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The Influence of Corporate Financial Situation on Carbon Information Disclosure

-- A Case Study of Shandong SCPH Holdings Limited

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Abstract: Nowadays, the problem of global warming is becoming more and more serious, and low-carbon activities are urgent. The 20th National Congress of the communist Party puts forward the idea of "Actively and prudently promoting carbon peak carbon neutrality" to encourage low-carbon production and life. Enterprises play a dominant role in economic activities; which carbon emission has a great influence on the realization of "double carbon" goal. The enterprise's carbon information is the main basis for evaluating low carbon production and living situation in our country. Therefore, the carbon information disclosure of enterprises is extremely critical. However, since the disclosure of enterprise carbon information is in the voluntary stage, and the disclosure content and standards have not been unified yet, most scholars take the heavily polluting industry as the research object, while there are few researches on the carbon sequestration industry. This paper takes Shandong SCPH Holdings Limited as an example, evaluates the quality of carbon information disclosure by ESG index, and analyzes the reasons for the company's poor quality of carbon information disclosure by combining the annual report and other financial datas. In order to improve the quality of the company's carbon information disclosure, three suggestions are put forward to build a block chain platform, strengthen the training of financial personnel, and give play to the supervision role of third-party organizations in view of the characteristics of the company, so as to realize the "double carbon" goal as soon as possible.

Keywords: Shandong SCPH Holdings Limited; Carbon information disclosure; ESG index.

1. Introduction

The report of the 20th National Congress of the Communist Party of China proposed to "actively yet prudently promote carbon peak carbon neutrality". Enterprises realize green and low-carbon production and life by developing low-carbon technologies and conducting carbon sink trading. Due to the theories of stakeholders and information asymmetry, the carbon information data of enterprises is gradually disclosed to improve the confidence of stakeholders, which is conducive to the financing development of enterprises and build a good social image of enterprises. However, because Chinese carbon information disclosure is in its infancy, the unified disclosure standard has not been developed, and the information comparability is low. In order to systematically understand the status quo, existing problems and solutions of carbon accounting information disclosure of Chinese enterprises, this paper takes SCPH Industry, a leading enterprise in the paper industry, as an example. Through the analysis of its annual financial report and social responsibility report and other carbon information disclosure information, this paper finds out the status quo and existing problems of carbon information disclosure of SCPH Industry, and puts forward countermeasures.

2. Literature review

In recent years, domestic and foreign scholars have not only studied the framework of carbon information disclosure and the evaluation of disclosure quality, but also paid attention to the influencing factors of enterprise carbon information disclosure, the relationship between the quality of carbon information disclosure and financial indicators.

2.1. Content of Chinese carbon information disclosure research

Liu Jiexian et al. (2020) established a carbon information disclosure quality evaluation system through questionnaire survey and exploratory factor analysis. Liu Yufen (2020) used content analysis method and entropy-weight TOPSIS method to construct carbon information disclosure index. Li Shihui et al. (2019) designed a comprehensive and systematic carbon information disclosure quality evaluation index system from the perspective of the quality characteristics of accounting information disclosure.

2.2. Factors affecting carbon information disclosure

Yang Jie et al. (2023) found that both executive compensation incentive and executive equity incentive can alleviate the U-shaped relationship between carbon information disclosure and corporate value; Zou Yuyou et al. (2022) analyzed the influence of institutional isometric pressure on the quality of corporate carbon information disclosure; Xu Guangqing et al. (2022) concluded that the opening of capital market has a positive promoting effect on corporate carbon information disclosure. Liu Zhibin proposed that government regulation, media value orientation and enterprise size were significantly positively correlated with the quality of carbon information disclosure among enterprises in the power industry.

2.3. Influence of financial indicators on carbon information disclosure

Wang Lian (2021) studied and concluded that there was a significant positive correlation between company size, development ability, profitability, operation capacity and the quality of carbon accounting information disclosure. Tian Yu et al. (2019) took heavily polluting enterprises as the research object and concluded that the quality of earnings management can significantly enhance the influence of the quality of carbon information disclosure on the financial performance of enterprises.

3. Paper industry introduction

In the current emphasis on high-tech development, paper industry is still an important basic raw material industry, occupies an important position in the national economy. In the background of actively promoting the development of green, the paper industry puts forward the method of "forest pulp integration" to realize the transformation of green development. From 2010 to 2019, the carbon emissions of Chinese paper and paper products sector fluctuated in more than 20 million tons, mainly affected by the rise of raw materials, the decline of demand, the environmental policy towards strict influence.

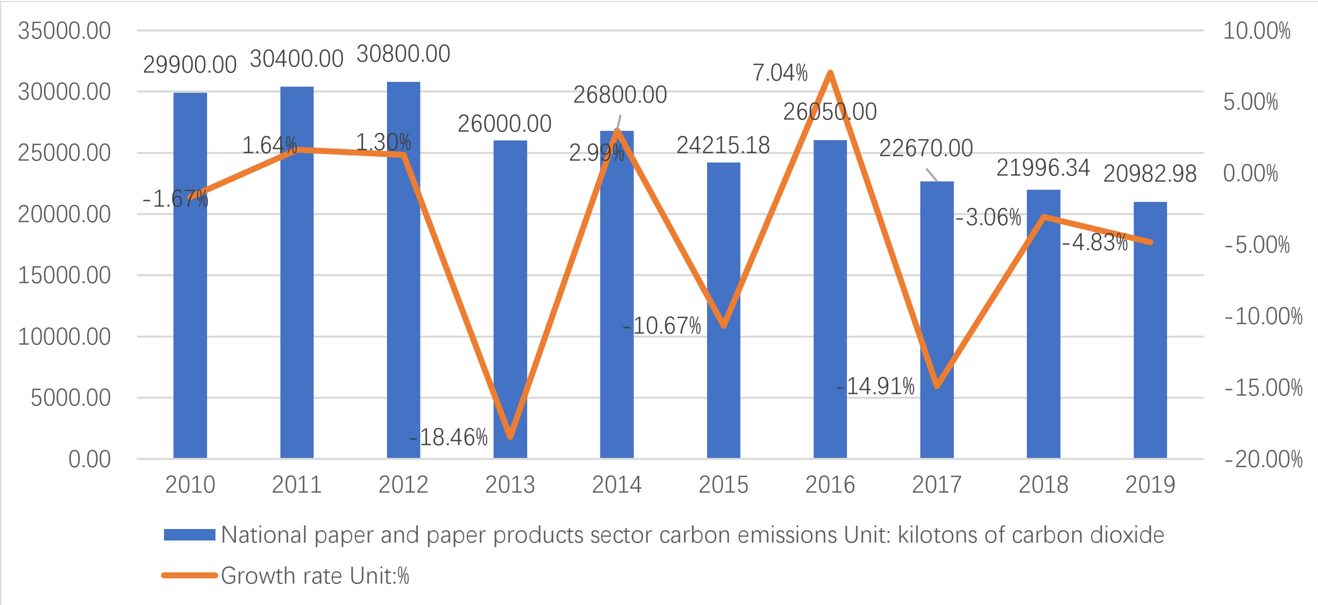

Figure1. Carbon emissions of papermaking industry

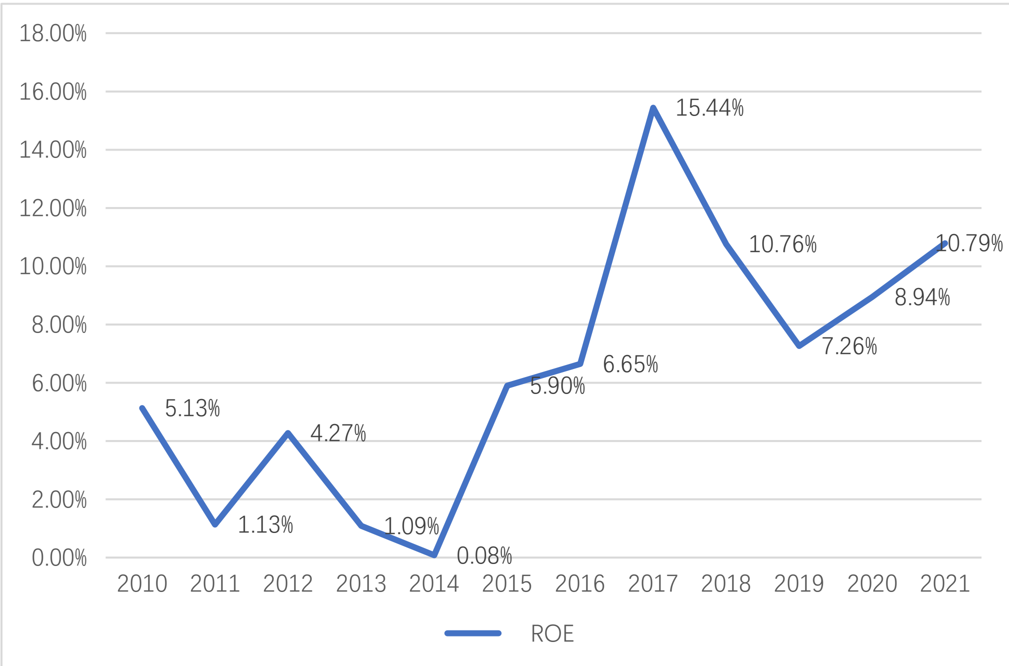

Figure 2. ROE of papermaking industry

Through Wind database, we find that the ROE of the paper and paper products industry dropped from 5.13% in 2010 to 0.08% in 2014, and then rose up to 15.44% again. The overall change is great, which means that the industry is faced with a complicated environment in recent ten years. However, compared with 2010, the ROE will almost double in 2021. It indicates that the industry tends to a good development stage at present.

4. Case analysis of SCPH Industry

4.1. Company introduction

Shandong SCPH Holdings Limited is one of the leading paper industries in China, expanding from a single paper business to a large enterprise group including forest planting, building materials, leasing business and other fields.

Nearly 88% of its main business is still machine-made paper, but outside paper there are 1.06% of building materials business and nearly 1% of financial leasing. Based on the total operating income of 3,301, 9812, 300 yuan, the income of other businesses is more than 29 million yuan, which has a great impact on its main financial indicators.

The company has repeatedly mentioned in the annual report and social responsibility report that "adhering to the concept of green development and ecological morning sound", building three circular economy ecological chains of "resource-product-renewable resources", and putting forward the integration strategy of forest, pulp and paper to ensure the supply of pulp raw materials and promote the sustainable development of paper industry. Planting, providing wood pulp and paper making form an industrial chain, thus reducing the cost of paper making.

4.2. Forest-pulp and paper integration projects

The integration project of forest pulp and paper is to integrate the three links of forest, pulp and paper together, so that paper enterprises can shoulder the responsibility of afforestation, solve the problem of wood raw materials by themselves, develop ecological paper making, and form an industrial pattern of raising forest with paper, promoting paper with forest and combining forest and paper.

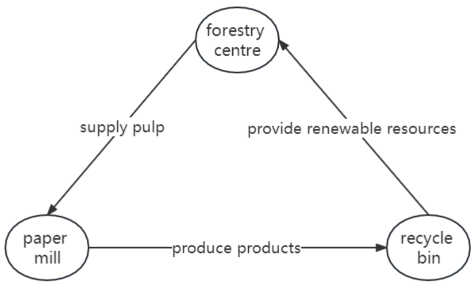

Figure 3. Forestry-pulp-paper integration project

On the one hand, the integration of forest pulp and paper provides raw materials for the paper industry and reduces the demand for imported raw materials. On the other hand, the increasing area of forest land enriches the forest carbon sink, promotes enterprises to conduct carbon sink transactions, and reduces the cost of affforestation. In addition, the improvement of carbon information can encourage enterprises to disclose and establish a good brand image. As of February 2021, the company has about 800,000 mu of forest land, and has cooperated with professional institutions to develop carbon sinks on this basis.

Domestic five pulp plants, the company has three, wood pulp capacity is the largest. At present, the company has a total wood pulp production capacity of 4.7 million tons, and is the first enterprise in China with self-sufficient raw material production and matching pulp and paper production capacity. It is the first to realize the industrial layout of "integration of forest, pulp and paper". By February 2021, the company has about 800,000 mu of forest land, and has cooperated with professional institutions to develop carbon sink on this basis.

4.3. Current situation of carbon information index disclosure

Zheng Yingyou proposed that "financial carbon information mainly refers to the input and output of enterprises' green development funds, including R&D, talent introduction and other aspects, as well as the reflection of accounting in financial statements through carbon emission trading or carbon tax." The environmental, social and corporate governance involved in HuaZheng ESG index include these three aspects. Therefore, SCPH's carbon information disclosure is mainly analyzed based on the environment in ESG index.

In the design of carbon emission reduction route, SCPH is mentioned in the chairman's report and development strategy every year. Most of the industrial emissions, green factories and environmental penalties involved in environmental pollution, environmental friendliness and environmental management are disclosed in the social environmental responsibility.

Through the inquiry of SCPH annual report and other announcements, it is known that since the construction of forest pulp and paper integration project started, the report mainly discloses the emission concentration of pollutants, total emission, whether the emission exceeds the standard, etc. The ability to put environmental penalties into the annual report for stakeholders to view shows that the company has a supportive attitude towards the quality of carbon information disclosure.

For example, relevant data are disclosed in the environmental protection related information of the social responsibility statement every year. Not only the data of emissions, but also the exhaust emissions reduced by recycling system and other related technologies, reflecting SCPH's emphasis on environmental protection and highlighting the enterprise's green emission reduction strategy.

However, since the quantitative description was added to the description of environmental advantages in the 2019 annual report, the data of the same project has not changed until 2021, which shows that the company is not willing to disclose more data of energy conservation and emission reduction projects voluntarily.

4.4. Analysis of the impact of corporate financial information on carbon information index disclosure

The company has a strong awareness of energy conservation and emission reduction, and relevant measures were implemented earlier, as can be seen from the launch of Zhanjiang Pulp and paper Integration project in 2005. However, there has been little disclosure of relevant carbon information, most of which are qualitative descriptions of energy conservation and emission reduction technologies adopted and honorary environmental titles obtained, and the quality of carbon information is low. With the change of policies and market trends, the 2019 annual report reported the carbon emission data reduced after the application of energy conservation and emission reduction technology for the first time, but the ESG index of China Securities remained unchanged, both of which were CCC, compared with B in 2017. In consideration of the impact of the epidemic, this paper compares the annual reports of 2017, 2018 and 20193, selects main financial indicators, and analyzes the reasons for the change of ESG index based on the changes of financial indicators.

Through comparison, it can be seen that the net operating margin, cash operating index and operating cycle are significantly reduced, and the ESG index is also declining. It indicates that there are problems in the operation of enterprises, which will reduce the emphasis on carbon information disclosure and focus on promoting the development of enterprises. However, the cash operation index in these two years is still greater than 1, indicating that the income in inventory, accounts receivable and other business items is less, which can be realized, and the occupied working capital is decreasing. Therefore, the working capital of the enterprise is sufficient, which leads to the increase of debt paying ability. The increase and decrease of asset-liability ratio can indicate that the enterprise is changing the asset structure, thus reducing the asset-liability ratio. The quick ratio reduces this series of changes. When enterprises do not develop steadily, they will give priority to solving internal problems, and fail to enhance the confidence of stakeholders and relieve the operation pressure of enterprises by disclosing more carbon information.

Table 1. Indicators of correlation

	2017	2018	2019
ESG index	B	CCC	CCC
Sales Margin	12.75	8.88	5.77
TTM	0.08	48.82	40.25
Cash operating index	1.83	2.02	1.14
Asset-liability ratio	71.34	75.43	73.11
Quick ratio	0.76	0.67	0.76
Operating cycle	145.97	160.12	130.56
Net profit attributable to Shareholders of parent company (year-over-year Growth rate)	88.60	-33.41	-34.00

The decrease in operating net profit margin and net profit attributable to shareholders of the parent company (year-on-year growth rate) both reflects the decrease in net profit. However, the 2018 annual report mentions that "the number of enterprises above designated size in the national paper and paper products industry in 2017 decreased from 7,213 in 2013 to 6,681." Backward enterprises are eliminated, the market is no longer full, and the profit space of leading enterprises is improved again. Therefore, the temporary decline of net profit cannot affect the development of the company to a greater extent. To sum up, on the premise that the company can develop well, the company should strengthen the disclosure of environmental information, establish a good brand image, and further improve the public's recognition and satisfaction for the company, so as to support the development of the company.

Wu et al. (2019) used the LEAP model to calculate and found that the carbon trading market scenario had the best effect on energy conservation and emission reduction in the forest pulp and paper industry. When Huanggang Forest pulp and paper integration project entered the trial production stage in 2018, compared with the estimated profit in 2017, it increased by 50 million yuan again. The increase of forest land area promotes the company to cooperate with professional institutions to develop carbon sinks. In a survey summary in 2021, it is mentioned that most of the company's 800,000 acres of forest land in line with the carbon neutrality policy have been cooperating with professional institutions to develop international certified voluntary emission reduction VCS carbon sink projects.

5. Suggestions

5.1. Building a blockchain platform

With the popularization of digitalization, SCPH has also carried out relevant upgrades to the financial system, realizing financial centralization and data management. However, centralized management is not conducive to improving the quality of carbon information disclosure, and companies can choose the carbon information data to be disclosed. Therefore, the construction of blockchain platform can, on the one hand, improve the efficiency of the company's financial management and reduce costs, and on the other hand, ensure the authenticity and integrity of carbon information data. At the same time, the decentralization of blockchain can enable relevant stakeholders to see carbon information data, which is conducive to improving the investment confidence of relevant stakeholders. Supervisory agencies can also pay timely attention to whether the fluctuation of carbon information data is reasonable and whether there are problems.

5.2. Strengthen the training of the Company's financial personnel

The key to improve the quality of carbon information disclosure lies in the handling and disclosure methods of financial personnel. Disclosing which carbon information in energy conservation and emission reduction or carbon sink trading projects requires financial personnel to make appropriate judgments about its importance. This requires financial personnel to understand the data in carbon information that can reflect the core energy-saving technology, and to predict the impact of qualitative or quantitative disclosure of carbon information on the company. This requires financial personnel to learn the methods of carbon information processing and disclosure, and choose the appropriate method to disclose carbon information in combination with the principles of importance and comparability required by the quality of accounting information.

5.3. Give play to the supervisory role of third-party institutions

Encouraging voluntary disclosure within the company is extremely important, and external monitoring remains indispensable. Liao Wang and Wang Weiming found that the external audit quality is positively correlated with the carbon information disclosure index, and the correlation is strong, indicating that external audit has a good supervision effect on the carbon information disclosure of heavy industry. It can be seen that the audit quality of third-party institutions will also affect the quality of carbon information disclosure. The improvement of disclosure quality is conducive to stakeholders to understand the carbon emissions of enterprises, which is conducive to enterprises to attract investment and further development. At present, few accounting firms have issued financial reports or audit reports on carbon information disclosure, which are only disclosed and verified as part of social responsibility, which makes companies pay little attention to carbon information disclosure. In the difficult operation or initial stage, affected by the financial situation, the company is more willing to focus on how to develop the company, which is contrary to the "high-quality development" advocated by China at present. Therefore, the third-party institutions should give full play to their supervisory role. At the same time, it can be combined with major universities to jointly cultivate compound talents with audit and carbon information knowledge, and improve the assessment and training of carbon audit practitioners to ensure the supply of audit talents.

6. Conclusion

The realization of "dual carbon" requires the efforts of everyone. As the main body of economic activities, the company is also responsible for the loan. To achieve low-carbon economic development, the company needs to formulate low-carbon strategy, actively implement low-carbon projects, fully disclose the carbon information and data of relevant projects, facilitate the company to obtain financing, and contribute to "carbon peak and carbon neutrality".

Paper industry, as a special industry that emits carbon when making paper and absorbs a large amount of carbon dioxide when afforestation obtains raw materials, plays an irreplaceable role in realizing the goal of "dual carbon". Taking SCPH as an example, this paper analyzes the current situation of carbon accounting information disclosure and the impact of financial information on the quality of carbon information disclosure. It is found that the profitability, earnings quality, operating capacity and growth capacity represented by operating net profit margin, cash operating index, operating cycle and net profit attributable to shareholders of the parent company (year-on-year growth rate) are positively correlated with ESG index, while cash flow and solvency are negatively correlated with ESG index. It can be seen that the better most financial indicators are, the higher ESG index is, that is, the higher the quality of carbon information disclosure is. Therefore, this paper puts forward three suggestions on how to improve the quality of carbon information disclosure: building a blockchain platform, strengthening the training of corporate financial personnel and giving play to the supervision role of third-party institutions.

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