

## RESEARCH ON ENVIRONMENTAL ACCOUNTING INFORMATION DISCLOSURE OF IRON AND IRON AND STEEL INDUSTRY

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**ABSTRACT.** *In recent years, environmental issues have increasingly attracted the attention of the public and relevant organizations. Practice has proved that we must pay attention to environmental protection while developing economy. As one of the 16 most polluting industries in the iron and iron and steel industry, its environmental protection task is particularly important, and environmental accounting information disclosure is more concerned. In this context, the research on environmental accounting information disclosure of listed steel companies is representative. Based on the content analysis method, this paper selects 30 listed companies in the iron and steel industry that will be published by the CSRC in 2021, analyzes the annual reports, social responsibility reports, sustainable development reports and related announcements of 30 listed companies, and analyzes the environmental accounting information disclosure problems in the iron and steel industry. In view of the main problems, this paper analyzes the causes of the problems, and finally puts forward countermeasures and suggestions, with a view to provide reference and reference for the iron and iron and steel industry and relevant departments to adjust the environmental accounting mechanism.*

**Keywords:** Environmental accounting, Information disclosure, Accounting information, Iron and steel industry

**1. Introduction.** For a long time, China's extensive economic development has been at the cost of sacrificing the ecological environment, which has led to the deterioration of the ecological environment. To achieve long-term and healthy development, a country must pay attention to environmental protection. While maintaining their own development and creating wealth, listed companies should take the initiative to protect the environment and conserve resources. In order to realize the green development of Chinese enterprises and promote the economic transformation and upgrading, enterprises in the iron and steel industry must enhance their awareness of environmental protection and strengthen the disclosure of environmental accounting information. A complete and accurate disclosure of environmental accounting information is helpful to understand the environmental protection strength and effectiveness of the enterprise, evaluate the environmental protection work of the enterprise, and better realize sustainable development.

This paper takes the information disclosure of the iron and iron and steel industry as the starting point, selects some listed companies as samples for research, and after a series of data statistical analysis, summarizes the information disclosure of listed companies in China's iron and iron and steel industry and the existing problems, analyzes the reasons and provides effective development views, which provides theoretical guidance and value reference for China's environmental accounting information disclosure, in order to promote the standardization and systematization of enterprise information disclosure.

## 2. Literature Review at Home and Abroad.

**2.1. Research on the content of environmental accounting information disclosure.** Foreign research started earlier than domestic research. Silva Monteiro and Aibar-Guzmán believed that the actual emission of air pollutants, emission reduction and related measures, pollution control and control equipment joint venture, organizational structure, environmental objectives and other information should be disclosed [1]. Fatima et al.'s report divided enterprise information disclosure into nine categories, involving 46 projects, involving environmental financial information and environmental performance information [2]. Domestic scholars have also carried out relevant research. Xiang believed that the contents of environmental accounting information disclosed by enterprises should include economic benefits, environmental benefits and social benefits, so as to reflect the performance of the enterprise's management to the fiduciary responsibility [3]. Liu et al. further divided environmental accounting information into four parts: environmental assets, carbon emission rights, environmental liabilities and environmental profits and losses [4].

**2.2. Research on the way of environmental accounting information disclosure.** Lara-Silva et al. believed that in terms of environmental accounting information disclosure, the current statements could not be reflected, and it was advisable to use descriptive language in the notes to make multiple disclosures [5]. Salvo et al. believed that environmental information is generally not standardized, and believed that companies should issue annual reports and independent environmental reports at the same time [6]. Qin and Guo believed that there should be a separate environmental information account in the annual report and the prepared environmental report should be published regularly [7]. Nie described the three major disclosure methods of preparation of annual report, independent report and combined disclosure of annual report and independent report [8].

**2.3. Literature review.** To sum up, in terms of the content of environmental accounting information disclosure, scholars from all countries have a relatively consistent view that enterprises should at least disclose environmental financial information and environmental performance. Due to the different research fields of different scholars, the classification of disclosure content may be different, but the coverage is roughly the same. In terms of environmental accounting information disclosure methods, scholars believe that there are mainly three forms: independent environmental report, supplementary environmental report and combination of independent environmental report and supplementary environmental report.

## 3. Analysis of Environmental Accounting Information Disclosure in Iron and Steel Industry.

**3.1. Analysis of environmental information disclosure content.** According to the annual reports and social responsibility reports of 30 listed companies in the iron and steel industry, the disclosure contents of these listed companies are classified and summarized. The results are shown in Table 1.

It can be seen from Table 1 that the sample listed companies are able to disclose environmental information in their annual reports in accordance with the requirements of the relevant environmental protection departments. The contents of disclosure are mainly distributed in the discussion and analysis of business conditions, major events and notes to financial statements. In the discussion and analysis of the business situation, the enterprises mainly disclosed the environmental protection results and the environmental protection strategy for the next year. At the same time, most of the enterprises also disclosed the environmental protection risks they may face and gave corresponding countermeasures. A few of the enterprises only listed the risks and did not give specific countermeasures. In the

TABLE 1. Statistical table of environmental information disclosure contents of sample companies

Disclosure content	Number of companies involved in the annual report	Number of companies involved in the social responsibility report
Environmental protection effect	16	15
Environmental protection strategy and policy	30	16
Environmental risks	23	5
Countermeasures for environmental protection risks	21	5
Environmental governance (pollutant emission reduction, construction and operation of pollution prevention facilities, environmental self monitoring scheme)	30	6
Penalty	3	3
Environmental protection honor	3	7
Government accreditation or certification by relevant institutions (ISO environmental certification)	1	5
Environmental protection organizations and personnel	3	5
Environmental protection investment (environmental protection investment and environmental protection R&D investment)	9	13
Three wastes and noise pollution	30	30
Recycling and comprehensive utilization of waste products	2	3

important matters section, enterprises will list the relevant information of environmental protection, including pollution discharge information, construction of pollution facilities, etc. In social responsibility reports, different enterprises have different disclosure structures and contents. Most enterprises have elaborated on the compliance of pollutant discharge and the implementation of environmental protection policies in detail. Some enterprises have listed environmental protection investment, including the invested funds and related projects. A few enterprises have described the internal environmental protection organizations and personnel, the recognition of the government or relevant institutions, and the environmental protection honor they have obtained.

**3.2. Analysis of environmental information disclosure methods.** From the perspective of the ways of environmental information disclosure, there are mainly four ways: annual report, social responsibility report, sustainable development report and internal control self-assessment report. Among them, annual report and social responsibility report are the two most important disclosure methods, and a small number of companies have disclosed the content of environmental information in the internal control self-assessment report. A total of 19 companies published their social responsibility reports, accounting for 63% of the total sample companies. The relevant national environmental regulatory authorities encourage companies to actively disclose the work of actively fulfilling their social responsibilities, which shows that most enterprises are complying with national

TABLE 2. Statistical table of environmental information disclosure methods of sample companies

Disclosure method	Number of companies
Annual report	30
Social responsibility report	19
Sustainable development report	1
Self evaluation report on internal control	6
Labor, safety, health protection and environmental protection of employees	1
Environmental, social and regulatory reports	1

policies and making reasonable disclosure according to policy requirements. The statistics of environmental information disclosure methods of listed companies are shown in Table 2.

#### 4. Main Problems of Environmental Accounting Information Disclosure in Iron and Iron and Steel Industry.

**4.1. The disclosure method and structure are not unified.** Under the current policy system, the relevant laws and regulations do not clearly stipulate the disclosure method and structure of environmental accounting information, which leads to that listed companies in the iron and steel industry cannot disclose relevant environmental accounting information in a unified structure and manner. The differences in disclosure methods and structures make it difficult for relevant information users to conduct horizontal comparison of environmental accounting information among different enterprises, which is not conducive to obtaining effective information.

**4.2. Environmental accounting information disclosure lacks integrity.** When preparing the financial report, an enterprise shall fully and detailedly list the impact of environmental factors in its daily production and operation activities. The items listed in most enterprises' accounting reports are mainly traditional financial accounting items, and the elements of environmental accounting items are not fully disclosed. For example, for environmental protection tax, some enterprises only list the amount of environmental protection tax. In the environmental protection investment projects, most enterprises only listed the amount of environmental protection investment and summarized the good performance in environmental protection, but did not specify the specific destination of the environmental protection amount and the specific embodiment of the good performance. All these reflect the incompleteness of environmental accounting information disclosure.

**4.3. The content of disclosure has a high degree of coincidence.** Most enterprises disclose environmental accounting information in their annual reports and social responsibility reports, and the contents overlap. Some enterprises have a high degree of overlap between the contents disclosed in the social responsibility report and the annual report. Some enterprises simply move the contents of the annual report directly to the social responsibility report, and the information is completely overlapped. There are also some green development plans with redundant contents and low information content, which simply explains the environmental protection compliance of the enterprise, lacking specific data to prove it. Such an approach will only consume time and be too formal, which will also affect the efficiency of information users in collecting effective information.

## 5. Analysis on the Causes of Environmental Accounting Information Disclosure.

5.1. **Relevant laws and regulations are not perfect.** At present, the provisions on environmental accounting information in the relevant accounting laws of China are quite general and lack of clear provisions to guide. The environmental protection department has issued the corresponding environmental protection law to limit the pollutant emissions of heavily polluting enterprises, but there is no clear provision on environmental accounting information disclosure, and there is also a lack of environmental information disclosure standards for specific industries, leading to inconsistent environmental accounting information disclosed by enterprises in the same industry. The structure and method of disclosure are different, which affects the comparison between different enterprises by stakeholders.

5.2. **The results of enterprise information disclosure have not been examined by professional departments.** The listed companies in the industries selected in this paper lack the review and evaluation of the specialized agencies. In this case, some listed companies may have a fluke mentality, reduce the quality and integrity of the disclosure content, resulting in the fact that the disclosure content often cannot meet the information needs of investors, and the environmental accounting information disclosure may become a formal disclosure. Moreover, the disclosure results of listed companies that have not been evaluated by specialized agencies may not be authoritative and reliable.

5.3. **Enterprises pay insufficient attention to environmental information disclosure.** Most enterprises have little quantitative data to fulfill their environmental protection responsibilities, which is not conducive to the evaluation and comparison of information users. It also means that the management of the enterprise does not really realize how strong the heavy pollution caused by the enterprise is to the environment, the management does not carry out the enterprise behavior planning, and the information disclosed by the enterprise is limited. The disclosure of environmental accounting information cannot be optimized.

## 6. Countermeasures and Suggestions on Improving Environmental Accounting Information Disclosure in Iron and Iron and Steel Industry.

6.1. **Improve the disclosure system of environmental accounting information in the iron and iron and steel industry.** It is undeniable that in the annual reports published by enterprises, most enterprises can comply with the relevant disclosure norms and explain the relevant situation of enterprises according to the key points of disclosure. However, in the social responsibility report, the format of environmental information released by enterprises is different, the quality level of content is uneven, and some corporate social responsibility reports have not been prepared. It can be seen that some enterprises are not very aware of environmental information disclosure and environmental protection. Just staying at the level of regulatory requirements, listed companies in various iron and steel industries show a very different phenomenon in environmental accounting information disclosure. To further improve the environmental accounting information disclosure system of the iron and iron and steel industry, we need to design the disclosure system and system according to the characteristics of the iron and iron and steel industry, promote enterprises to disclose complete accounting information through normative requirements, improve enterprises' awareness of environmental protection responsibility, and promote the public to supervise enterprises to perform their social responsibilities.

**6.2. Promote the external environmental audit system.** At present, the results of environmental information disclosure in the steel industry lack professional institutional audit, so the authenticity and integrity of the environmental accounting information disclosure report will be affected. For enterprises, the involvement of external audit can enable enterprises to pay more attention to environmental information disclosure, improve the integrity of information disclosure, and promote the construction of relevant systems and the authenticity of information disclosure. For stakeholders, it ensures the reliability and comprehensiveness of the information they obtain.

**6.3. Improve the environmental protection awareness of iron and steel enterprises.** Some iron and steel enterprises will carry out environmental protection education and training activities, for example, Valin Iron and Steel has carried out pollutant treatment training and environmental protection publicity activities to improve the environmental protection awareness and environmental risk awareness of employees; Liugang has carried out the training of environmental protection management backbone in the company. The specific effect of this series of environmental education and publicity activities and the setting of environmental protection organizations and personnel cannot be evaluated, but it can reflect the importance and in-depth implementation of environmental protection policies by these enterprises, which is conducive to the establishment of a solid concept of environmental legal system by enterprise employees and the improvement of environmental protection awareness. In order to improve their awareness of environmental protection, listed companies can refer to the specific practices of enterprises with excellent environmental protection achievements, regularly carry out activities, implement environmental protection plans, and involve all employees more or less, so as to imperceptibly improve employees' enthusiasm for environmental protection in the process of activities.

**7. Conclusion.** Through the analysis of the annual report, social responsibility report, sustainable development report and relevant announcements of listed companies in the steel industry, this paper finds that the main problems of environmental accounting information disclosure are the inconsistency of the disclosure method and structure, the lack of integrity of environmental accounting information disclosure, and the high degree of overlap of the disclosure content. The main reasons for these problems are the imperfection of relevant laws and the lack of effective supervision. In view of these problems, this paper studies the optimization of environmental accounting information disclosure in the steel industry from the national and enterprise levels. On the one hand, we should accelerate the construction of relevant special laws and regulations at the national level, improve the disclosure system, and strengthen the construction of the third-party supervision system; On the other hand, improve the internal managers' awareness of environmental accounting information from the enterprise level, and strengthen the environmental awareness of enterprise employees.

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