

A Study on the Current Situation of ESG Information Disclosure and Its Consequences

– Taking China Shenhua Energy Company Limited as an Example

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Abstract: ESG disclosure is essential for enhancing corporate transparency given the increasing global growth of ESG systems. China's coal industry generates economic advantages but also causes external diseconomies and is required to fulfill certain social obligations. So that the general public may comprehend how corporate social responsibility is being fulfilled, it is imperative that businesses in the coal sector take the effort to provide social responsibility information. In order to determine if the information in coal companies' ESG reports complies with requirements and to examine the effects of the reports' release on businesses, this article uses China Shenhua Energy Co., Ltd. as its research subject. This paper primarily looks at Shenhua's ESG report by comparing it to the GRI standard, and discovers that Shenhua's ESG information disclosure still has some deficiencies. However, from the event study method, we learn that the publication of Shenhua's ESG report has had some positive effects on the company.

Keywords: ESG, information disclosure, China Shenhua Energy Co., Ltd.

1. Introduction

With the concepts of “peak carbon”, “carbon neutrality” and “social responsibility” taking root in people's minds, research on ESG is emerging in China. Due to the late start of China's research on ESG disclosure, the current research in this area in China is still in the ascending stage, whereas overseas ESG disclosure-related research has been in the exploding stage, with a large number of studies and comprehensive content.

For different industry sectors, China's A-shares have varying standards on the focus of information disclosure. Enterprises in high-emission and energy-intensive industry sectors implement the principle of mandatory environmental disclosure. For listed companies in other areas, the principle of “comply or explain” environmental disclosure applies, while information on social responsibility is voluntary [1].

Due to the special characteristics of their own production and operation, the frequent occurrence of safety production and environmental pollution problems in coal enterprises has attracted extensive public attention, and the issue of social responsibility of coal enterprises has always been a hotspot

of concern for stakeholders. Therefore, based on the theory of social responsibility - a company, while making profits from its own operations and assuming the corresponding legal responsibilities of the company, also has to assume certain responsibilities to various stakeholders, such as employees, consumers, society and environmental protection, the study of the disclosure of social responsibility information of coal enterprises will bring reference significance to the coal industry.

Currently, there are still shortcomings in the social responsibility information disclosure of most of the coal enterprises. The basis for and the format of the disclosure of social responsibility information of them are not uniform, and the quality of the disclosed information varies [2]. Taking Shenhua as the research object, this paper collects and reads pertinent literature, rationalizes the thesis research ideas, and adopts the comparative analysis method to compare Shenhua's social responsibility information with the GRI standard. It discovers that the disclosure of some significant topics is not comprehensive enough, and that the overall disclosure is not yet up to the corresponding requirements in terms of completeness, clarity, and accuracy.

2. Literature Review

2.1. Current Status of Domestic ESG Disclosure

At present, the theoretical framework related to ESG has been established, but there is still room for improvement in the quantity and quality of ESG information disclosure in China [3]. Based on the empirical analysis of the social responsibility of listed companies in China, some scholars believe that there are still many problems in their information disclosure, such as window dressing, incomplete information disclosure, and inactive disclosure of negative information, etc. [4]

In recent years, the number of listed companies carrying out ESG disclosure has increased significantly. According to the official website of the Shanghai and Shenzhen Stock Exchanges, in 2021, a total of more than 1,300 A-share listed companies independently released one of the "ESG Report", "Sustainability Report" and "Social Responsibility Report", accounting for more than 30% of all listed companies in the A-share market, which is a significant increase in number compared with that of 2020 [1].

China's mainland has yet to introduce systematic ESG disclosure norms, and voluntary disclosure by enterprises is still the main form. Although relevant government departments encourage enterprises to make ESG disclosures, the lack of effective supervision and disclosure guidance services for ESG disclosures, as well as the insufficient incentives for enterprises that voluntarily disclose under the current system, have led to the lack of the extent and quality of information disclosed by some enterprises [5].

2.2. The Impact of ESG Disclosure on Business

Foreign scholars have concluded that the impact of corporate ESG disclosure on corporate performance is more important than ESG performance [6]. This is because when companies disclose socially responsible information, the transfer of information can enable stakeholders to better understand the company, thus contributing to a certain extent to the improvement of financial performance [7]. This suggests that voluntary disclosure of corporate social responsibility information can help to increase the transparency of corporate information and send a "good" signal mechanism to investors and corporate stakeholders [8]. Relevant scholars' empirical research on the operating data of A-share listed companies from 2010 to 2018 found that corporate performance is positively correlated with ESG performance, especially after the occurrence of the COVID-19 pandemic [9].

The degree of financing constraints is significantly lower for disclosing companies relative to non-disclosing companies; at the same time, the higher the quality of information disclosure, the lower

the degree of financing constraints in the sample of disclosing companies [10]. The disclosure requirements related to environmental responsibility in ESG disclosure will encourage enterprises to enhance their innovation in environmental management and technology such as green innovation of enterprises [11]. It has also been studied by scholars that listed companies should actively fulfill their disclosure obligations while increasing the level of voluntary disclosure, which motivates corporate managers to make transformational decisions in favor of long-term corporate development. At the same time, corporate controllers should use ESG information as a means of corporate risk management to continuously improve the level of sustainable development and market position of the enterprise in accordance with its stage of development and market position [12].

2.3. Comments of Literature

According to the previous literature review, it is found that the standard of ESG information disclosure of enterprises in China is not uniform and the quality is still to be improved when compared to foreign countries. However, ESG disclosure can not only improve the financial performance of enterprises, but also has a certain impact on corporate financing, risk management, strategic transformation and so on. Therefore, this paper will take Shenhua's ESG report as the research object to compare with the GRI standard, to explore the defects of its disclosure content and the impact after information disclosure.

3. Analysis of the Current Situation of ESG Disclosure in Shenhua

3.1. Basic Situation of the Company

Founded on November 8, 2004, Shenhua is an A+H share listed company under CHN ENERGY, with H-shares and A-shares listed on the Hong Kong Stock Exchange and the Shanghai Stock Exchange on June 15, 2005 and October 9, 2007, respectively. Shenhua mainly operates seven business segments: coal, electric power, new energy, coal chemical industry, railroad, port and shipping. By the end of 2022, the company had assets of 621.7 billion yuan, a total market capitalization of 75.2 billion U.S. dollars, and 83,029 employees.

Shenhua aims to empower the society and boost the economy, and makes the pursuit of excellence and green development as its core values. Shenhua also has the strategy of building a globally competitive world-class integrated energy listed company, creating an innovative, leading and value-oriented enterprise, promoting cleaner, integrated, refined, intelligent and internationalized development, and realizing first-rate safety, quality, efficiency, technology, talent, brand and party building.

3.2. Status of Shenhua's ESG Disclosure

Shenhua's 2022 ESG Report is mainly based on the Hong Kong Stock Exchange's "Guidelines on Listing Rules", the SSE's "Self-Regulatory Guidelines for Listed Companies No. 1 - Standardized Operation", and references to the requirements of the Global Sustainability Standards Council's GRI Standards.

According to the official website of the United Nations Sustainable Stock Exchanges (SSE) Initiative, as of December 1, 2021, the mainstream standards cited in the ESG disclosure guidelines of stock exchanges around the world and their percentages are as follows: GRI (95%), SASB (78%), IIRC (75%), CDP (67%), TCFD (57%), and CDSB (30%).

Since GRI is the mainstream standard, and Shenhua has referred to GRI standard requirements when preparing ESG reports, this paper will choose GRI reporting standards 2021 to analyze Shenhua's 2022 social responsibility report.

3.2.1. Characterization of the Information Quality

According to GRI Standards, organizations should report on accuracy, balance, clarity, comparability, completeness, sustainability context, timeliness, and verifiability to ensure that the quality of reported information, as well as the appropriate presentation of high-quality information, enables users to make informed assessments and decisions around the organization’s impacts and influence on sustainable development.

Table1: Comparison of Shenhua’s ESG Report with GRI Standards.

	Requirements of GRI	Disclosure of the report	Lacking content
Accuracy	The organization shall report information that is correct and sufficiently detailed to an assessment of the organization’s impacts.	1. The company’s operation results, corporate governance, social contributions, and environmental pollution control results are shown in figures; 2. In the relevant forecasts, there are explanations of the underlying assumptions and methods used in the estimations; 3. Data for reporting is taken from the company’s official records and is in conformity with any applicable laws or industry standards for statistics and calculations.	Some words are not described in detail.
balance	The organization shall report information in an unbiased way and provide a fair representation of the organization’s negative and positive impacts.	The company has disclosed the indicators involving both positive and negative information.	No lacking content.

Table 1: (continued).

<p>clarity</p>	<p>The organization shall present information in a way that is accessible and understandable.</p>	<p>1.The catalog can be used by users to locate the page coverage for the three topics of corporate responsibility, environmental protection, and social responsibility; 2. Relevant indicators and abbreviations are described in the appendix to the report; 3. Graphs and data tables were used.</p>	<p>Catalog does not present page numbers for all topics.</p>
<p>comparability</p>	<p>The organization shall select, compile, and report information consistently to enable an analysis of changes in the organization’s impacts over time and an analysis of these impacts relative to those of other organizations.</p>	<p>1. There are no significant adjustments to the scope of disclosure in 2022 ESG report compared to previous years’ ESG reports; 2. In order to reveal 3-year comparisons for ESG key metrics and show performance level changes, a consistent statistical methodology was applied.</p>	<p>No lacking content.</p>
<p>completeness</p>	<p>The organization shall provide sufficient information to enable an assessment of organization’s impacts during the reporting period.</p>	<p>1. The report contains three main sections: corporate governance, environmental protection, and social responsibility; 2. Most key indicators are disclosed in terms of operational performance, environmental performance and social performance.</p>	<p>For some important topics, companies did not make more detailed disclosure.</p>

Table 1: (continued).

sustainability context	The organization shall report information about its impacts in the wider context of sustainable development.	The company has proactively disclosed the company's "Peak Carbon" course of action, water resource protection, air pollutant management, biodiversity conservation, land resource management, and other substantive issues related to environmental protection.	No lacking content.
timeliness	The organization shall report information on a regular schedule and make it available in time for information users to make decisions.	1. The reporting period of Shenhua's ESG reports is from January 1 to December 31 of each year; 2. The report has been prepared following the principle of consistency of information, with some elements being backtracked and extended.	No lacking content.
verifiability	The organization shall gather, record, compile, and analyze information in such a way that the information can be examined to establish its quality.	There is an independent third party issuing assurance report	No lacking content.

From Table 1, it can be seen that Shenhua is able to meet the criteria of the five information characteristics of balance, comparability, sustainability context, timeliness and verifiability, but still lacks in accuracy, clarity and completeness.

Under the "dual-carbon" goal, China Shenhua takes the pursuit of excellence and green development as its core values, implements the concept of sustainable development, and prepares ESG reports, describing various activities that have significant impacts on stakeholders or have minimal short-term impacts, but may cause unavoidable cumulative impacts in the long term, as well as responding to the concerns of society from various perspectives. Enterprises follow the principle of consistency of information in their social responsibility reports, with no material adjustments in

the scope of disclosure, and use measures consistent with those of previous years to calculate relevant data, which makes the information in the reports more objective and accurate, and also increases comparability.

The company hired KPMG to perform limited assurance on the report, increasing its verifiability, by ensuring that there are no material inaccuracies in key metrics like total carbon emissions, total water consumption, wastewater generation, hazardous waste generation, number of patents granted, total number of employees, employee turnover rate, etc.

In addition, Shenhua discloses both positive and negative information, such as in the chapter on ESG target management, which objectively presents the company's good or bad control in the four areas of greenhouse gas emissions, pollution prevention and control, energy use, and water use efficiency in the form of absolute values.

However, the expression in the text description is not clear and complete enough, especially in the disclosure of important issues simply describing the related work and presenting basic data, which prevents users from understanding the real situation of the company. The time horizon of climate change risks, for instance, is only described as short to long term in the section on climate risks and opportunities, which does not accurately inform users of the duration of the risks. Likewise, the impacts of the risks are only described in terms of the dimensions of the risks, not the magnitude of the impacts.

Additionally, there is a lack of clarity in the table of contents, which only provides the page number for each major section but not the page number for each sub-topic. For example, if a user is interested in learning about the anti-corruption situation at the company but is unaware that the topic falls under the category of integrity and compliance, it will be challenging for them to find the pertinent information.

3.2.2. Report Analysis

While the previous section provided a general analysis of the report as a whole in terms of the eight properties of information quality characteristics, this section provides a more detailed analysis in content of some highly important topics.

(1) Carbon information

Against the backdrop of the “dual-carbon” policy, Shenhua takes carbon emissions as an important issue and accounts for carbon emissions in accordance with the reporting standards and technical specifications issued by the Ministry of Ecology and Environment, and directly expresses its emissions in metric tons of carbon dioxide equivalent. In contrast to the GRI standard, this disclosure item does not separately report biogenic CO₂ emissions due to biomass combustion or biodegradation in total direct GHG emissions, biogenic emissions that exclude other types of GHGs, and biogenic CO₂ emissions from non-combustion and biodegradation in the biomass life cycle.

With global warming, people's awareness of environmental protection is increasing day by day, and in order to make more accurate judgments, stakeholders will inevitably require companies to provide more comprehensive carbon emission data as much as possible. When Shenhua discloses carbon information, in addition to considering the cost factor and minimizing the cost required for carbon disclosure, it also needs to disclose information on carbon emissions more comprehensively to meet the needs of shareholders and creditors [13].

(2) Water Information

In the current environmental background of water scarcity and serious water pollution, enterprises, as the main user of water resources and the main producer of water pollution, enterprises have adopted the trend of disclosing water information such as water resource usage and sewage discharge.

In order for businesses to “take advantage of the first opportunity” under the policy-- lucid waters and lush mountains are invaluable assets, they must increase their awareness of water information disclosure and treat it as a key component of their overall business strategy [14].

Shenhua revealed how it used water resources by using indicators like total water consumption, total water discharged, and total fresh water withdrawals. It also revealed how it managed its wastewater by describing treatment procedures, but it omitted to reveal the indicators of water withdrawals separately for freshwater and other water by source, indicating the effects of the enterprise in water-sensitive areas.

(3) Employee Information

Users of ESG reports are not only investors but also employees within the company. According to research, the more transparent and thorough the disclosure of information about employees of listed companies is—particularly the disclosure of information about labor compensation, leisure activities, and health and safety—the higher the employees’ loyalty and recognition of the company [15].

Shenhua disclosed information on occupational health, labor rights and care, and employee training and development in its report.

For information on occupational health, companies disclose the amount of money invested in occupational health, priorities for preventing and controlling occupational diseases, as well as mental health care. However, for the crucial work of occupational disease prevention and mental health care, Shenhua merely describe the content of the work and provide a pertinent case; they are unable to provide the user with an intuitive presentation of the organization’s work on employee occupational health and safety effects because there are no performance indicators to measure the prevention of occupational injuries and work-related health problems.

Regarding labor rights and care, enterprise disclose from the perspectives of employment in accordance with the law, human rights protection, democratic management, diversified integration, and employee care. However, Shenhua only describes that the enterprise has implemented actions in accordance with the relevant laws and regulations to safeguard the legitimate rights and interests of its employees, which lacks relevant data to confirm the results of the enterprise’s implementation of the measures. Enterprises can further provide relevant data on employee leave, such as the total number of employees taking parental leave, the return rate, the retention rate and other data to show that the enterprise protects the rights and interests of employees.

For information on employee training, company only disclose the amount of money invested in training but lack of the length of training by gender and employee category.

Overall, Shenhua is still in short supply of important data on employee information disclosure.

4. Short-Term Market Returns Based on Daily Event Study

This paper adopts the daily event study method to analyze the short-term performance of Shenhua’s ESG information disclosure, and measures the market’s reaction to Shenhua’s ESG disclosure through the abnormal return of the firm’s stock price and the cumulative abnormal return. Abnormal return is the difference between the actual return on a company’s stock price when a special event occurs and the normal return that would have occurred without the special event. When the excess return is positive, it means that the investors in the market are positive about the special event that happened to the company and hope that the sub-event will bring some profit to the company. Cumulative abnormal return is the result of summing all excess returns over a certain period of time before and after a special event. When the cumulative abnormal return is positive, it indicates that the special event has generated some gains for the company in the short term.

The estimation model chosen for this paper is the market model: $R_{i,t} = \alpha_i + \beta_i R_{m,t} + \varepsilon_{i,t}$;

The abnormal return (AR) is stated as: $AR_{i,t} = R_{i,t} - (\alpha_i + \beta_i R_{m,t})$;

$R_{i,t}$ represents the actual return of the stock, $(\alpha_i + \beta_i R_{m,t})$ represents the expected return is determined by the abnormal return α_i , the market-based risk β_i , and the market return $R_{m,t}$.

In this paper, we choose Shenhua's 2022 ESG report which is March 27, 2023, as the event date, recorded as $t=0$. Since Shenhua's annual financial statement is released on March 25, which is close to the release of ESG report, the event window period is selected as $[t, t+4]$ in order to exclude the effect of annual earnings report. Estimation window is selected as $[t-210, t-11]$ and SSE is selected as the market return.

Using Excel to generate a scatterplot, and find that $\alpha = -0.0001, \beta = 0.7922, R^2 = 0.1423$. See Figure 1.

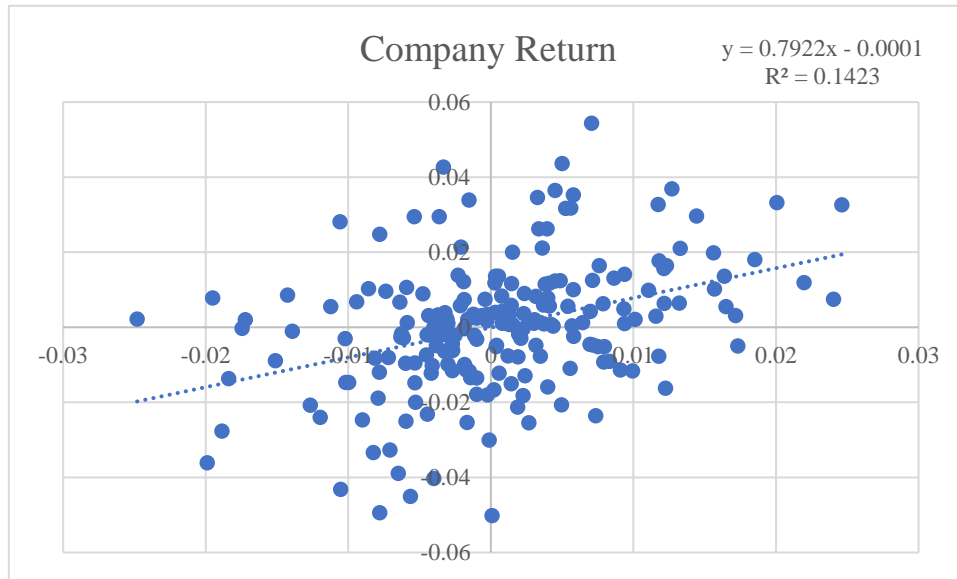


Figure 1: The relationship between company return and market return.

The normal rate of return of the firm is estimated from the market model: $y = 0.7922x - 0.0001$ and then the abnormal return is obtained by using $AR_{i,t} = R_{i,t} - (\alpha_i + \beta_i R_{m,t})$. As shown in Table 2 below:

Table 2: Algorithmic result.

Event reference date	Event Dates	Normal Return	Abnormal Return	Accumulative Abnormal Return
0	2023-03-27	-0.2631%	-0.5255%	-0.5255%
1	2023-03-28	-0.2829%	-0.8009%	-1.3263%
2	2023-03-29	-0.3402%	-0.4240%	-1.7504%
3	2023-03-30	0.4341%	2.6817%	0.9314%
4	2023-03-31	0.2194%	0.1726%	1.1040%

Data source: <https://www.cnrds.com/>

According to the value of β , the return of Shenhua shows a positive correlation with the market return. Three days prior to the event date the firm had a negative abnormal return, while on the third benchmark date the abnormal return was 2.6817%, giving a cumulative excess return of 0.9314%. The explanation can be given is that after the release of Shenhua's ESG report, investors were slowly reacting to this event, but still had a positive attitude towards it, and ultimately this particular event brought the company a certain amount of revenue in the short term; this also reflected investors' concern for ESG information and their emphasis on the sustainability of the company.

5. Conclusion

To summarize, still, Shenhua's ESG report has issues with imprecise language and insufficient information. With relation to GRI standards, there is a need for more thorough disclosure that concentrates on crucial issues, presents vital indications, and offers plausible justifications for highly varied data.

The Event Study shows that the market has a positive attitude towards the special event that Shenhua released ESG report, suggesting that the firm might derive some immediate benefits from disclosing its ESG data.

The study in this article offers the coal sector the following insights: 1. Strengthen energy conservation and emission reduction. In order to achieve sustainable growth, the coal industry, which produces a lot of pollution, should look into more environmentally friendly processing and treatment methods. It should also actively encourage energy saving and emission reduction. Additionally, businesses should explicitly state how they have carried out pertinent tasks when disclosing social responsibility data so that stakeholders and investors may better appreciate how well-performing businesses are in this area of environmental preservation; 2. Raise awareness of social responsibility. The coal sector should educate its workforce, uphold their safety and rights, and actively advance public welfare via initiatives including industrial aid, job help, and information disclosure; 3. Increase transparency of information disclosure. To provide more accurate and reliable information to investors and other stakeholders, the coal industry should take an active role in improving information disclosure transparency by proactively disclosing negative events, such as environmental penalties, and then requesting an independent audit of the report.

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