This research applies a descriptive qualitative approach through literature review and comparative analysis of global sustainability reporting frameworks and national regulations. The findings indicate that sustainability reporting has shifted from a voluntary practice to a more standardized and integrated reporting system. The GRI Standards emphasize impact materiality, focusing on corporate impacts on the economy, environment, and society. In contrast, IFRS S1 and IFRS S2 emphasize financial materiality, focusing on sustainability-related risks and opportunities that affect enterprise value, particularly climate-related issues. In Indonesia, OJK Regulation No. 51/POJK.03/2017 plays an important role in encouraging mandatory sustainability reporting for financial service institutions, issuers, and public companies. The case of PT Pertamina indicates that the company has implemented sustainability reporting relatively comprehensively; however, it still faces challenges in measuring Scope 3 emissions, integrating sustainability risks with enterprise value, improving ESG data quality, and harmonizing its reporting practices with global standards. This study highlights the importance of integrating GRI, IFRS S1/S2, and OJK regulations to enhance the transparency, credibility, and comparability of sustainability reporting in Indonesia.

Keywords: Sustainability Reporting, GRI Standards, IFRS S1, IFRS S2, OJK Regulation.

I. Introduction

Sustainability reporting has become an important part of the development of modern corporate reporting. Companies are no longer assessed solely based on financial performance, but also on their ability to manage economic, social, environmental, and governance impacts. This shift has emerged due to increasing demands for transparency from investors, regulators, society, creditors, consumers, and other stakeholders regarding sustainable business activities. In this context, sustainability reporting functions as a medium of corporate accountability in communicating strategies, risks, opportunities, and sustainability performance to information users. Previous literature has shown that social and environmental reporting has long been understood as a mechanism of organizational legitimacy and accountability to society at large (Gray et al., 1995; Suchman, 1995). Theoretically, sustainability reporting practices can be explained through stakeholder theory and legitimacy theory. Stakeholder theory emphasizes that companies have responsibilities not only to shareholders, but also to various parties that influence or are influenced by

ISSN [Online]: 2776-6411

corporate activities. Therefore, sustainability disclosure becomes an important instrument for meeting stakeholders' information needs and maintaining the company's relationship with its social environment (Donaldson & Preston, 1995). Meanwhile, legitimacy theory views companies as seeking to obtain, maintain, or restore social acceptance through information disclosure that demonstrates the conformity of corporate activities with societal values and norms (Suchman, 1995). Thus, sustainability reporting is not merely technical as a form of non-financial reporting, but also strategic because it is related to reputation, legitimacy, and long-term organizational sustainability.

The development of sustainability reporting has been further strengthened by the emergence of various international reporting standards. One widely used standard is the Global Reporting Initiative, or GRI Standards. GRI emphasizes the impact materiality approach, namely the disclosure of significant organizational impacts on the economy, environment, and society. GRI Standards are structured modularly through Universal Standards, Sector Standards, and Topic Standards, allowing them to be used by various types of organizations and industrial sectors. This approach provides room for companies to communicate sustainability impacts more broadly to various stakeholders. However, several studies also show that the use of sustainability reporting guidelines does not always guarantee the substantive quality of reports. Sustainability reports may become symbols of compliance if they are not supported by credible data, measurable indicators, and strong managerial commitment (Boiral, 2013; Michelon et al., 2015).

In addition to GRI, an important development in global sustainability reporting is marked by the establishment of the International Sustainability Standards Board, or ISSB, by the IFRS Foundation. The ISSB issued IFRS S1 General Requirements for Disclosure of Sustainability-related Financial Information and IFRS S2 Climate-related Disclosures. IFRS S1 focuses on the disclosure of sustainability-related risks and opportunities that may affect cash flows, access to financing, cost of capital, and corporate prospects in the short, medium, and long term. IFRS S2 specifically regulates the disclosure of climate-related risks and opportunities, including physical risks, transition risks, corporate strategy, risk management, and climate-related metrics and targets. Unlike GRI, which places greater emphasis on corporate impacts on the environment and society, IFRS S1 and IFRS S2 are more oriented toward sustainability information that is material to investors and users of general-purpose financial reports.

The different orientations between GRI and ISSB indicate an important dynamic in sustainability reporting practices. GRI is closer to a multi-stakeholder reporting approach, while ISSB emphasizes enterprise value and investors' information needs. This condition creates conceptual and practical challenges for companies, particularly in determining materiality boundaries, disclosure indicators, ESG data quality, and integration between sustainability reports and financial reports. Millar and Slack (2024) show that global investors generally support the development of ISSB standards, although differences of opinion remain regarding the basis of materiality, emissions, assurance, and the usefulness of sustainability information for decision-making. These findings indicate that the standardization of sustainability reporting is still in a consolidation process and requires deeper academic inquiry.

In the Indonesian context, sustainability reporting has obtained a regulatory basis through Financial Services Authority Regulation No. 51/POJK.03/2017 concerning the Implementation of Sustainable Finance for Financial Service Institutions, Issuers, and Public Companies. This regulation strengthens companies' obligation to prepare sustainability reports as part of the implementation of sustainable finance. Thus, sustainability reporting in Indonesia has moved from a voluntary practice toward a practice that is increasingly institutionalized through regulation. However, the implementation of this regulation still faces several issues, such as variations in disclosure quality, limitations in ESG data, human resource readiness, reporting costs, and the uneven implementation of external assurance practices. A study by Rudyanto and Siregar (2018) on companies listed on the Indonesia Stock Exchange shows that stakeholder pressure and the effectiveness of the board of commissioners affect sustainability reporting quality, indicating that reporting quality is not only determined by the existence of regulation, but also by corporate governance and external pressure.

Previous studies also show that mandatory non-financial reporting can encourage improvements in report quality, although the results are not always uniform across companies and countries. Mion and Loza

ISSN [Online]: 2776-6411

Adaui (2019) found that mandatory non-financial disclosure affects the quality of sustainability reporting among companies in Italy and Germany. However, Michelon et al. (2015) caution that practices such as stand-alone reports, assurance, and the use of reporting guidelines do not automatically improve disclosure quality if they are used merely as symbolic legitimacy tools. In the Indonesian context, Sebrina et al. (2023) show that the sustainability reporting quality of listed companies still needs to be strengthened, particularly in terms of substance, comparability, and information credibility. Therefore, the main issue in sustainability reporting is not merely whether a company has published a report, but the extent to which the report is relevant, reliable, measurable, and usable by stakeholders.

Based on the above explanation, a study on Sustainability Reporting: GRI Standards, ISSB/IFRS S1 & S2, and OJK Regulations in Indonesia is important to conduct. This study has academic relevance because it discusses the intersection between impact-based reporting standards, enterprise value-based standards, and national regulation. In addition, this study also has practical relevance for companies, regulators, investors, and academics in understanding the direction of sustainability reporting harmonization in Indonesia. The novelty of this article lies in its integrative discussion of GRI Standards, IFRS S1, IFRS S2, and OJK Regulation No. 51/POJK.03/2017 as interrelated sustainability reporting frameworks that nevertheless have different orientations of materiality and information users. Therefore, this article aims to analyze the development of sustainability reporting based on GRI Standards, ISSB/IFRS S1 and S2, and OJK regulations in Indonesia. Specifically, this article discusses differences in reporting orientation, the concept of materiality, implementation challenges, and opportunities for harmonizing sustainability reporting standards in Indonesia. The findings of this study are expected to provide conceptual contributions to the development of sustainability accounting literature and practical contributions to improving the quality of corporate sustainability reporting in Indonesia.

II. Literature Review and Hypothesis Development

2.1. Sustainability Reporting

Sustainability reporting is a form of corporate reporting that contains information on the economic, environmental, social, and governance impacts of a company. This reporting does not only function as a communication instrument to the public, but also as an accountability mechanism for the company toward its stakeholders. In the development of modern reporting, sustainability information has become increasingly important because investors, regulators, creditors, communities, and other stakeholders require non-financial information to assess risks, opportunities, and the company’s long-term prospects. Recent literature shows that ESG disclosure and sustainability information have become major issues in accounting research because they are related to disclosure motivation, information quality, capital market responses, and the characteristics of information users (Tsang et al., 2023). In the context of regulation and reporting practices, sustainability reporting has shifted from voluntary practice toward an increasingly mandatory practice. Christensen et al. (2021) explain that mandatory CSR and sustainability reporting may generate economic consequences for capital markets, non-investor stakeholders, corporate behavior, and the enforcement system of reporting standards. This indicates that sustainability reporting is not only related to information disclosure, but may also influence organizational behavior and the company’s relationship with stakeholders.

2.2. Stakeholder Theory and Legitimacy Theory

Stakeholder theory explains that a company has responsibilities to various parties that influence or are influenced by its activities. In the context of sustainability reporting, companies disclose sustainability information to meet stakeholders’ information needs, reduce information asymmetry, and build more transparent relationships. Stakeholder pressure can encourage companies to prepare higher-quality sustainability reports. Rudyanto and Siregar (2018), through their study of companies listed on the Indonesia

ISSN [Online]: 2776-6411

Stock Exchange, found that pressure from the environment, consumers, and employees is related to the quality of sustainability reports, while the effectiveness of the board of commissioners also has a positive effect on sustainability reporting quality. Legitimacy theory explains that companies seek to obtain and maintain social acceptance through information disclosure that demonstrates that their activities are aligned with societal values, norms, and expectations. Sustainability reporting can be used by companies to strengthen social legitimacy, particularly for companies with high environmental and social impacts. However, the literature also warns that sustainability reporting does not always reflect substantive information quality. If it is not supported by governance, credible data, and assurance, sustainability reporting may become merely a symbolic legitimacy instrument.

2.3. GRI Standards and Sustainability Reporting Quality

The Global Reporting Initiative, or GRI Standards, is one of the most widely used sustainability reporting standards globally. GRI states that these standards help organizations understand and report their impacts on the economy, environment, and people in a more transparent, credible, and comparable manner. The structure of GRI consists of Universal Standards, Sector Standards, and Topic Standards, enabling companies to prepare reports based on material issues that are relevant to their organizational and industrial characteristics. The main strength of GRI lies in its impact materiality approach, which emphasizes the company's impacts on stakeholders, the environment, and society. By using GRI Standards, companies have more systematic guidance in identifying material issues, determining disclosure indicators, and explaining management approaches to sustainability issues. Therefore, consistent implementation of GRI Standards is expected to improve sustainability reporting quality, particularly in terms of completeness, comparability, relevance, and transparency of information.

However, the use of GRI does not automatically guarantee reporting quality. Reporting quality is still influenced by management commitment, ESG data quality, internal control mechanisms, and the integration of sustainability into corporate governance. Sebrina et al. (2023) show that the quality of sustainability reporting among listed companies in Indonesia still needs to be strengthened, particularly in terms of the substance and credibility of information. Based on the above explanation, the first hypothesis is formulated as follows:

H1: The implementation of GRI Standards has a positive effect on sustainability reporting quality.

2.4. ISSB/IFRS S1 and IFRS S2

The establishment of the International Sustainability Standards Board, or ISSB, by the IFRS Foundation marks a new phase in the standardization of global sustainability reporting. The IFRS Foundation explains that the IFRS Sustainability Disclosure Standards were developed to improve dialogue between investors and companies through sustainability disclosures that are useful for decision-making and globally comparable. IFRS S1 regulates general requirements for the disclosure of sustainability-related information concerning risks and opportunities that may affect a company's prospects. This standard applies to annual reporting periods beginning on or after January 1, 2024, with earlier application permitted if IFRS S2 is also applied. The objective of IFRS S1 is to require entities to disclose information on sustainability-related risks and opportunities that is useful to users of general-purpose financial reports in making decisions about providing resources to the entity.

IFRS S2 specifically focuses on the disclosure of climate-related risks and opportunities. This standard is also effective for annual reporting periods beginning on or after January 1, 2024. The objective of IFRS S2 is to require entities to disclose information on climate-related risks and opportunities that is useful to users of general-purpose financial reports. Unlike GRI, which emphasizes impact materiality, IFRS S1 and IFRS S2 place greater emphasis on financial materiality, namely sustainability information that has the potential to affect firm value, cash flows, cost of capital, access to financing, and business prospects. Millar and Slack (2024) show that global investors respond to the development of ISSB standards because these standards are considered relevant for improving the comparability and usefulness of sustainability information, although debates remain regarding materiality, emissions disclosure, and assurance.

For developing countries, the adoption of IFRS S1 and S2 requires institutional readiness, human resource capacity, data infrastructure, emissions measurement systems, and coordination among regulators, companies, and the accounting profession. Fianko et al. (2025) emphasize that implementation readiness for IFRS S1 and S2 in emerging markets can be assessed through a multidimensional framework that includes regulatory, institutional, data, market, and organizational capacity readiness. Based on the above explanation, the second hypothesis is formulated as follows:

H2: Readiness to implement ISSB/IFRS S1 and IFRS S2 has a positive effect on sustainability reporting quality.

2.5. OJK Regulation and Sustainability Reporting in Indonesia

In Indonesia, mandatory sustainability reporting has a regulatory basis through OJK Regulation No. 51/POJK.03/2017 concerning the Implementation of Sustainable Finance for Financial Service Institutions, Issuers, and Public Companies. This regulation requires financial service institutions, issuers, and public companies to prepare sustainability reports, either separately or as an inseparable part of the annual report. OJK also issued the Sustainable Finance Roadmap Phase II 2021–2025, which focuses on establishing a comprehensive sustainable finance ecosystem, involving various parties, and encouraging cooperation and strengthening the implementation of environmental, social, and governance principles in Indonesia. The presence of POJK 51/2017 shows that sustainability reporting in Indonesia is no longer entirely voluntary. Regulation can improve compliance, increase the number of companies preparing sustainability reports, and encourage information standardization. Mion and Loza Adaui (2019) found that mandatory non-financial disclosure can improve sustainability reporting quality in companies in Italy and Germany. This finding is relevant to the Indonesian context because OJK regulation also aims to improve transparency and accountability in corporate sustainability.

Nevertheless, regulation alone is not sufficient to ensure report quality. Adhariani and du Toit (2020) found that sustainability reports in Indonesia have a low level of readability, indicating that the usefulness of information for investors and report users still needs to be improved. This finding shows that formal compliance with reporting obligations must be followed by improvements in the quality of substance, readability, and usefulness of information. Based on the above explanation, the third hypothesis is formulated as follows:

H3: Compliance with OJK regulation has a positive effect on sustainability reporting quality.

2.6. Stakeholder Pressure and Sustainability Reporting Quality

Stakeholder pressure is one of the important factors influencing the quality of sustainability reports. Companies facing greater pressure from society, consumers, employees, investors, regulators, and the media tend to have stronger incentives to prepare more comprehensive sustainability reports. From the stakeholder perspective, sustainability reports function as a means for companies to respond to the expectations of parties affected by their business activities. Rudyanto and Siregar (2018) found that pressure from the environment, consumers, and employees affects the quality of sustainability reports in Indonesian companies. This finding indicates that sustainability reporting quality is influenced not only by standards or regulations, but also by external pressures faced by companies. In the context of GRI and ISSB standards, stakeholder pressure has become increasingly relevant because companies are not only required to disclose social and environmental impacts, but also to explain sustainability risks that may affect corporate prospects. Therefore, the higher the

ISSN [Online]: 2776-6411

stakeholder pressure, the greater the likelihood that companies will improve the quality of sustainability disclosure. Based on the above explanation, the fourth hypothesis is formulated as follows:

H4: Stakeholder pressure has a positive effect on sustainability reporting quality.

2.7. Sustainability Governance and Sustainability Reporting Quality

Corporate governance plays an important role in ensuring the quality of sustainability reporting. Governance mechanisms such as the effectiveness of the board of commissioners, the existence of a sustainability committee, board diversity, sustainability-based remuneration, and external assurance can strengthen the process of collecting, validating, and disclosing ESG information. Gerwing et al. (2022) found that sustainable corporate governance mechanisms, such as sustainability-based remuneration, gender diversity on the supervisory board, the existence of a CSR committee, involvement in CSR initiatives, and external assurance, are positively related to the quality of mandatory sustainability reporting. Al-Shaer and Zaman (2016) also found that board gender diversity is positively related to sustainability reporting quality. These findings show that governance characteristics can influence corporate attention to social, environmental, and stakeholder-related issues.

In the Indonesian context, the effectiveness of the board of commissioners has been proven to have a positive effect on sustainability reporting quality. This indicates that internal corporate oversight plays an important role in ensuring that sustainability reports are not prepared merely to comply with regulation, but also present information that is relevant, credible, and useful to stakeholders. Based on the above explanation, the fifth hypothesis is formulated as follows:

H5: Sustainability governance has a positive effect on sustainability reporting quality.

2.8. External Assurance as a Strengthener of Reporting Quality

One of the main challenges in sustainability reporting is information credibility. Unlike financial statements, which have an established audit mechanism, sustainability reports often face issues related to data reliability, indicator subjectivity, and the risk of greenwashing. External assurance can enhance report credibility because sustainability information is examined by an independent party. Gerwing et al. (2022) found that external assurance is positively related to the quality of mandatory sustainability reporting. This finding strengthens the argument that assurance can serve as an external control mechanism to improve the reliability of sustainability information. In the context of implementing GRI, IFRS S1/S2, and OJK regulations, external assurance is expected to strengthen the relationship between standard implementation and sustainability reporting quality. Companies that apply reporting standards but do not have assurance may produce less credible reports. Conversely, companies that apply standards and obtain independent assurance have a greater opportunity to produce reports that are trusted by investors and stakeholders. Based on the above explanation, the sixth hypothesis is formulated as follows:

H6: External assurance strengthens the effect of implementing sustainability standards and regulations on sustainability reporting quality.

III. Research Method

This study uses a descriptive qualitative approach with a case study method. The qualitative approach is used because this research aims to understand, describe, and analyze sustainability reporting practices from the perspective of GRI Standards, ISSB/IFRS S1 and IFRS S2, and OJK regulations in Indonesia. Qualitative research is relevant for examining complex and contextual phenomena that require in-depth interpretation of documents, policies, and corporate reporting practices (Creswell & Poth, 2018). The case study method is used because this research focuses on PT Pertamina (Persero) as the object of study. A case study enables researchers to conduct an in-depth analysis of a particular entity in a real-life context, especially when the boundaries between the phenomenon being studied and its context are not clearly separated (Yin, 2018). PT Pertamina (Persero) was selected because it is a national energy company with significant economic, social, and environmental impacts and faces high sustainability pressures, particularly in relation to energy transition, emissions management, and compliance with sustainability reporting regulations.

3.1. Research Object and Focus

The object of this research is sustainability reporting practices at PT Pertamina (Persero). The focus of the research is directed toward analyzing the conformity and relationship between the company's sustainability report and four main frameworks, namely GRI Standards, IFRS S1, IFRS S2, and OJK regulations, particularly OJK Regulation No. 51/POJK.03/2017. The analysis is conducted to understand how the company discloses sustainability information, how global standards and national regulations are applied, and what challenges arise in the process of harmonizing sustainability reporting. Specifically, this study examines four main aspects. First, the implementation of GRI Standards in disclosing economic, environmental, and social impacts. Second, the readiness to implement IFRS S1 in disclosing sustainability-related risks and opportunities associated with firm value. Third, the application of IFRS S2 principles in disclosing climate-related risks and opportunities. Fourth, the conformity of the sustainability report with the provisions of OJK Regulation No. 51/POJK.03/2017 as the national regulation on sustainable finance.

3.2. Data Sources

This study uses secondary data. Secondary data are selected because the research is conducted through the analysis of official documents, reporting standards, regulations, and relevant academic literature. The main data sources in this study include PT Pertamina (Persero)'s sustainability report, GRI Standards documents, IFRS S1 and IFRS S2 documents issued by the IFRS Foundation, as well as OJK Regulation No. 51/POJK.03/2017 and OJK sustainable finance policy documents. In addition, this study also uses reputable scientific articles as supporting sources in building academic arguments. Scientific literature is used to connect the analysis results with previous studies on sustainability reporting, mandatory disclosure, sustainability reporting quality, stakeholder pressure, sustainability governance, and the adoption of global sustainability reporting standards.

3.3. Data Collection Technique

The data collection technique used in this study is documentation study. Documentation study is used to collect, select, read, and analyze documents relevant to the research focus. The documents analyzed include corporate sustainability reports, international reporting standards, national regulations, and scientific journal articles. This technique is appropriate for qualitative research because documents can serve as stable data sources, can be reviewed repeatedly, and are able to provide contextual information regarding the phenomenon being studied (Bowen, 2009). The data collection process is carried out through several stages. First, the researcher identifies the main documents relevant to sustainability reporting, namely PT Pertamina (Persero)'s sustainability report, GRI Standards, IFRS S1, IFRS S2, and OJK Regulation No. 51/POJK.03/2017. Second, the researcher selects document sections related to economic, environmental, social, governance, sustainability risk, climate risk, carbon emissions, sustainability strategy, and regulatory compliance aspects. Third, the researcher develops a comparison matrix to examine the relationship between the company's disclosures and each reporting framework. Fourth, the researcher compares the results of the analysis with findings from previous studies to strengthen the academic discussion.

3.4. Data Analysis Technique

The data analysis techniques used in this study are qualitative content analysis and comparative analysis. Qualitative content analysis is used to identify, classify, and interpret document contents based on predetermined categories. Content analysis is a relevant technique for examining texts, documents, and reports because it allows researchers to draw conclusions systematically from written data (Krippendorff, 2018). The analysis is conducted using a categorization framework based on GRI Standards, IFRS S1, IFRS S2, and OJK Regulation No. 51/POJK.03/2017. Within the GRI framework, the analysis focuses on the disclosure of economic, environmental, and social aspects based on the impact materiality approach. Within the IFRS S1 framework, the analysis focuses on the disclosure of governance, strategy, risk management, and metrics and targets related to sustainability-related risks and opportunities. Within the IFRS S2 framework, the analysis focuses on physical risks, transition risks, climate-related opportunities, and carbon emissions disclosure. Meanwhile, within the OJK regulatory framework, the analysis focuses on compliance with sustainable finance principles and the obligation to prepare sustainability reports.

The stages of data analysis in this study are carried out as follows. First, the researcher conducts data reduction by selecting relevant information from the research documents. Second, the data are categorized based on the dimensions of GRI Standards, IFRS S1, IFRS S2, and OJK regulations. Third, the researcher presents the data in the form of narrative descriptions and comparative tables. Fourth, the researcher interprets the analysis results by relating them to stakeholder theory, legitimacy theory, regulatory theory, and previous studies. Fifth, the researcher draws conclusions regarding the level of implementation, challenges, and prospects for the integration of sustainability reporting in Indonesia.

3.5. Research Analysis Framework

The research analysis framework is developed to compare the orientation, disclosure focus, and materiality approach of each standard and regulation used. This framework helps the researcher assess the position of PT Pertamina (Persero) in implementing sustainability reporting based on global standards and national regulations.

Table 1. Research Analysis Framework

Analysis Framework	**Analysis Focus**	**Indicators Examined**
GRI Standards	Disclosure of economic, environmental, and social impacts based on impact materiality	Economic, environmental, and social disclosures; stakeholder engagement; material topics; and contribution to sustainable development
IFRS S1	Disclosure of sustainability-related risks and opportunities that affect firm value	Governance, strategy, risk management, metrics and targets, and the relationship between sustainability issues and company prospects
IFRS S2	Disclosure of climate-related risks and opportunities	Physical risks, transition risks, climate-related opportunities, Scope 1, Scope 2, Scope 3 emissions, and climate targets
OJK Regulation No. 51/POJK.03/2017	Compliance with sustainable finance regulations in Indonesia	Sustainability strategy, sustainability governance, economic, social, and environmental performance, and preparation of sustainability reports
PT Pertamina (Persero)	Sustainability reporting practices in a national energy company	Conformity of disclosures with GRI, IFRS S1, IFRS S2, and OJK regulations; ESG data challenges; integration of climate risks and firm value

3.6. Data Validity

Data validity in this study is maintained through source triangulation and theoretical triangulation. Source triangulation is conducted by comparing various documents, such as corporate sustainability reports, GRI Standards, IFRS S1 and IFRS S2 standards, OJK regulations, and previous scientific articles. Theoretical triangulation is conducted by using stakeholder theory, legitimacy theory, and regulatory theory as the basis for interpreting the research findings. In addition, the reliability of the analysis is strengthened through the use of clear and consistent analytical categories. Each finding is classified based on the framework of GRI Standards, IFRS S1, IFRS S2, and OJK Regulation No. 51/POJK.03/2017. In this way, the analysis process can be conducted more systematically, transparently, and traceably.

3.7. Research Limitations

This study has several limitations. First, this study uses only a descriptive qualitative approach and therefore does not conduct statistical testing of relationships among variables. Second, the research object is focused on PT Pertamina (Persero), so the findings cannot be directly generalized to all companies in Indonesia. Third, the data used are derived from public documents, so the analysis is limited to information available in sustainability reports, regulations, reporting standards, and scientific literature. Nevertheless, this approach remains relevant for providing an in-depth understanding of the integration of GRI Standards, IFRS S1, IFRS S2, and OJK regulations in sustainability reporting practices in Indonesia.

IV. Results and Discussion

4.1. Results

a. The Development of Sustainability Reporting in Indonesia

The results of the analysis show that sustainability reporting practices in Indonesia have shifted from voluntary practices to increasingly institutionalized practices through regulation. In the early stage, sustainability reports were mostly published by large companies, multinational companies, and companies with high exposure to international markets. After the issuance of OJK Regulation No. 51/POJK.03/2017, sustainability reporting began to become mandatory for financial service institutions, issuers, and public companies. The regulation defines a sustainability report as a report announced to the public that contains the economic, financial, social, and environmental performance of financial service institutions, issuers, and public companies. This development indicates that regulation has become an important factor in expanding sustainability reporting practices in Indonesia. However, the analysis also shows that the increase in the number of reports has not always been followed by an improvement in reporting quality. Several companies have prepared comprehensive reports by referring to the GRI Standards and have begun to consider the principles of IFRS S1/S2, while others still present descriptive reports that are not yet fully based on measurable indicators. This condition indicates differences in the maturity level of sustainability reporting among companies.

b. Implementation of GRI Standards in Indonesian Companies

The results of the analysis show that the GRI Standards are the most widely used framework by Indonesian companies in preparing sustainability reports. The GRI Standards have a modular structure consisting of Universal Standards, Sector Standards, and Topic Standards. The Universal Standards include GRI 1, GRI 2, and GRI 3, which became effective for reporting from January 1, 2023. In their implementation, the GRI Standards help companies disclose economic, environmental, and social impacts more systematically. In the economic aspect, companies disclose contributions to state revenues, job creation, distribution of economic value, social investment, and anti-corruption practices. In the environmental aspect, disclosures generally include energy consumption, greenhouse gas emissions, water use, waste

ISSN [Online]: 2776-6411

management, and environmental conservation. In the social aspect, disclosures include occupational safety, employee training, diversity, human rights, and corporate social responsibility programs. The analysis also shows that the main strength of GRI lies in its impact materiality approach, namely the disclosure of corporate impacts on the economy, environment, and society. GRI states that its standards are used to publicly report economic, environmental, and social impacts and to explain an organization's positive or negative contribution to sustainable development.

V. Implementation of IFRS S1 and IFRS S2 in Indonesia

The results of the analysis show that IFRS S1 and IFRS S2 introduce a new orientation in sustainability reporting, namely the disclosure of sustainability-related information that is relevant to investors, creditors, and users of general-purpose financial reports. IFRS S1 aims to require entities to disclose information about sustainability-related risks and opportunities that is useful for users of general-purpose financial reports in making decisions about providing resources to the entity. This standard is effective for annual reporting periods beginning on or after January 1, 2024. IFRS S2 specifically regulates the disclosure of climate-related risks and opportunities. This standard is also effective for annual reporting periods beginning on or after January 1, 2024, and aims to provide information related to climate-related risks and opportunities that is useful for users of general-purpose financial reports.

In the Indonesian context, the results of the analysis show that the implementation of IFRS S1 and IFRS S2 is still at the readiness and transition stage. Large companies that already have ESG systems are relatively more prepared to adopt ISSB standards, particularly in the aspects of governance, strategy, risk management, and metrics and targets. However, challenges remain in measuring the financial impacts of sustainability risks, disclosing Scope 3 emissions, preparing ESG data, and developing human resources who understand the concept of financial materiality.

VI. Analysis of OJK Regulation in Sustainability Reporting

The results of the analysis show that OJK Regulation No. 51/POJK.03/2017 serves as the main regulatory foundation in promoting sustainability reporting in Indonesia. This regulation governs the implementation of sustainable finance for financial service institutions, issuers, and public companies. In addition, the appendix to OJK Regulation 51/2017 stipulates that sustainability reports may be prepared separately from annual reports or as an inseparable part of annual reports, and must at least contain a sustainability strategy. The results of the analysis show that OJK regulation has improved companies' formal compliance with reporting obligations. However, in terms of quality, challenges remain, including narrative-based disclosures, limited quantitative indicators, low comparability among companies, and uneven implementation of external assurance practices. Thus, OJK regulation has succeeded in establishing the foundation for sustainability reporting, but it still requires strengthening in terms of standardization, supervision, and harmonization with international standards such as GRI and IFRS S1/S2.

VII. Comparison of GRI Standards, IFRS S1, IFRS S2, and OJK Regulation

The results of the analysis show that GRI Standards, IFRS S1, IFRS S2, and OJK regulation have different orientations. GRI Standards focus on corporate impacts on the economy, environment, and society. IFRS S1 focuses on sustainability-related risks and opportunities that affect firm value. IFRS S2 focuses on climate-related risks and opportunities. Meanwhile, OJK regulation focuses on the implementation of sustainable finance and reporting obligations for entities under OJK supervision. The most fundamental difference lies in the concept of materiality. GRI applies an impact materiality approach, while IFRS S1 and IFRS S2 apply a financial materiality approach. OJK regulation tends to be national compliance-based and still provides room for companies to use relevant reporting standards. Therefore, the four frameworks should not be positioned as substitutes for one another, but rather can be integrated to produce more comprehensive sustainability reports.

VIII. Case Study of PT Pertamina (Persero)

GOLDEN RATIO
ISSN [Online]: 2776-6411

The results of the analysis of PT Pertamina (Persero) show that the company has relevant characteristics for analysis in the context of sustainability reporting because it operates in the energy sector, which has significant economic, environmental, and social impacts. Pertamina's sustainability reports are accessible through the company's official website. From the perspective of GRI Standards, Pertamina has disclosed economic, environmental, and social aspects relatively comprehensively. In the economic aspect, the company contributes through tax payments, dividends, energy investment, and national energy supply. In the environmental aspect, the main issues disclosed include energy consumption, greenhouse gas emissions, waste, water use, and efforts to reduce environmental impacts. In the social aspect, the company implements corporate social responsibility programs such as education, health, community empowerment, and development in operational areas.

From the perspective of IFRS S1, Pertamina shows integration of sustainability issues into corporate governance and strategy. However, the relationship between sustainability risks and long-term financial impacts still needs to be strengthened. From the perspective of IFRS S2, Pertamina faces high climate risks, both physical risks and transition risks. Physical risks may include extreme weather, flooding, and disruptions to operational facilities, while transition risks relate to changes in carbon regulation, technological shifts, changes in market preferences, and pressure toward a low-carbon economy.

IX. Comparative Table of Sustainability Reporting Implementation at PT Pertamina

Table 2. Comparison of Sustainability Reporting Implementation at PT Pertamina Based on GRI Standards, IFRS S1, IFRS S2, and OJK Regulation No. 51/2017

Aspect	GRI Standards	IFRS S1	IFRS S2	OJK/POJK 51/2017
Main focus	Corporate impacts on the economy, environment, and society (impact-oriented)	Sustainability-related risks and opportunities that affect firm value	Climate-related risks and opportunities	Implementation of sustainable finance and ESG transparency in Indonesia
Materiality approach	Impact materiality, namely corporate impacts on stakeholders	Financial materiality, namely the impact of sustainability issues on firm value	Financial materiality specifically related to climate risks and opportunities	Combined approach, but still predominantly compliance-based and descriptive
Economy/business strategy	High economic contribution through taxes, dividends, and energy investment	ESG is beginning to be integrated into strategy, but fossil-based business remains dominant	Energy transition becomes a business opportunity through renewable energy, biofuel, and CCS	Sustainability strategy is mandatory to report, but remains general
Environment/emissions	Relatively comprehensive disclosure related to energy, waste, water, and emissions	Environmental risks are beginning to be linked to firm value	High climate risk; Scope 1 and Scope 2 are relatively more mature, while Scope 3 remains a challenge	Environmental reporting is mandatory, but not as detailed as GRI and IFRS S2
Social/human resources and society	Broad CSR through education, health,	Social risks are beginning to be linked to	Indirect social impacts related to climate transition	CSR becomes part of the

ISSN [Online]: 2776-6411

	and community empowerment	business sustainability		sustainability report
Governance	ESG structure is available, but the main focus remains on disclosure	ESG is beginning to enter the board and committee level	Climate risks are beginning to enter corporate governance	Sustainability governance is generally required
Main users of information	Broad stakeholders, including society, government, employees, customers, and investors	Investors, creditors, and capital markets	Investors and capital markets, particularly regarding climate risks	Regulators, investors, and the Indonesian public
Emission scope	Discloses Scope 1, Scope 2, and part of Scope 3	Focuses on the financial impacts of emissions and sustainability risks	Main focus on emissions risks and carbon transition	Not as strict as GRI and IFRS S2 in measurement standards
Strength of implementation	ESG disclosure is relatively comprehensive, particularly in environmental aspects	ESG is beginning to be integrated into strategy	High awareness of climate risks	Regulatory compliance has been fulfilled
Weakness/gap	Scope 3 is difficult to measure and long-term impacts are not yet optimal	Financial integration of ESG is not yet complete	Emissions data are complex, particularly Scope 3	Still descriptive and not fully aligned with global standards
Maturity level	High for the energy sector	Moderate, in the transition phase	Moderate to high because climate risk is high, but implementation is still developing	Moderate, compliance-based

4.2. Discussion

a. The Development of Sustainability Reporting and the Role of Regulation

The results of the study show that the development of sustainability reporting in Indonesia is strongly influenced by regulatory pressure. After the issuance of OJK Regulation No. 51/POJK.03/2017, public companies and financial service institutions have had a formal obligation to prepare sustainability reports. This finding is in line with Christensen et al. (2021), who explain that mandatory CSR and sustainability reporting can influence corporate behavior, expand transparency, and generate economic consequences for capital markets and non-investor stakeholders. Indonesia's condition is also consistent with the findings of Mion and Loza Adaui (2019), who show that mandatory non-financial disclosure can improve sustainability reporting quality in companies in Italy and Germany. However, the results of this analysis also show that regulation does not automatically guarantee report quality. The increase in the number of reports needs to be accompanied by improvements in substance, comparability, credibility, and measurable indicators. This strengthens the argument that regulation is only an initial foundation, while reporting quality is still determined by organizational capacity, governance, data systems, and management commitment.

ISSN [Online]: 2776-6411

b. GRI Implementation and the Quality of Impact Disclosure

The results of the study show that GRI Standards remain the dominant framework in corporate sustainability reporting in Indonesia. This can be understood because GRI provides a systematic reporting structure and is oriented toward the disclosure of economic, environmental, and social impacts. GRI also emphasizes that its standards are global best practices for reporting organizational impacts on sustainable development. This finding is in line with Sebrina et al. (2023), who examined the quality of sustainability reporting and non-financial reporting in companies listed on the Indonesia Stock Exchange. The study shows that the quality of sustainability reporting in Indonesia still needs to be strengthened, particularly in the disclosure of the triple bottom line and GRI reporting quality principles, such as clarity, accuracy, timeliness, stakeholder inclusiveness, comparability, and reliability. However, the results of the analysis also show that the use of GRI does not always guarantee substantive report quality. This finding is consistent with Michelon et al. (2015), who show that the use of stand-alone reports, assurance, and CSR reporting guidelines does not automatically improve disclosure quality when these practices are used merely symbolically. Therefore, the quality of sustainability reporting cannot be assessed solely based on the existence of standards, but also on the extent to which companies are able to present information that is complete, verifiable, and relevant to stakeholders.

c. IFRS S1/S2 and the Shift Toward Financial Materiality

The results of the study show that IFRS S1 and IFRS S2 introduce a new orientation in sustainability reporting, namely the disclosure of sustainability-related risks and opportunities that affect firm value. This differs from GRI, which focuses on corporate impacts on stakeholders. IFRS S1 and IFRS S2 are closer to investor needs because they emphasize the impact of sustainability issues on cash flows, cost of capital, access to financing, and corporate prospects. The IFRS Foundation officially states that IFRS S1 and IFRS S2 are effective for annual reporting periods beginning on or after January 1, 2024. This finding is in line with Millar and Slack (2024), who show that global investors pay attention to ISSB standards because these standards are viewed as capable of improving the comparability and usefulness of sustainability information in investment decision-making. However, the study also shows that debates remain regarding the concept of materiality, emissions disclosure, and assurance. In the Indonesian context, the results of the study show that the adoption of IFRS S1/S2 still faces challenges related to data readiness, emissions measurement, and the integration of sustainability risks into financial information. This is in line with Fianko et al. (2025), who emphasize that readiness to implement IFRS S1 and S2 in emerging markets needs to be assessed from the aspects of regulation, institutions, organizational capacity, data readiness, and market readiness. Therefore, Indonesia needs a transition strategy that does not only focus on standard adoption, but also on the development of reporting infrastructure and professional competence.

d. OJK Regulation and the Challenges of Report Quality

The results of the study show that OJK Regulation 51/2017 has improved companies' formal compliance, but has not fully resolved issues related to report quality. Many sustainability reports remain narrative in nature, do not fully use quantitative indicators, and are not yet integrated with corporate financial risks. This finding is relevant to Adhariani and du Toit (2020), who found that sustainability reports in Indonesia still face readability issues. Low readability can reduce the usefulness of reports for investors and other information users. This finding also supports the argument of Tsang et al. (2023), who state that ESG disclosure is increasingly important for accounting research and capital markets, but disclosure quality is still influenced by corporate motivation, characteristics of information users, and the consequences of the disclosed information. Thus, OJK regulation should be understood as an initial stage in forming a sustainability reporting ecosystem. In order for sustainability reports to be more useful for investors and stakeholders, regulation needs to be strengthened through harmonization with international standards, capacity building for companies, stronger assurance practices, and the development of more measurable indicators.

ISSN [Online]: 2776-6411

e. The Role of Stakeholders and Governance in Sustainability Reporting

The results of the study show that the quality of sustainability reporting is strongly influenced by stakeholder pressure and corporate governance. Companies with high stakeholder pressure tend to have stronger incentives to prepare transparent and comprehensive reports. This is in line with Rudyanto and Siregar (2018), who found that stakeholder pressure and corporate governance affect sustainability reporting quality in Indonesian companies. Their study used pressure from the environment, employees, consumers, and shareholders as forms of stakeholder pressure, and the effectiveness of the board of commissioners as one of the governance mechanisms. In addition, the results of this study are also consistent with Gerwing et al. (2022), who found that sustainable corporate governance mechanisms are associated with the quality of mandatory sustainability reporting. These mechanisms include sustainability governance, CSR committees, assurance, and other governance elements that support disclosure quality. In the case of Pertamina, stakeholder pressure is very high because the company operates in the energy sector, which is directly related to emissions, energy security, energy transition, and social-environmental impacts. Therefore, the existence of an ESG governance structure, sustainability committees, and climate risk disclosure becomes an important element in enhancing the credibility of the company's sustainability report.

f. Integration of GRI, IFRS S1/S2, and OJK Regulation in the Context of Pertamina

The case study results show that Pertamina has achieved a relatively good level of compliance with sustainability reporting obligations, but still faces challenges in fully integrating with global standards. From the GRI perspective, disclosure of economic, environmental, and social impacts is relatively comprehensive. From the IFRS S1 perspective, sustainability issues have begun to enter governance and strategy, but their relationship with financial impacts still needs to be strengthened. From the IFRS S2 perspective, climate risk is a key issue because the energy sector has high exposure to physical risks and transition risks. This finding reinforces the view of Hummel and Jobst (2024), who explain that the development of global sustainability reporting regulation is moving toward harmonization among reporting standards, investor needs, and broader stakeholder interests. In the context of Pertamina, the integration of GRI, IFRS S1/S2, and OJK regulation can improve reporting quality because each framework has complementary functions. GRI strengthens impact disclosure, IFRS S1/S2 strengthens the link with risk and firm value, while OJK provides a national compliance foundation.

V. Conclusion

Based on the discussion of sustainability reporting, GRI Standards, IFRS S1 and IFRS S2, and OJK regulations in the context of PT Pertamina (Persero), it can be concluded that sustainability reporting has undergone significant development at both the global and national levels. Globally, sustainability reporting is no longer viewed merely as a voluntary practice, but has developed into a reporting system that is increasingly standardized, measurable, and integrated with corporate reporting. This development can be explained through regulatory theories, such as Public Interest Theory, Capture Theory, and Economic Interest Group Theory, which emphasize that sustainability regulation is formed through the interaction of public interest, market needs, industry pressure, and the demands of various stakeholder groups. GRI Standards play an important role in shaping sustainability reporting practices that are oriented toward impact materiality. These standards emphasize the disclosure of corporate impacts on economic, environmental, and social aspects. The structure of GRI, which consists of Universal Standards, Sector Standards, and Topic Standards, provides comprehensive guidance for companies in preparing sustainability reports. However, the broad approach of GRI often results in lengthy reports and does not fully address the needs of investors who are more focused on the impact of sustainability issues on firm value.

The presence of the ISSB through IFRS S1 and IFRS S2 indicates an important shift in global sustainability reporting. IFRS S1 emphasizes the disclosure of sustainability-related risks and opportunities that may affect a company's prospects and value, while IFRS S2 specifically regulates the disclosure of risks

ISSN [Online]: 2776-6411

and opportunities related to climate change, including physical risks, transition risks, and carbon emissions disclosure. Unlike GRI, which places greater emphasis on corporate impacts on stakeholders, IFRS S1 and IFRS S2 emphasize financial materiality, namely sustainability information that is relevant to investors, creditors, and capital markets. In the Indonesian context, the development of sustainability reporting has strengthened following the issuance of OJK Regulation No. 51/POJK.03/2017 and the OJK Sustainable Finance Roadmap. These regulations encourage financial service institutions, issuers, and public companies to integrate sustainability principles into their business activities and to prepare sustainability reports periodically. Nevertheless, the implementation of sustainability reporting in Indonesia still faces several challenges, particularly in relation to ESG data quality, report comparability, human resource readiness, implementation costs, and the harmonization of national regulations with international standards.

The analysis of PT Pertamina (Persero) shows that the company has implemented sustainability reporting at a relatively good level based on the perspectives of GRI Standards, IFRS S1, IFRS S2, and OJK regulations. As a national energy company, Pertamina has disclosed economic, social, and environmental aspects in a relatively comprehensive manner, particularly in relation to economic contribution, environmental management, social programs, and energy transition strategies. However, the company is still in a transitional stage toward the full integration of sustainability reporting based on financial risks and climate impacts. The main challenges that remain include the measurement of Scope 3 emissions, the integration of sustainability risks into firm value, the improvement of ESG data quality, and the strengthening of report comparability with global standards. Overall, sustainability reporting has become an important part of modern corporate governance. The integration of GRI Standards, IFRS S1, IFRS S2, and OJK regulations reflects the direction of sustainability reporting development toward greater transparency, relevance, measurability, and comparability. PT Pertamina, as a case study, reflects the dynamics of Indonesian companies' transition from regulatory compliance toward more strategic sustainability reporting that is aligned with global standards. Therefore, the future quality of sustainability reporting will depend greatly on the ability of companies to strengthen data systems, sustainability governance, risk management, and the credibility of information disclosed to stakeholders.

Based on the conclusions above, companies such as PT Pertamina (Persero) need to strengthen the integration between sustainability reporting and financial reporting in order to align with the development of global standards such as IFRS S1 and IFRS S2. Sustainability information should not only be positioned as a supplement to the annual report, but also as part of strategic information that is directly related to firm value, business risks, cost of capital, and long-term prospects. This integration is important so that sustainability reports can be used more effectively by investors, creditors, regulators, and other stakeholders in decision-making processes. Companies also need to improve the quality of ESG data management and collection systems in an integrated manner. Strengthening data systems is essential because the quality of sustainability reporting depends heavily on the accuracy, consistency, and comparability of the information presented. This is particularly important in the measurement of carbon emissions, especially Scope 3 emissions, which remains a major challenge for energy companies because it involves a broad and complex value chain. With a stronger data system, companies can produce sustainability reports that are more measurable, transparent, and verifiable.

In addition, companies are advised to expand the use of external assurance in sustainability reports. Independent verification can enhance the credibility of ESG information disclosed to the public. Assurance can also reduce the risk of greenwashing and increase stakeholder trust in the company's sustainability commitment. In the context of a large company such as Pertamina, the use of assurance is increasingly important because the company has significant economic, social, and environmental impacts and faces strong pressure from regulators, investors, society, and the international community. Improving human resource capacity in the field of sustainability reporting should also become a priority. Companies need to provide continuous training for employees, management, and related units regarding international reporting standards, sustainability risk management, emissions measurement, ESG disclosure, and the integration of sustainability information into business strategy. Adequate human resource competence will help companies

ISSN [Online]: 2776-6411

prepare reports that not only meet administrative obligations, but also contain strong analysis and remain relevant to the needs of report users.

For regulators, particularly the Financial Services Authority, it is necessary to accelerate the harmonization of national regulations with international reporting standards such as GRI Standards, IFRS S1, and IFRS S2. This harmonization is important so that sustainability reports of Indonesian companies have better comparability in the global market. In addition, OJK needs to strengthen technical guidelines for sustainability reporting so that companies do not merely focus on fulfilling formal obligations, but also on improving the quality of substantive disclosure. More detailed guidelines will help companies understand the indicators, measurement methods, and forms of disclosure that are aligned with stakeholder needs. Companies also need to strengthen the integration of sustainability risk management into the overall enterprise risk management system. Environmental, social, governance, and climate-related risks can no longer be viewed as separate issues, but must be treated as strategic risks that may affect long-term business sustainability. Therefore, companies need to develop systematic mechanisms for identifying, measuring, monitoring, and reporting sustainability risks in order to respond effectively to regulatory changes, market pressure, and the dynamics of the transition toward a low-carbon economy. For future research, it is recommended to expand the research object to several companies from different industrial sectors, such as banking, mining, manufacturing, energy, and telecommunications. Future studies may also apply quantitative or mixed-method approaches to empirically measure the influence of GRI Standards implementation, IFRS S1 and IFRS S2 readiness, OJK regulatory compliance, external assurance, and sustainability governance on the quality of sustainability reporting. With broader research objects and methods, future studies are expected to provide a more comprehensive picture of the development and quality of sustainability reporting in Indonesia.

References

Adhariani, D., & du Toit, E. (2020). Readability of sustainability reports: Evidence from Indonesia. Journal of Accounting in Emerging Economies, 10(4), 621–636. https://doi.org/10.1108/JAEE-10-2019-0194

Al-Shaer, H., & Zaman, M. (2016). Board gender diversity and sustainability reporting quality. Journal of Contemporary Accounting & Economics, 12(3), 210–222. https://doi.org/10.1016/j.jcae.2016.09.001

Boiral, O. (2013). Sustainability reports as simulacra? A counter-account of A and A+ GRI reports. Accounting, Auditing & Accountability Journal, 26(7), 1036–1071. https://doi.org/10.1108/AAAJ-04-2012-00998

Bowen, G. A. (2009). Document analysis as a qualitative research method. Qualitative Research Journal, 9(2), 27–40. https://doi.org/10.3316/QRJ0902027

Christensen, H. B., Hail, L., & Leuz, C. (2021). Mandatory CSR and sustainability reporting: Economic analysis and literature review. Review of Accounting Studies, 26, 1176–1248. https://doi.org/10.1007/s11142-021-09609-5

Creswell, J. W., & Poth, C. N. (2018). Qualitative inquiry and research design: Choosing among five approaches (4th ed.). SAGE Publications.

Deegan, C. (2014). Financial accounting theory (4th ed.). McGraw-Hill Education.

Donaldson, T., & Preston, L. E. (1995). The stakeholder theory of the corporation: Concepts, evidence, and implications. Academy of Management Review, 20(1), 65–91. https://doi.org/10.5465/AMR.1995.9503271992

Elkington, J. (1997). Cannibals with forks: The triple bottom line of 21st century business. Capstone.

Fianko, S. K., Amoah, N., Addo, A., Agyemang, K., Gbadago, F. Y., Adjaye-Gyamfi, O., Agbemava, E., Agropah, F., Zaglago, L., Atiase, D. D., & Nooni, I. K. (2025). IFRS S1 and S2 implementation readiness in emerging markets: A multi-dimensional assessment framework and market readiness index. Journal of Financial Reporting and Accounting. https://doi.org/10.1108/JFRA-12-2024-0921

Freeman, R. E. (1984). Strategic management: A stakeholder approach. Pitman.

Gerwing, T., Kajüter, P., & Wirth, M. (2022). The role of sustainable corporate governance in mandatory sustainability reporting quality. Journal of Business Economics, 92, 517–555. https://doi.org/10.1007/s11573-022-01092-x

Global Reporting Initiative. (2021). GRI Standards. Global Reporting Initiative. https://www.globalreporting.org

GOLDEN RATIO
ISSN [Online]: 2776-6411

Gray, R., Kouhy, R., & Lavers, S. (1995). Corporate social and environmental reporting: A review of the literature and a longitudinal study of UK disclosure. Accounting, Auditing & Accountability Journal, 8(2), 47–77. https://doi.org/10.1108/09513579510146996

Hahn, R., & Kühnen, M. (2013). Determinants of sustainability reporting: A review of results, trends, theory, and opportunities in an expanding field of research. Journal of Cleaner Production, 59, 5–21. https://doi.org/10.1016/j.jclepro.2013.07.005

Hummel, K., & Jobst, D. (2024). An overview of corporate sustainability reporting legislation in the European Union. Accounting in Europe, 21(3), 320–355. https://doi.org/10.1080/17449480.2024.2312145

IFRS Foundation. (2023a). IFRS S1 General Requirements for Disclosure of Sustainability-related Financial Information. IFRS Foundation. https://www.ifrs.org

IFRS Foundation. (2023b). IFRS S2 Climate-related Disclosures. IFRS Foundation. https://www.ifrs.org

KPMG. (2024). Survey of sustainability reporting. KPMG. https://kpmg.com

Krippendorff, K. (2018). Content analysis: An introduction to its methodology (4th ed.). SAGE Publications. https://doi.org/10.4135/9781071878781

Michelon, G., Pilonato, S., & Ricceri, F. (2015). CSR reporting practices and the quality of disclosure: An empirical analysis. Critical Perspectives on Accounting, 33, 59–78. https://doi.org/10.1016/j.cpa.2014.10.003

Millar, J., & Slack, R. (2024). Global investor responses to the International Sustainability Standards Board draft sustainability and climate-change standards: Sites of dissonance or consensus. Sustainability Accounting, Management and Policy Journal, 15(3), 573–604. https://doi.org/10.1108/SAMPJ-03-2023-0128

Mion, G., & Loza Adaui, C. R. (2019). Mandatory nonfinancial disclosure and its consequences on the sustainability reporting quality of Italian and German companies. Sustainability, 11(17), 4612. https://doi.org/10.3390/su11174612

Otoritas Jasa Keuangan. (2017). Peraturan Otoritas Jasa Keuangan Nomor 51/POJK.03/2017 tentang penerapan keuangan berkelanjutan bagi lembaga jasa keuangan, emiten, dan perusahaan publik. Otoritas Jasa Keuangan. https://www.ojk.go.id

Otoritas Jasa Keuangan. (2021). Roadmap keuangan berkelanjutan tahap II 2021–2025. Otoritas Jasa Keuangan. https://www.ojk.go.id

Pertamina. (2024). Sustainability report PT Pertamina (Persero). PT Pertamina (Persero). https://www.pertamina.com

Posner, R. A. (1974). Theories of economic regulation. The Bell Journal of Economics and Management Science, 5(2), 335–358. https://doi.org/10.2307/3003113

Rudyanto, A., & Siregar, S. V. (2018). The effect of stakeholder pressure and corporate governance on the sustainability report quality. International Journal of Ethics and Systems, 34(2), 233–249. https://doi.org/10.1108/IJOES-05-2017-0071

Scott, W. R. (2015). Financial accounting theory (7th ed.). Pearson.

Sebrina, N., Taqwa, S., Afriyenti, M., & Septiari, D. (2023). Analysis of sustainability reporting quality and corporate social responsibility on companies listed on the Indonesia Stock Exchange. Cogent Business & Management, 10(1), 2157975. https://doi.org/10.1080/23311975.2022.2157975

Stigler, G. J. (1971). The theory of economic regulation. The Bell Journal of Economics and Management Science, 2(1), 3–21. https://doi.org/10.2307/3003160

Suchman, M. C. (1995). Managing legitimacy: Strategic and institutional approaches. Academy of Management Review, 20(3), 571–610. https://doi.org/10.5465/amr.1995.9508080331

Tsang, A., Frost, T., & Cao, H. (2023). Environmental, social, and governance (ESG) disclosure: A literature review. The British Accounting Review, 55(1), 101149. https://doi.org/10.1016/j.bar.2022.101149

United Nations. (2015). Transforming our world: The 2030 agenda for sustainable development. United Nations. https://sdgs.un.org/2030agenda

Yin, R. K. (2018). Case study research and applications: Design and methods (6th ed.). SAGE Publications.