



Comparative Analysis of Global ESG Information Disclosure Regulatory Frameworks and Challenges

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Abstract. Environmental, social, and governance (ESG) information disclosure constitutes the cornerstone of ESG rating and plays a fundamental role in the ESG investment process. At present, listed companies mainly rely on the voluntary principle in ESG information disclosure and lack macro-level enforcement, which leads to false disclosure, information omission, and other problems. Through in-depth desktop research, this paper compares and analyzes the similarities, differences, and characteristics of the global ESG regulatory framework, and explores the challenges faced by the current ESG information disclosure regulatory system. It is found that significant variations in the maturity and emphasis on ESG information disclosure regulation are evident across different countries. The current regulatory frameworks for ESG information disclosure in various countries primarily encounter three challenges: insufficient data quality and consistency, difficulty in supervision implementation, and resistance of enterprises. To address these challenges, this paper proposes that regulators can formulate a unified ESG disclosure standard, strengthen data quality and transparency, and introduce a mechanism combining incentives and punishments, to improve regulatory efficiency. Meanwhile, enterprises should actively formulate ESG strategies, build ESG management frameworks, and improve internal control systems of risk management, to meet the urgent requirements of sustainable development under the background of globalization.

Keywords: ESG information disclosure; Regulatory framework; Sustainable development; Enterprise responsibility; Transparency.

1 Introduction

Environment, social, and governance (ESG) represent an innovative enterprise evaluation concept that comprehensively considers the environmental protection, social responsibility, and governance efficiency of enterprises, and embodies the in-depth practice of the concept of sustainable development and long-term value growth ^[1]. The ESG rating system covers three core elements: information disclosure, evaluation and rating methods, and investment guidance. Among them, ESG information disclosure constitutes the cornerstone of the ESG investment concept, which involves listed

companies actively or passively providing investors and regulators with detailed ESG information before and after listing according to regulations. This process not only facilitates effective regulation by regulators but also enables investors to fully understand the actual situation of enterprises and then make wise investment choices. As the basis of ESG performance data of enterprises, the ESG information disclosure system plays a vital role in promoting the in-depth development of the ESG investment and financing system. However, the overall quality of global ESG information disclosure remains inadequate, with the existing systems in various countries having limitations. Urgent attention is required to enhance the relevant regulatory framework to comprehensively improve the authenticity, adequacy, and comparability of ESG information disclosure. Therefore, by comparing and analyzing the similarities, differences, and characteristics of global ESG information disclosure regulatory frameworks and discussing the current challenges, this paper puts forward targeted improvement suggestions for both regulators and enterprises to optimize ESG information disclosure regulatory frameworks and promote their continuous improvement in practice.

2 Regulatory Framework for ESG Information Disclosure

2.1 International Regulatory Framework

2.1.1 Standards and Initiatives of Major Global ESG Information Disclosure

Currently, the global information disclosure standards are undergoing the process of integration and unification, which enhances the comparability and transparency of information. Internationally, the ESG information disclosure framework primarily consists of authoritative standards, such as the Global Reporting Initiative (GRI) and the Sustainability Accounting Standards Board (SASB).

1) GRI: As the most widely used ESG reporting framework in the world, GRI was jointly established by the United Nations Environment Programme (UNEP) and the Coalition for Environmentally Responsible Economics (CERES), a non-governmental organization. GRI mainly aims to facilitate organizations in disclosing their economic, environmental, and social impacts and provides a series of common standards. It has also formulated industry standards for specific industries such as oil and gas, coal, and agriculture.

2) SASB: It is a non-profit organization in the United States and focuses on formulating industry-specific ESG accounting standards to provide valuable financial-related ESG information for investors' decision-making. SASB's standards cover many industries and complement GRI standards, providing a comprehensive set of ESG disclosure guidelines for enterprises.

3) Task Force on Climate-related Financial Disclosures (TCFD): It was established by the G20 Financial Stability Board in 2015 to develop a consistent and voluntary set of climate-related financial disclosure recommendations. TCFD aims to assist investors in understanding the climate risks of entities and promote enterprises to communicate their climate change risk management strategies and adaptation measures to investors. It should be noted that TCFD standards not only focus on climate risks but

also emphasize the development opportunities brought by enterprises' proactive actions in dealing with climate change.

4) International Sustainable Standards Board (ISSB): It is an emerging global organization, striving to formulate a unified ESG disclosure standard. Based on the TCFD framework, ISSB's standards integrate industry-specific disclosure requirements such as SASB, aiming at providing a set of global ESG disclosure standards.

2.1.2 Brief Introduction of Regulatory Practices and Policies In the EU, the US, and other Regions

In terms of regulatory practices and policies, the EU and the US have adopted different methods according to the characteristics and needs of their respective markets [2]. The EU has taken more mandatory measures in ESG information disclosure. For example, the Non-Financial Reporting Directive (NFRD) requires large enterprises to disclose ESG information [3], and the Corporate Sustainability Reporting Directive (CSRD) aims to expand the coverage of disclosure requirements to include small and medium-sized enterprises and introduce limited authentication requirements. Conversely, in the American market, SASB standards enjoy widespread adoption. However, on March 6, 2024, the Securities and Exchange Commission (SEC) of the US announced new regulations, requiring listed companies to disclose the climate risks faced by their businesses, mitigation strategies, and potential financial impacts stemming from extreme weather events in their annual reports and listing registration forms.

2.2 Regulatory Framework in China

China has not issued a unified regulation specifically addressing ESG information disclosure, but relevant requirements and guidelines are scattered in multiple laws, regulations, and regulatory documents [4]. The following are some key regulations and policy documents, which constitute the ESG information disclosure framework in China:

1) The Environmental Protection Law has been implemented since January 1, 2015, establishing the priority status of environmental protection and the principle of pollution prevention, and clarifying the responsibilities of all units and individuals to protect the environment.

2) The Guidance on Establishing the Green Financial System was jointly issued by seven ministries and commissions including the People's Bank of China and the Ministry of Finance on August 31, 2016. It aims to clarify the supporting role of green investment, promote the green transformation of the economy, improve the definition standards of green bonds, and support qualified green enterprises for listing financing and refinancing.

3) The Plan for the Reform of the Legal Disclosure System of Environmental Information was issued by the Ministry of Ecology and Environment on May 24, 2021. It puts forward the "Goal in 2025", which requires the establishment of a well-developed mandatory disclosure system of environmental information. It also stipu-

lates that key pollutant discharge units, listed companies implementing mandatory cleaner production audits, and bond issuers should legally disclose environmental information in annual reports.

4) China Securities Regulatory Commission (CSRC) revised the Code of Corporate Governance for Listed Companies in China in 2018, establishing the basic framework of ESG information disclosure for the first time. CSRC also issued the Guidelines for the Content and Format of Information Disclosure of Companies Offering Securities to the public in 2021, which systematically demands enterprises to disclose ESG information.

5) The Shanghai Stock Exchange and Shenzhen Stock Exchange have proposed specific requirements for information disclosure of non-financial reports of listed companies, including environmental information disclosure guidelines and disclosure standards of social responsibility reports.

6) Administrative Measures for Information Disclosure of Listed Companies was promulgated on March 18, 2021, and implemented since May 1 of the same year. It clarifies the behavioral norms of listed companies and other entities obligated to disclose information and emphasizes that information disclosure should guarantee authenticity, accuracy, and completeness.

These regulations and guidelines not only exhibit China's progress in promoting ESG information disclosure, but also reflect China's legislative and regulatory trends in environmental protection, social responsibility, and corporate governance. With China's increasing emphasis on sustainable development, it is expected that more specific regulations and standards will be issued in the future to further enhance the transparency and sense of responsibility of enterprises in ESG.

2.3 Differences in Regulatory Characteristics of Relevant Countries and Regions

The limitations of the ESG information disclosure system are similar globally, but the manifestation varies among different countries and regions, leading to significant differences in ESG information disclosure systems. Overall, the ESG information disclosure system of the EU demonstrates significant advantages. The specific differences in regulatory characteristics are as follows:

China's ESG regulation lacks a unified disclosure standard and normative guidelines. In China, the ESG information disclosure requirements are mainly voluntary, but some industries, such as key pollutant discharge units, have mandatory disclosure requirements. Although CSRC and exchanges are gradually strengthening the norms of ESG information disclosure, such as the Shanghai Stock Exchange requiring science and technology innovation board enterprises to disclose ESG information^[5], it is obvious that China's ESG information disclosure framework is still developing, without a unified disclosure standard and normative guidelines. On February 8, 2024, the Shanghai Stock Exchange, Shenzhen Stock Exchange, and Beijing Stock Exchange respectively issued the "Guidelines for Self-Regulation of Listed Companies-Sustainable Development Report (Trial) (Draft for Comment)," which proposed the requirements of disclosing the specific situations, treatment results, and corrective

measures of high-standard negative information, including major environmental incidents, major safety and quality liability accidents, privacy leaks, commercial bribery, corruption incidents, and unfair competition behaviors. Meanwhile, the guidelines put forward the principle of dual importance: the finance and impact of sustainable development needed to be considered by disclosure entities, indicating that the disclosure of ESG reports by listed companies will be in line with the international market.

ESG disclosure standards and guidelines in the US are scattered, provided by many institutions and organizations, and mainly regulated by the SEC. Although the US market mainly adopts voluntary disclosure at present, the SEC has specific requirements for environmental information disclosure, especially for environmental factors that may affect the enterprise's operation and financial performance^[6]. The new regulations, promulgated by the SEC on March 6, 2024, require for the first time to strengthen and standardize disclosure of climate-related contents of listed companies. This includes significant climate-related risks that may affect registrants' business strategies, financial status, and operational performance, as well as significant strategic expenditures and specific activities conducted by registrants to mitigate or adapt to the significant climate-related risks, and capitalization costs, expenditures, and losses resulting from adverse weather events, carbon offsets, and renewable energy credits. Compared with the draft for comment two years ago, the new regulations cancel the disclosure requirements of greenhouse gas emissions in Scope 3, extend the corresponding compliance transition period, add significant preconditions to most disclosure requirements, and reduce the implementation difficulty of enterprises, aiming at encouraging more listed companies in the US to participate in and improve the climate information disclosure.

The EU has strict requirements on ESG information disclosure, especially for large enterprises and listed companies. Non-financial reporting directives in the region require enterprises to disclose ESG information. The CSRD proposed by the EU came into effect on January 5, 2023. It requires EU enterprises to report the impact of their business activities on the environment and society, as well as the effects of their ESG practices and measures on their business. In other words, they must disclose relevant information on the impact of their business activities on the earth and human beings, as well as the influence of their sustainable development goals, measures, and risks on the financial health of enterprises. For example, in addition to requiring organizations to report on their energy usage and costs, CSRD also demands disclosure entities to report their emission targets, elucidate the environmental impacts of energy usage, outline goals for reducing these impacts, and specify the financial influence of achieving these goals on organizations. Evidently, CSRD significantly expands the NFRD scope, sustainable development disclosure, and reporting requirements.

3 Challenges in ESG Information Disclosure Regulation

3.1 Difficulty in Guaranteeing Data Quality and Consistency

Globally, the inconsistency of data standards is a major challenge for ESG information disclosure. Due to the lack of a unified framework and indicator system, dif-

ferent organizations and countries may adopt their own methods when disclosing ESG information. This diversity leads to the inconsistency of information, which makes it complicated to compare ESG performance across enterprises. In addition, the diversity of ESG data sources also poses a nonnegligible challenge, as these data may originate from internal enterprise reports, analyses conducted by third-party evaluation agencies, or statistics of relevant government departments. Given the potential significant variations in data collection and processing methods, the ultimate comparability of the data is affected. Meanwhile, enterprises may disclose selectively or exaggerate their achievements when reporting ESG performance, aiming to enhance enterprise image and attract investors. However, such practice may result in the loss of authenticity of disclosed information, thus affecting the judgment of investors and other stakeholders. Furthermore, the measurement of some key environmental indicators, like greenhouse gas emissions, often depends on complex technology and professional equipment, and technical limitations may lead to inaccuracy of data collection, thereby affecting the overall quality and credibility of ESG information.

3.2 Difficulty in Regulation and Implementation

Regulators face various challenges in implementing ESG disclosure requirements. First, the absence of consistent disclosure standards globally results in regulatory disparities across different countries and regions. To ensure international standards' compatibility and alignment with local market demands, regulators must meticulously consider the formulation and implementation of ESG regulations. Second, the lack of both detailed disclosure standards and clear guiding principles leads to uneven scope and depth in ESG information disclosed by enterprises. They often omit negative information, which seriously affects the comparability and credibility of information. Finally, the collection and processing of ESG data involves many aspects, which not only pose a huge workload but also necessitate cross-departmental collaboration, thereby increasing regulatory complexity.

3.3 Resistance from Enterprises

Enterprises may resist ESG disclosure due to various factors, such as costs, resources, culture, regulation, market reaction, and internal resistance. Among them, the core influencing factor is the reaction of investors and markets to information disclosure. Most enterprises fear that ESG disclosure may not yield the expected positive reaction from investors and markets, or that the poor performance of ESG data may adversely affect stock prices ^[7].

Other main factors that cause enterprises to resist ESG disclosure include:

1) Sensitivity of information disclosure: ESG information may involve enterprises' sensitive data, such as environmental impacts, labor conditions, and governance structure. Enterprises may worry that the disclosure of such information will affect their business competitiveness or cause negative reactions from the public, investors, and regulators.

2) Lack of clear standards: Despite the existence of an international ESG disclosure framework, different regions and industries may have various disclosure requirements, so the lack of unified and clear standards may lead enterprises to be confused and uncertain about disclosure contents and methods.

3) Short-term performance pressure: Enterprises may pay more attention to short-term financial performance, while ESG practice often requires long-term investment and commitment. Driven by the pursuit of short-term profit maximization, enterprises may be reluctant to invest heavily in ESG.

4) Doubts about the ESG disclosure value: Some enterprises are skeptical about the long-term value of ESG investments and disclosures, arguing that these efforts will not yield discernible business returns.

4 Recommendations

4.1 Recommendations to Regulators

Regulators can take the following measures to improve the regulatory framework:

1) Establishing a unified ESG disclosure standard

A unified standard assists investors in comprehending and evaluating the ESG performance of enterprises, while simultaneously alleviating the reporting burden on enterprises. Therefore, regulators should promote the formulation of a set of internationally recognized ESG disclosure standards to ensure the comparability of ESG reports of different enterprises and industries. Collaboration with international organizations like the GRI or the SASB can facilitate this process.

2) Strengthening data quality and transparency requirements

It is necessary to ensure the quality and transparency of ESG information while requiring enterprises to provide verifiable data and a detailed disclosure process. Introducing the third-party audit or certification can enhance the credibility of ESG reports. Additionally, regulators should encourage enterprises to use quantitative data and key performance indicators (KPIs) to evaluate their ESG performance, so investors and other stakeholders can readily gauge the enterprise's performance and progress in these areas.

3) Implementing incentive and punishment mechanisms

Enterprises should be motivated to actively enhance their ESG performance through the introduction of incentives such as tax incentives, financial subsidies, or priority access to markets. Meanwhile, for those failing to meet ESG disclosure standards, corresponding punishment measures should be implemented, such as fines, restrictions on financing channels, or public condemnation. Employing a two-way reward and punishment mechanism can heighten the enterprise's focus on ESG information disclosure and promote the whole market to develop in a more sustainable direction.

4.2 Recommendations to Enterprises

Given the ongoing global wave of sustainable development, enterprises should actively embrace adaptation and leverage ESG initiatives in the following aspects:

1) Developing ESG strategies

Enterprises should initiate their approach with strategy formulation, identify and evaluate key risks and opportunities in ESG, and set clear ESG goals and indicators to ensure alignment with business strategies and operations.

2) Establishing an ESG management structure

It is essential to clarify the allocation of ESG responsibilities in the corporate governance structure, such as setting up a special ESG committee or working group to ensure a clear division of powers and responsibilities in ESG affairs across decision-making, regulation, and execution levels.

3) Improving the internal control system of risk management

It is crucial to optimize the internal control management system related to ESG, guarantee the effective implementation of ESG policies and measures, and improve the efficiency of risk management through system optimization, clear division of responsibilities, and establishment of relevant mechanisms.

5 Conclusions

By comparing and analyzing the current global regulations of ESG information disclosure regulatory frameworks, this paper demonstrates substantial variations in the maturity and emphasis on ESG information disclosure regulation across different countries. Overall, numerous challenges persist in ESG information disclosure, including guaranteeing data quality and consistency, implementing regulation, and addressing enterprise resistance. Therefore, regulators should start by formulating a unified ESG disclosure standard, strengthening data quality and transparency requirements, and supplementing incentive and punishment mechanisms to improve the effectiveness of ESG information disclosure regulation. Meanwhile, enterprises should embrace and adapt to the current wave of sustainable development under globalization by formulating ESG strategies, establishing ESG management structures, and improving the internal control system of risk management. The findings of this study assist enterprises in effective ESG information disclosure and offer suggestions for enhancing the regulatory framework of ESG information disclosure in China. In the future, we can further explore the impact of ESG information disclosure on economic consequences like enterprise value, to promote enterprises to improve their ESG information disclosure practices.

References

1. Zhu C. Y. & Lv C. L. The rise of ESG and the dynamic response of modern company law [J]. *Chinese and Foreign Law*, 2022, 34 (05): 1241-1259.
2. Peng Y. C. Optimization of ESG information disclosure system: EU experience and China mirror [J]. *Securities Market Herald*, 2023 (11): 43-55.
3. See S. D. & Serensen K. New EU directive on the disclosure of non-financial information(CSR)[J]. *European Company and Financial Law Review*,2015,12(3):312.
4. He Y. T. & Bu J. Design of ESG information disclosure framework oriented by accounting information quality [J]. *Modern Business*, 2022 (12): 165-168.
5. Zhang X. Y. & Qi Y. Research on reshaping the development strategy of state-owned enterprises based on ESG evaluation system [J]. *China Environmental Management*, 2024, 16 (01): 27-33.
6. Wang W. B., Ma D. P., and Gan S. D. International ESG information disclosure and its enlightenment to China [J]. *Accounting Monthly*, 2023, 44 (11): 135-142.
7. Lou Q. R. ESG Information Disclosure: Jurisprudential Reflection and System Construction [J]. *Securities Market Herald*, 2023 (03): 24-34.

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