福建省中电海峡智能装备研究院
Fujian Zhongdian Straits Institute of Intelligent Equipment
Asia Pacific Science Press
Advances in Management and Intelligent Technologies
ISSN(O):3079-5869
ISSN(P):3079-5850
Vol. 2 No.2 (2026)

Integrating ESG Indicators into Corporate Financial Reports: Realistic Dilemmas and Countermeasures—A Paradigm Shift in the Accounting Framework

Shiying Wang[1], Enyi Lai[2]*, Bofeng Wang[3]

1. School of Economics and Management, Xiamen University of Technology, Xiamen, 361024, P.R.China
2. Faculty of Business, City University of Macau, Macau SAR, 999078, P.R.China
3. City University of Macau, Macau SAR, 999078, P.R.China

Corresponding author: Enyi Lai, laienyi@163.com

Abstract: The integration of Environmental, Social, and Governance (ESG) indicators into corporate financial reports is an inevitable trend aligned with the sustainable development theory in corporate accounting. It also serves as a strategic tool for companies to address environmental and social risks and achieve sustainable development. By incorporating ESG indicators, companies can transform non-financial performance into quantifiable references for decision-making, providing stakeholders with a comprehensive value assessment that goes beyond traditional statements. This process offers theoretical support and practical methods for a paradigm shift in accounting. Guided by Information Asymmetry Theory and Signaling Theory, this study analyzes the realistic dilemmas in integrating ESG indicators into corporate financial reports. The findings indicate that the current challenges can be categorized into institutional, market, technical, and corporate levels. Building on these dilemmas, the study clarifies three principles for a renewed accounting framework: systemic relevance, correlation, and dynamism. It further proposes a corresponding accounting framework system comprising four dimensions: an institutional coordination framework, a technical support framework, a market guidance framework, and a corporate management framework. It is hoped that this research will provide theoretical insights for the paradigm shift in corporate accounting. By advancing corporate progress toward sustainable development goals, it aims to offer stakeholders a more comprehensive and accurate basis for evaluating corporate value.

Keywords: ESG Indicators; Corporate Financial Reports; Accounting Framework; Paradigm Shift
Published: Apr 7, 2026
DOI: https://doi.org/10.62177/amit.v2i2.1252

1. Introduction

As societal concern for ecological and environmental changes grows alongside the development of sustainability theory, public attention is increasingly focused on the social responsibilities of enterprises regarding environmental protection. In 1992, the United Nations Environment Programme Finance Initiative introduced the ESG (Environmental, Social, and Governance) system, establishing it as a crucial set of metrics for evaluating how proactively companies fulfill their social responsibilities. With the collaborative advancement of global climate governance, the concepts of environment, social responsibility, and governance have progressively moved from theory to practice, becoming key standards for measuring

corporate sustainability. In recent years, the frequent occurrence of extreme weather events, heightened public focus on social welfare, and prominent corporate governance issues have led stakeholders—including investors, regulators, and consumers—to look beyond mere financial performance. They increasingly seek comprehensive ESG information to assess a company's performance in fulfilling environmental duties, undertaking social responsibilities, and improving internal governance. According to the Global Sustainable Investment Alliance, global sustainable investment surpassed $35 trillion in 2022, with the proportion of ESG-related investment products continuing to rise. This demonstrates that ESG factors have become a significant variable influencing capital flows and long-term corporate value.

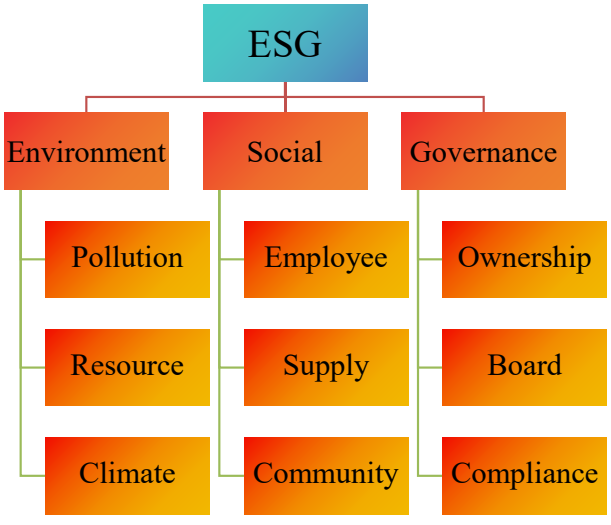
In this context, integrating ESG indicators into corporate financial reporting has emerged as a vital pathway to bridge the connection between a company's financial performance and its sustainability performance. Traditional financial reports primarily focus on financial data such as assets, liabilities, and profits, often failing to comprehensively reflect non-financial information related to ESG. This limitation hampers stakeholders' ability to accurately assess a company's long-term risks and growth potential. However, the integration of ESG metrics with financial reporting is not a simple addition. In practice, it faces a series of challenges, including difficulties in metric measurement, inconsistent data quality, and inadequate adaptability of existing accounting frameworks. Therefore, conducting an in-depth analysis of these dilemmas and exploring solutions from the perspective of a paradigm shift in accounting frameworks holds significant importance. It can not only provide practical guidance for enterprises but also play a crucial role in advancing the sustainable development of Chinese companies and enhancing their international competitiveness. [10] (Diwan & Binilkumar, 2023).

2. Conceptual Definitions and Theoretical Foundation

2.1 The Concept and Content of ESG

ESG stands for Environmental, Social, and Governance. It is a comprehensive framework used to evaluate a company's performance in the field of sustainable development. Its core lies in measuring a company's impact and fulfillment of responsibilities concerning the environment, society, and internal governance, beyond mere financial performance. Tracing its evolution, the ESG concept originated from the Corporate Social Responsibility (CSR) notion in the 1980s. Over decades of development, it has evolved from a singular advocacy for responsibility into a systematic and measurable comprehensive evaluation standard. Currently, over a thousand institutions globally are utilizing ESG disclosure frameworks established by bodies such as the International Sustainability Standards Board (ISSB) and the Global Reporting Initiative (GRI), promoting the standardization of ESG information disclosure. [21] (Suresh et al., 2024).

Figure 1: ESG Dimensions and Key Content Framework



From the Concept of ESG, it is evident that its content can be deconstructed into three major dimensions, each encompassing specific focus areas and core indicators.

In the environmental dimension, the primary focus is on the impact of corporate operations on the natural environment and corresponding mitigation measures. Core aspects encompass three main directions: pollution prevention and control, resource

use efficiency, and climate change response.

The social dimension emphasizes the assessment of a company's relationships with its stakeholders and the fulfillment of its social responsibilities. Its core coverage spans three key areas: employee rights and welfare, supply chain responsibility, and community contribution. Regarding employee welfare, this includes compensation and benefits levels, occupational health and safety safeguards, and training and career advancement opportunities. In 2023, China's "Guidelines for Green Development in Outbound Investment and Cooperation" explicitly required enterprises to strengthen environmental and social risk management within their supply chains. In terms of community contribution, indicators include the amount of charitable donations, the number of local jobs supported, and involvement in public infrastructure projects. According to data from the China Charity Alliance, total corporate charitable donations in China exceeded 150 billion yuan in 2023, with over 60% of these donations being ESG-oriented. [11] (Ellili,2022).

The governance dimension focuses on the standardization and transparency of a company's internal governance structure, covering three main sections: ownership structure, board governance, and compliance and risk management. These three dimensions are interconnected and mutually supportive, collectively forming the comprehensive framework of the ESG evaluation system. This framework also serves as the core basis for corporate ESG information disclosure and indicator measurement. [16] (Lulaj & Brajković, 2025)

2.2 Foundational Theories

2.2.1 Information Asymmetry Theory

In 1970, while studying the used car market, American economist George A. Akerlof discovered that sellers often possess more accurate information about a vehicle's true condition than buyers. This information asymmetry leads to a "market for lemons" phenomenon, where high-quality cars are driven out of the market by lower-quality ones due to information opacity, eventually leaving only low-quality vehicles available. Akerlof defined this market failure as information asymmetry. Information asymmetry is a common market phenomenon, and its negative consequences primarily manifest as adverse selection and moral hazard. Adverse selection occurs when buyers, due to a lack of transparent information, lower their offer prices to mitigate potential losses. Over time, this leads to inferior products dominating the market—the "lemons" problem. Moral hazard refers to situations where the party with an information advantage engages in irresponsible behavior for personal gain, while the disadvantaged party remains unaware, thus triggering moral hazard.

Under the traditional financial reporting system, companies, as information providers, hold detailed data on their own operations, environmental impacts, and social responsibility performance. [6] Choi & Lee, 2024) In contrast, external stakeholders such as investors and regulators are in a position of information disadvantage. This information asymmetry can prevent stakeholders from accurately assessing a company's true ESG performance, thereby affecting their investment decisions and the effectiveness of regulation. Particularly when facing capital market choices, companies might, driven by self-interest, selectively disclose favorable ESG information while concealing or downplaying unfavorable aspects. This leads to external stakeholders being unable to gain a comprehensive understanding of a company's ESG risks. Therefore, integrating ESG indicators into corporate financial reports to enhance information transparency is a crucial pathway to alleviating information asymmetry and improving market efficiency. [8] (Da, 2025).

2.2.2 Signaling Theory

Signaling Theory is a significant management theory developed on the foundation of information asymmetry, forming, together with theories of market asymmetry, a cornerstone of information economics. The theory was formally introduced by Michael Spence in 1973 in "Job Market Signaling." It explains how the party with an information advantage can mitigate information asymmetry through signaling.

When a company actively discloses ESG information, it is essentially sending positive signals to the capital market, investors, and creditors. These signals indicate that the enterprise is capable of proactively fulfilling environmental responsibilities, social responsibilities, and improving corporate governance. [23] (Vanina & Dian,2025). F This often implies that the company emphasizes long-term development and possesses sufficient cash flow and robust operational capabilities. Simultaneously, a company's ESG disclosure signals its active commitment to social responsibility and the establishment of a favorable public

relationship with the government. These signals enhance the company's social responsibility image, bolster investor and creditor confidence, and make them more willing to provide capital, potentially at a lower required rate of return. Actively engaging in ESG disclosure can also, to some extent, mitigate the problems of adverse selection and moral hazard arising from information asymmetry, enabling the company to secure needed capital at a lower cost. Therefore, the integration of ESG information into corporate financial reports is, in essence, the transmission of positive corporate signals to investors. By demonstrating the company's positive, steady, and long-term development potential, it aims to obtain financing at a lower cost.

3. Practical Challenges in Integrating ESG Indicators into Corporate Financial Reports

3.1 Institutional Level: Ambiguous ESG Disclosure Standards and Fragmented Regulatory Frameworks

Currently, the ESG information disclosure system lacks unified standards, exhibiting significant fragmentation across different countries and regions, with notable disparities in the disclosure standards established by various institutions. Taking the ESG rating system of MSCI in the United States as an example, its core logic lies in screening material issues within various industries, which serve as the key basis for evaluating corporate ESG performance. In contrast, China's existing ESG-related guidelines place greater emphasis on aligning evaluation criteria with policy orientations, with indicators often designed around national initiatives such as energy conservation, emission reduction targets, and the "dual-carbon" goals. Such discrepancies in standards require enterprises operating in multiple markets to comply with different regulatory requirements, incurring additional compliance costs and increasing their operational burdens. [17] (Malik & Kashiramka, 2025). More critically, current mainstream accounting standards lack explicit rules for the recognition and measurement of ESG elements. Whether it is the provision method for contingent liabilities arising from climate risks, the capitalization of human capital investments, or the quantitative accounting of biodiversity loss, specific operational guidance is absent. This situation not only grants enterprises considerable subjective discretion in ESG information disclosure, leading to insufficient standardization and consistency in the content disclosed, but may also incentivize regulatory arbitrage. Some companies even deliberately select disclosure frameworks favorable to themselves, categorizing environmental expenses that should be accounted for as regular costs under "non-recurring gains and losses," thereby diluting the actual impact of ESG costs on corporate financial management. [22] (Tian et al., 2025).

Although the International Sustainability Standards Board has been promoting the establishment of globally unified ESG disclosure standards, differences in national priorities regarding climate policies and sensitivities to social issues have created conflicting interests.[3](Bogdan et al., 2025) As a result, the finalized standards must undergo localization adjustments to accommodate the actual conditions of different countries. These adjustments, in turn, exacerbate compatibility issues between different standards, creating further obstacles to the advancement of a globally unified disclosure framework. [12] (Gafni et al.,2024).

3.2 Market Level: Mismatch Between Supply and Demand for ESG Information and Inefficient Pricing Mechanisms

With the increasing adoption of ESG principles, institutional investors' demand for ESG information has shifted from initial compliance screening to a value-discovery phase. They now seek to leverage ESG data to identify corporate long-term growth potential and inform investment decisions. However, from the corporate perspective, current ESG disclosure practices largely remain at the risk-aversion level, primarily aimed at meeting regulatory compliance requirements rather than proactively communicating value to the market. To align with the preferences of ESG rating agencies and improve their ratings, some companies even resort to "greenwashing" tactics, such as exaggerating the proportion of green revenue in total revenue or providing vague or evasive disclosures regarding negative ESG-related incidents. These practices further exacerbate the problem of ESG information asymmetry in the market, interfering with investors' judgment. [13] (Kilian, 2021)

The root cause of corporate falsification of ESG information lies in the opaque transmission mechanism between ESG performance and financial performance, making it difficult to establish a clear correlation between the two. For example, in the clean energy sector, investment returns typically take a decade or longer to materialize. Current mainstream corporate

valuation models struggle to capture such long-term value accurately, making it challenging to reasonably assess the long-term financial impact of ESG investments. The influence of ESG risks in the supply chain on a company's gross margin involves multiple variables, including changes in customer demand, the severity of regulatory penalties, and fluctuations in market reputation, making it difficult for investors to form stable expectations about this impact. The imperfections in market pricing mechanisms are also directly reflected in the irrational volatility of ESG premiums. During periods of optimistic market sentiment, companies with strong ESG performance may receive valuation premiums that far exceed their fundamentals. However, when the market encounters a "black swan" event, the entire ESG-related sector may face panic selling, leading to significant valuation declines. This inefficient market pricing situation, in turn, discourages companies from voluntarily disclosing high-quality ESG information, ultimately leading to a "lemons problem" of adverse selection, which undermines the long-term healthy development of the ESG market.

3.3 Technical Level: Challenges in ESG Data Collection and Bottlenecks in Value Quantification

ESG data is typically unstructured, which fundamentally conflicts with the rigid requirements of financial reports for quantified information. In terms of specific data types, environmental data, such as carbon emissions, often relies on third-party verification agencies estimating values using specific methodologies. Enterprises themselves find it difficult to achieve precise carbon emission measurements. Social indicators, such as employee satisfaction, are mostly gathered through surveys and contain a significant amount of subjective content. Such data struggles to meet core accounting information quality requirements, such as horizontal comparability and verifiability. Moreover, challenges in quantification also arise in translating ESG value into financial value. Taking carbon reduction benefits as an example, they need to be converted into measurable financial gains through carbon pricing mechanisms. However, significant price differences across regional carbon markets and the uncertainty surrounding carbon policy adjustments undermine the stability of the benchmarks used in calculating carbon reduction benefits, significantly reducing the accuracy and reliability of the results. Social benefits, such as community contributions, often lack mature market pricing mechanisms. Consequently, related disclosures usually remain at the descriptive level, offering detailed explanations of contributions but failing to provide quantitative data support, which falls short of the quantitative information requirements of financial reporting. Governance indicators similarly face technical difficulties in quantification. For example, governance metrics like board independence scores can be quantified using methods such as the entropy weight method or the Analytic Hierarchy Process (AHP). However, establishing a direct and clear correlation between these scores and the effectiveness of corporate financial risk prevention is challenging. The accuracy of such indicator data is difficult to verify. For investors and regulators who are not involved in the long-term day-to-day management of the company, it is particularly hard to effectively demonstrate the actual impact of governance levels on corporate financial health. [4] [5](Chen & Lai,2025) (Chen & Rodger,2025)

3.4 Corporate Level: Insufficient Adaptation of Internal Management Systems and Weak Motivation for Disclosure

From the perspective of internal corporate operations, a significant gap exists between existing management systems and the need to integrate ESG metrics into financial reports. Currently, the majority of companies globally are small and medium-sized enterprises (SMEs), most of which have not established specialized ESG management departments. ESG tasks are often assigned as additional responsibilities to departments like finance or administration. This lack of dedicated oversight leads to issues such as data omissions and inconsistent standards, as the collection, organization, and alignment of ESG data with financial data lack centralized coordination. [7] (Chamera, 2025) Taking the collection of environmental cost data as an example, due to production processes, such data may be scattered across departments like production and procurement and not synchronized promptly with the financial system, hampering the efficiency of integrating ESG metrics with financial reports. Furthermore, ESG-related internal system development lags in most companies, lacking clear regulations concerning ESG data quality control and disclosure procedures. Although some enterprises have begun disclosing ESG information, the absence of standardized data verification mechanisms leads to issues with accuracy and completeness in the disclosed ESG data, further undermining the credibility of the integration of ESG information with financial reports. Moreover, corporate ESG disclosures often entail hiring third-party organizations to verify data and upgrade information systems, requiring

additional investment of human and material resources. Given the difficulty in seeing direct economic returns in the short term, this situation leads to a lack of willingness to invest, particularly among SMEs.

4. Guiding Principles for the Accounting Framework for Integrating ESG Indicators into Corporate Financial Reports

The accounting framework for integrating ESG indicators into corporate financial reports should adhere to three overarching principles: systematic integration, relevance, and dynamism.

4.1 Principle of Systematic Integration

The principle of systematic integration requires the comprehensive and in-depth incorporation of ESG elements into the entire financial reporting process, encompassing recognition, measurement, recording, and reporting. This approach avoids fragmented improvements limited to isolated aspects and ensures the organic fusion of ESG information with financial data. During the recognition phase, it is essential to clarify the asset attributes of emerging ESG elements, such as carbon emission rights and human capital, and determine whether they meet the criteria for accounting element recognition. In the measurement stage, scientifically sound models for environmental cost allocation should be developed to appropriately distribute environmental expenditures to relevant products or business activities. Concurrently, investments in governance should be integrated into the goodwill assessment system to fully reflect the contribution of governance quality to corporate value. In the recording process, interface standards between ESG data and the company's existing financial systems must be established to facilitate efficient alignment and synchronized recording of ESG and financial data. In the final reporting stage, non-financial information should be effectively linked with the three primary financial statements—the balance sheet, income statement, and cash flow statement—enabling stakeholders to clearly discern the tangible impact of ESG factors on the company's financial position, operating performance, and cash flows.

4.2 Principle of Relevance

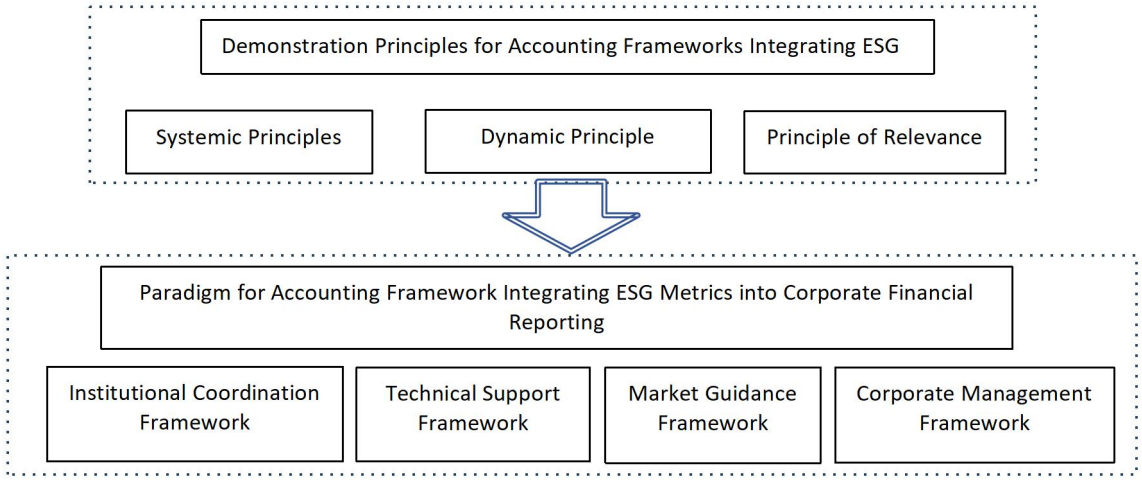
The principle of relevance places high emphasis on aligning ESG information with the decision-making needs of stakeholders, avoiding redundant details that may hinder judgment. On one hand, it requires the selection of core ESG indicators tailored to industry-specific characteristics. For example, high-energy-consumption industries should prioritize disclosing carbon emissions and energy consumption data; the manufacturing sector should focus on supply chain social responsibility indicators; and the financial industry should highlight information related to green finance and ESG risk exposures. This ensures that disclosed content is closely tied to the operational substance of the business and the concerns of stakeholders. On the other hand, it necessitates clarifying the logical connection between ESG information and financial data. Items such as "green revenue" and "environmental costs" should be separately presented in the income statement, while the notes to the financial statements should explain the impact of ESG investments on long-term asset items in the balance sheet. This assists investors in intuitively assessing the transmission relationship between ESG performance and financial outcomes. [18] Palas et al., 2025)

4.3 Principle of Dynamism

The principle of dynamism requires that the design of the integration pathway and the disclosure indicators remain responsive to policy changes and technological advancements in the ESG domain. This involves establishing a dynamic adjustment mechanism for ESG indicators, regularly refining the recognition scope and measurement methods for ESG elements in line with updates to international standards, shifts in domestic policy direction, and evolving market demands. In particular, as carbon market mechanisms mature, emerging carbon assets such as carbon allowances and carbon options should be progressively incorporated into the scope of accounting recognition. This ensures that the pathway for integrating ESG indicators into financial reports can be continuously optimized in response to changes in the external environment. [15] (Li & Lai, 2025).

5. Construction of Accounting Framework for Incorporating ESG Indicators into Enterprise Financial Reports

Figure 2: Accounting Framework Demonstrating the Integration of ESG Indicators into Corporate Financial Reporting



5.1 Institutional Coordination Framework: Resolving Ambiguous Standards and Regulatory Fragmentation

To address the current divergence in ESG standards at the institutional level, the disclosure criteria issued by the International Sustainability Standards Board should serve as the foundational framework, unifying the principles for recognizing ESG elements and their measurement bases. On the other hand, domestic regulatory agencies should formulate localized supplementary guidelines in line with national policy objectives, refining disclosure requirements for specific indicators to avoid the "inadaptability" that may arise from directly applying international standards. Simultaneously, a cross-departmental regulatory coordination mechanism should be established. [9](Darma et al., 2025) Led by the Ministry of Finance, an "ESG Accounting Disclosure Coordination Group" should be formed in collaboration with departments such as the Ministry of Ecology and Environment, the Ministry of Human Resources and Social Security, and the State-owned Assets Supervision and Administration Commission to standardize regulatory approaches. Clear standards should be defined for integrating environmental data, such as pollutant discharge information from environmental authorities, and social data, such as employee rights records from human resources departments, with ESG information in financial reports. This will prevent companies from incurring multiple compliance costs due to conflicting requirements from various regulatory bodies. Additionally, mechanisms to penalize regulatory arbitrage should be strengthened. Companies that deliberately select disclosure frameworks or manipulate ESG data should be included in the capital market integrity records to increase the cost of non-compliance.[2] (Bigelli et al., 2023) [14] (Lai et al., 2026)

5.2 Technical Support Framework: Overcoming Data Collection and Value Quantification Bottlenecks

To address the challenges of unstructured ESG data and value quantification at the technical level, a multi-source data integration mechanism involving enterprise self-collection, third-party verification, and government data sharing should be established under the leadership of regulatory authorities. In this process, enterprises must develop specialized ESG data ledgers to ensure continuous and complete recording of core data such as carbon emissions and employee satisfaction. At the same time, third-party institutions with ESG verification qualifications, such as accounting firms, should be engaged to professionally verify the authenticity of the ESG data collected by enterprises and issue data quality reports, providing external assurance of data credibility. Furthermore, enterprises should connect with government public data platforms to access official data, including pollution monitoring data from environmental protection departments and employee social security records from human resources departments. This data should be used for cross-validation, further enhancing the verifiability and comparability of ESG data across different enterprises.

In the value quantification phase, corresponding quantification models should be developed based on the characteristics of different ESG dimensions. For the environmental dimension, a carbon price-linked measurement model should be established, using actual transaction prices in regional carbon markets as the baseline accounting benchmark. Dynamic adjustment coefficients should be incorporated to account for expected changes in carbon policies. This approach aims to accurately

calculate the actual benefits generated by corporate carbon reduction efforts and transform them into measurable social value, thereby addressing the issue of excessive qualitative descriptions and insufficient quantitative data in social dimension disclosures. For the governance dimension, a financial impact model for governance effectiveness should be developed. This model would analyze the correlation between governance indicators, such as board independence scores and corporate anti-corruption investments, and financial data, such as the incidence of financial risks and audit adjustment amounts. Regression analysis should be employed to establish a quantitative relationship, thereby clearly demonstrating the actual impact of corporate governance levels on financial health.

5.3 Market Guidance Framework: Balancing Information Supply and Demand and Optimizing Pricing Mechanisms

To improve the efficiency of ESG information supply and demand, relevant regulatory authorities should strengthen the guidance on ESG information needs for institutional investors. For instance, the China Securities Regulatory Commission could require public funds, insurance asset management companies, and other institutions to mandatorily disclose their use of ESG information in investment decision reports, thereby incentivizing enterprises to proactively disclose high-quality information. Concurrently, stock exchanges should be encouraged to establish an "ESG Information Disclosure Quality Rating System," categorizing enterprises into four tiers—A, B, C, and D—based on the completeness, accuracy, and relevance of their disclosures. [20] (Soboleva & Zuga, 2022) The rating results should be linked to the eligibility of listed companies for activities such as refinancing and equity incentives, creating positive incentives. On the other hand, the ESG value pricing mechanism should be refined. Securities firms and fund companies should be guided to develop "ESG Long-term Value Valuation Models," incorporating the return periods of long-term projects like clean energy investments into discount rate adjustment factors to avoid short-term valuation biases. [24] (Wu & Abeysekera, 2023) Stock exchanges should establish "ESG Sector Indices," selecting highly-rated enterprises as constituent stocks to attract long-term capital inflows and stabilize irrational fluctuations in ESG premiums. Additionally, relevant departments should collaborate to establish a rapid response mechanism for negative ESG information. When an enterprise experiences a negative ESG event, the stock exchange should promptly require the disclosure of the event's financial impact to prevent market panic selling and enhance pricing efficiency.

5.4 Corporate Management Framework: Improving Internal Adaptation and Enhancing Disclosure Motivation

Integrating ESG indicators into corporate financial reports will inevitably impact the internal organizational structure and management mechanisms of enterprises. Therefore, in terms of organizational structure, companies should establish a dedicated "ESG Accounting Management Department," staffed with full-time ESG accounting personnel responsible for integrating ESG data with financial systems and ensuring the recognition and measurement of ESG information. This will prevent ambiguities in responsibility that may arise from part-time management. Simultaneously, ESG performance should be incorporated into management evaluation indicators, linking the quality of ESG disclosures and the effectiveness of ESG cost control with executive compensation to increase management's emphasis on these areas.(Aluchna et al., 2022)[1]

In terms of cost allocation, to encourage enterprises to advance the integration of ESG and financial reporting, the government can utilize measures such as tax incentives, fiscal subsidies, and optimized financing. For investments in ESG data collection and system upgrades, enterprises could receive fiscal subsidies of up to 30%. Companies with outstanding ESG performance may benefit from reductions in corporate income tax. Additionally, ESG-specific bonds could be introduced in the capital market, allowing enterprises to use ESG project revenues as a source for debt repayment, thereby lowering financing costs. [19] (Rossi & Candio,2023) Furthermore, enterprises should be encouraged to engage in value-added applications of ESG information, using high-quality ESG reports as credit credentials for supply chain cooperation and overseas market expansion. This approach enables companies to derive tangible benefits from disclosure, stimulating proactive disclosure motivation.

6. Conclusion

The integration of ESG indicators into corporate financial reports represents not only an innovation in the accounting field

but also a crucial initiative to advance corporate sustainable development and respond to the global green transition. Although numerous practical challenges currently exist at the institutional, market, technical, and corporate levels, these issues—such as ambiguous standards and fragmented regulation; difficulties in data collection and value quantification bottlenecks; mismatched information supply and demand coupled with inefficient pricing mechanisms; and inadequate internal adaptation and weak disclosure motivation—can be effectively addressed. This can be achieved by establishing systematic, relevant, and dynamic guiding principles for the accounting framework, and constructing specific frameworks across four dimensions: institutional synergy, technical support, market guidance, and corporate management.

Looking ahead, as ESG principles become more deeply ingrained, policy environments continue to optimize, and technological methods keep advancing, the integration of ESG indicators with corporate financial reports will become even more seamless and efficient. This will provide stakeholders, including enterprises, investors, and regulators, with more comprehensive, accurate, and valuable information, thereby contributing to the green, low-carbon, and high-quality development of the economy and society.

Funding

No

Conflict of Interests

The authors declare that there is no conflict of interest regarding the publication of this paper.

Reference

[1] Aluchna, M., Roszkowska-Menkes, M., & Kamiński, B. (2022). From talk to action: The effects of the non-financial reporting directive on ESG performance. Meditari Accountancy Research, 31(7), 1–25.

[2] Bigelli, M., Mengoli, S., & Sandri, S. (2023). ESG score, board structure and the impact of the non-financial reporting directive on European firms. Journal of Economics and Business, 127, 106–133.

[3] Bogdan, V., Haţegan, C. D., Török, R. M., Blidișel, R. G., Popa, D. N., & Pitorac, R. I. (2025). Driving sustainable value: The dynamic interplay between artificial intelligence disclosure, financial reporting quality, and ESG scores. Electronics, 14(16), 3247–3262. https://doi.org/10.3390/electronics14163247

[4] Chen, M., & Lai, E. (2025). Carbon asset management system and trading strategies: Empowering listed companies in value reassessment and sustainable development. Advances in Management and Intelligent Technologies, 1(6). https://doi.org/10.62177/amit.v1i6.860

[5] Chen, M., & Rodger, W. (2025). Artificial intelligence and energy efficiency for ecological sustainability: Can regulatory quality overcome the net zero challenges in G7 economies?. Sustainable Development. https://doi.org/10.1002/sd.70434

[6] Choi, S. U., & Lee, W. J. (2024). Financial statement comparability and environmental, social, and governance (ESG) performance. Sustainability, 16(18), 7993.

[7] Chamera, K. O. (2025). Introduction to the assessment of the quality of non-financial reports of banks in the context of WIG-ESG index membership. Journal of Economics and Management, 47(1), 189–210.

[8] Da, X. (2025). A study on the correlation between ESG performance of manufacturing enterprises and the risk of financial statement restatements. Forum on Research and Innovation Management, 3(11), 772–779.

[9] Darma, S., Fithria, A., Ainy, R. N., & Amalia, D. (2025). Integrating ESG into regional government financial reporting: Insights from Jakarta's smart city initiatives. IOP Conference Series: Earth and Environmental Science, 1524(1), 157–168.

[10] Diwan, H., & Binilkumar, A. S. (2023). From financial reporting to ESG reporting: A bibliometric analysis of the evolution in corporate sustainability disclosures. Environment, Development and Sustainability, 26(6), 13769–13805.

[11] Ellili, N. O. D. (2022). Impact of ESG disclosure and financial reporting quality on investment efficiency. Corporate Governance: The International Journal of Business in Society, 22(5), 1094–1111.

[12] Gafni, D., Palas, R., Baum, I., & Solomon, D. (2024). ESG regulation and financial reporting quality: Friends or foes? Finance Research Letters, 61, 105017. https://doi.org/10.1016/j.frl.2024.105017

[13] Kilian, N. (2021). Ethical reporting of ESG in company financial statements: A South African interpretation. International Journal of Business Continuity and Risk Management, 11(4), 295–309.

[14] Lai, E., Wang, S., & Wang, B. (2026). The theoretical mechanism, practical dilemmas, and innovative pathways of carbon emission rights trading on the financial performance of "Three-High" enterprises. Asia Pacific Economic and Management Review, 2(6).

[15] Li, Y., & Lai, E. (2025). Research on the market-oriented construction of China's blue carbon value realisation: Mechanisms, obstacles, and pathway innovations. Advances in Management and Intelligent Technologies, 1(5).

[16] Lulaj, E., & Brajković, M. (2025). The moderating role of finance, accounting, and digital disruption in ESG, financial reporting, and auditing: A triple-helix perspective. Journal of Risk and Financial Management, 18(5), 245.

[17] Malik, N., & Kashiramka, S. (2025). ESG disclosure and its impact on firm leverage: Moderating role of quality of financial reporting and financial constraints. Global Finance Journal, 65, 101–113.

[18] Palas, R., Gafni, D., Solomon, D., & Baum, I. (2025). ESG ratings and financial reporting quality: Why social performance matters. Finance Research Letters, 86(PE), 108–113.

[19] Rossi, P., & Candio, P. (2023). The independent and moderating role of choice of non-financial reporting format on forecast accuracy and ESG disclosure. Journal of Environmental Management, 345, 264–273.

[20] Soboleva, G., & Zuga, E. (2022). The participation of Russian companies in the implementation of the ESG agenda: Social and corporate aspects in the context of non-financial reporting. St Petersburg University Journal of Economic Studies, 38(3), 365–384.

[21] Suresh, N. V., Selvakumar, A., Sasikala, B., & Sridhar, G. (2024). Integrating environmental, social, and governance (ESG) factors into social accounting frameworks: Implications for sustainable business practices. In Proceedings of the International Conference on Digital Transformation in Business: Navigating the New Frontiers Beyond Boundaries (DTBNNF 2024) (pp. 18–28). Atlantis Press. https://doi.org/10.2991/978-94-6463-433-4_3

[22] Tian, Y., Lai, E., Fu, Y., & Li, Y. (2025). Exploring the impacts of ESG disclosure on corporate financing constraints: A perspective of classifying corporate carbon emissions. Corporate Social Responsibility and Environmental Management. Advance online publication. https://doi.org/10.1002/csr.70097

[23] Vanina, S. T., & Dian, A. (2025). Financial statement comparability and cash holding: Moderated by ESG performance in Indonesia. Asian Review of Accounting, 33(3), 441–463.

[24] Wu, M & Abeysekera, I. (2023) Financial reporting quality of ESG firms listed in China. PLoS ONE 18(6): e0284684. https://doi.org/10.1371/journal.pone.0284684