An Empirical Study on the Impact of Corporate Greenwashing Behaviours on Financial Performance

Bingshang Du*, Jiangrui Hu, Yujie Peng
School of Nanjing University of Science and Technology, Jiangsu, China
*Corresponding author: dubingshang0814@163.com

Abstract. In the context of sustainable development, governments, consumers and other external institutions have become increasingly concerned about corporate social responsibility (CSR) issues. The behavior of companies attempting to improve their corporate image with social responsibility investment, but not actually implementing or exaggerating the effect is called greenwashing. Such behavior is extremely harmful to consumers, companies and the development of green markets. This paper explores the relationship between corporate greenwashing and financial performance. In this paper, the degree of corporate greenwashing is measured by the company's peer-relative greenwashing score. Based on this, we examined the negative relationship between corporate greenwashing behaviors and financial performance using a sample of 349 A-share listed companies in China from 2017 to 2020, and made suggestions to enterprises, government departments and regulators to reduce the occurrence of corporate greenwashing.

Keywords: Greenwashing Behaviors, Corporate Financial Performance, Empirical Study.

1. Introduction

In recent years, Chinese economy has shown vigorous development, people's income has gradually increased, consumption level has increasingly risen, and the goal of building a well-off society in an all-round way has been initially achieved. But along with the high economic growth, the main contradiction in our society has also changed, from the past contradiction between material as well as cultural needs and backward social productivity to the contradiction between people's needs for a better life and unbalanced and insufficient development. As the global ecological environment continues to deteriorate, with problems such as land desertification, marine pollution and shortage of fresh water resources, people are becoming more aware of environmental protection and are paying more attention to green consumption. According to the 2019 China Sustainable Consumption Report, consumers’ attention to the issue of corporate social responsibility continues to rise, even influencing purchasing decisions. In 2019, the proportion of consumers who purchased sustainable products increased from 21.53% in 2017 to 52.35% because of the manufacturer's CSR (corporate social responsibility) commitment. Sustainable development has therefore become an inevitable choice for companies to transform and upgrade and gain a competitive advantage in the face of resource constraints.

Fierce business competition is forcing companies to adopt green means to establish green brands and form their competitive advantage[1]. However, if companies want to gain sustainable resource integration capability and truly establish a green brand, they must invest a lot of money and technology, which will inevitably increase their operating and management costs and place a burden on their financial performance. Some companies want to attract customers by establishing a green image but do not want to invest much money and energy to transform and upgrade their products as well as fulfil their corporate social responsibility, so they will adopt an opportunistic approach and join the ranks of greenwashing, using some obscure and unseen means to achieve the “green-looking” development.

The behavior of companies attempting to improve their corporate image with social responsibility investment, but not actually implementing or exaggerating the effect is called greenwashing. As Lyon[2] says, greenwashing has become a very common phenomenon in today's society. However, it has not been taken seriously enough and few people are aware of the dangers of this behavior, which is in fact harmful to consumers, companies and the development of green markets. Throughout
domestic and foreign literature, the complex corporate behaviour of greenwashing has not been fully explored. And research on the economic consequences of greenwashing is relatively limited, mainly focusing on the impact on the greenwashing corporate itself and economic life, without going into the impact of greenwashing on the financial performance of the companies. So, does greenwashing have an impact on the financial performance of companies? This paper explores this issue. In this paper, the degree of corporate greenwashing is measured by the company's peer-relative greenwashing score. Based on this, we examined the negative relationship between corporate greenwashing behaviors and financial performance using a sample of 349 companies listed on the A-share market in China from 2017 to 2020.

The paper is organized as follows. We present the related literature review in Section 2. We present the corresponding hypotheses in Section 3. We introduce the sample selection, data sources, variable definitions and research model in Section 4. We analyze the empirical results in Section 5. We present the study conclusions and recommendations in Section 6.

2. Literature review

2.1 Definition and manifestation of corporate greenwashing

The behavior of corporate greenwashing has been developing and changing continuously since its appearance, and the number of global greenwashing cases has been increasing. A review of the domestic and foreign literature on greenwashing reveals that, although existing research has extensively discussed greenwashing behavior, there is no consensus on the definition of greenwashing behavior in academia. Generally speaking, greenwashing is the act of providing false information to the public with the aim of creating an environmentally friendly image, promoting a green image but not practising the corresponding environmental policies. In terms of the manifestation of corporate greenwashing, Scot Case[3] concluded the “six sins of greenwashing”, including ambiguity, concealing the truth, insufficient evidence, irrelevant, lying and deceiving, and avoiding the important. Lyon and Montgomery[2] summarized forms of greenwashing such as selective disclosure, empty statements and policies, dubious accreditation and labeling, false collaboration with NGOs, ineffective public interest projects, misleading language and misleading images.

2.2 Measurement of corporate greenwashing

There are two main ways of measuring the degree of greenwashing available. 

One is proposed by Walker and Wan[4]. From the perspective of corporate differentiated environmental practices, divide corporate environmental protection behaviors into substantive behaviors and symbolic behaviors. Symbolic behavior mainly refers to the company conveying the concept of environmental protection to the outside world through slogans and publicity to shape an environmentally friendly image, which usually mean symbolic practices without any substantive content; whereas the substantive behavior is the actual action taken by companies to protect the environment. Thus, the deviation between symbolic and substantive behavior is used as a proxy variable for the degree of corporate greenwashing.

The other draws on Laufer[5] and Chen and Chang[6]. They used the scales or questionnaires to measure the degree of corporate greenwashing. The measurement includes five items. (1) The product is termed misleadingly about its environmental characteristics. (2) The product uses visual or graphics in its environmental features to mislead. (3) The product has vague or seemingly unprovable green claims. (4) The product exaggerates or overstates the reality of its green features. (5) The product omits or obscures important information to make the green claim sound better than it is.

2.3 Economic Consequences of Corporate Greenwashing

The impact of greenwashing on companies is mainly in the areas of financial performance, brand reputation and capital market performance.
Firstly, greenwashing affects the financial performance of companies. Walker and Wan[4] conducted a survey of 100 companies with serious pollution in Canada and found that substantive environmental activities have no damage or benefit to corporate financial performance while symbolic environmental activities have a negative impact. They measured the degree of corporate greenwashing by the difference between symbolic and substantive behaviors, and concluded that corporate greenwashing was negatively related to its financial performance. Sun and Wu[7] took the case of PetroChina's greenwashing as an example. They focused on the whole process of greenwashing from the beginning and its success to the occurrence of negative events and the exposure of greenwashing. The study found that the behavior of greenwashing has a positive impact on the company's financial performance by reducing costs and cushioning losses from negative news before exposure, and a negative impact on financial performance after exposure.

Secondly, greenwashing affects the corporate reputation. Skarmeas and Leonidou [8] found that when consumers know company's irresponsible behavior, they have a distrust of the company's brand and are less satisfied with it. Based on the attitude-behaviour-context theory, Zhuo[9] explored the influence of greenwashing perception on green purchasing behaviors through the mediation of green word-of-mouth, and found that there was a negative relationship between greenwashing perception and green purchasing behaviors. When consumers discover a company's green counterfeiting behavior, the company's long-established reputation and image will instantly collapse, seriously affecting the company's reputation.

Finally, greenwashing affects the capital market performance of companies. Ye and Pan[10] took the companies listed in the “Greenwashing List” published by Nan Fang Daily's Reports as a sample and applied the event analysis method to analyse the reaction of the capital market after the exposure of the company's greenwashing behaviours. Their study found that after the exposure of greenwashing behaviors, the capital market has formed a certain disciplinary effect on companies, and their stock price has dropped significantly. The more serious the greenwashing behaviors, the stronger the government's punishment or the greater the public influence of the incident, and the more obvious the disciplinary effect of the capital market.

While all of the above studies largely agree that corporate greenwashing has a negative effect for companies, Lee[11] considered the market results brought about by greenwashing from the perspective of economics, and found that when environmental issues are not critical or the cost of implementing CSR is too high, driven by the presence of insiders in the market, greenwashing can provide an incentive for some companies to be greener. His findings provided a counter argument to many critics of greenwashing.

In summary, although scholars have made great progress in measuring the extent of corporate greenwashing in recent years-through scales or scoring index systems, it is still a challenge to measure the extent of corporate greenwashing more accurately in academic terms. In addition, there are few studies on the impact of corporate greenwashing behaviors on its financial performance. And most related studies focus on a specific company with greenwashing behaviors exposed and explore the market reaction before and after the exposure, the findings lack universality. Therefore, it is still worthwhile to explore how to measure the degree of corporate greenwashing more accurately and to study the quantitative relationship between corporate greenwashing and corporate financial performance through empirical evidence.

3. Research hypothesis

Corporate greenwashing behaviors can cause companies to lose sight of their true social responsibility and become addicted to the policy tilt and consumer attention through speculation. When companies become addicted to the short-term gains of speculation, it is difficult for them to truly adapt to changes in the external environment, making them less competitive and leading to a decline in cash flow, market position and internal governance[12,13], which ultimately has a negative impact on financial performance. Exposure to corporate greenwashing can have a disciplinary effect.
on the capital markets[14]. Not only will the company's production operations and marketing take a huge hit immediately, but its long-established brand equity and reputation will collapse instantly and the legitimacy of the company will be questioned[15], which reduces the corporate financial performance. At the same time, in order to avoid the exposure of their greenwashing behaviors, companies will take measures to cover up their greenwashing behaviors and spend more extra costs, thus increasing the financial burden and negatively affecting their financial performance. Based on the above analysis, we propose the following hypothesis.

Hypothesis: There is a negative relationship between corporate greenwashing behaviors and financial performance.

4. Research design

4.1 Data collection

This study uses the data of Chinese A-share listed companies from 2017-2020 as the sample for the research and does the following: (1) exclude companies with missing data in Bloomberg database and Wind database; (2) exclude ST and *ST companies; (3) exclude companies in the financial sector. Finally, this study obtained a sample of 349 companies and 1261 valid observations.

The greenwashing data is based on ESG disclosure scores from the Bloomberg database and ESG composite scores from the Wind database; the rest of the data are from the CSMAR database. This study mainly uses Stata15.0 and SPSS25.0 statistical software for data analysis.

4.2 Variable definitions

(1) Explanatory variable

The explanatory variable in this paper is the degree of a company’s greenwashing.

Adopting the approach of Ellen Pei-yi Yu et al.[16], this paper defines greenwashing companies as those companies that seek to create a very transparent public profile by revealing large amounts of ESG data, but underperform in terms of ESG performance. Based on this definition, a company's peer-relative greenwashing score = (a normalized measure representing a company's relative position to its peers in the distribution of the ESG disclosure score) - (a normalized measure representing a company's relative position to its peers in the distribution of the ESG performance score), this peer-relative greenwashing score can be used to quantify the extent of a company’s greenwashing behavior on ESG issues, with the higher the score, the greater the company’s greenwashing.

This paper measures company’s ESG disclosure using the Bloomberg ESG Disclosure Score, which reflects the quantity of ESG data this company discloses to the public but does not gauge its ESG performance. All ESG information disclosed by a company is counted irrespective of whether it is favorable or negative. The Bloomberg disclosure score is a proprietary calculation. Over 900 key disclosure indicators (e.g., direct CO2 emissions, total energy consumptions, total water use, hazardous waste, percentages of minorities in the workforce, workforce accidents, board meeting attendance, and political donations) are structured into separate disclosure score for each dimension, which are then combined into the total Bloomberg ESG disclosure score for each company. Company that discloses a minimum amount of ESG data has an ESG disclosure score of 0.1. The higher the ESG disclosure score, the more non-financial information is disclosed, up to a maximum score of 100.

This paper uses Wind ESG score to measure the ESG performance of a company. The Wind ESG evaluation index system distinguishes three dimensions of environment, society and governance. It subdivides 27 issues and sets more than 300 specific indicators. At the same time, based on news and public opinion, regulatory penalties, legal proceedings, etc., it evaluates controversial events to comprehensively reflect the company’s ESG management practice level and major unexpected risks. Considering the large differences in ESG risks between different industries and based on authoritative research and in-depth research, Wind subdivides ESG issues in 62 industries according to the
characteristics of different industries and assigns different weights. The Wind ESG score ranges between 0 and 10. The higher the score, the better the ESG performance of the company.

Then we divide the Bloomberg ESG disclosure score by 100 and the Wind ESG score by 10 to convert the two scores into a ratio, so the maximum value for both metrics is 1. The two scores were then normalised by subtracting the mean and dividing by the standard deviation. A company’s peer-relative greenwashing score is the difference between its normalized ESG disclosure and its normalized ESG performance score. A positive difference indicates that the company is greenwashing. It may be hiding its poor performance in its ESG issues by simply revealing large quantities of ESG data. Oppositely, companies with negative greenwashing scores choose to understate their environmental achievements, which may in line with prior research suggesting that green credentials and social responsibility programs are harmful to share prices.[17 -19]

(2) Explained variable
The explanatory variable in this paper is the financial performance of the company. This paper uses the return on total assets (net profit/average total assets) as a measure.

(3) Controlled variable
This paper draws on the practice of similar literature to control the following variables.①Company size. Larger companies tend to have a greater impact on society and the environment, and are more likely to be subject to the jurisdiction of government authorities and the attention of consumers. Large-scale companies pay more attention to their brand in the minds of consumers and are more likely to adopt greenwashing behaviors. At the same time, the financial performance of a company is influenced by the size of its assets, as has been demonstrated in many studies. Therefore, we set the company size as a controlled variable, which is expressed by the natural logarithm of the total assets at the end of the period.②Ownership property. The ownership property refers to whether the company is owned by Chinese government. State-owned companies are often expected to lead by example in the policies implemented by the state and in fulfilling their social responsibilities. Non-state-owned enterprises are less concerned with these aspects than state-owned enterprises, which operate with a focus on improving performance results. Therefore, the ownership property also affects the financial performance of a company. In this paper, the ownership property is set as a controlled variable, with listed companies being assigned a value of 1 if they are state-owned and 0 if they are not.③Leverage ratio. According to the theory of capital structure, if a company raises too much debt, the company will be insolvent, which will cause the company to fall into financial distress and face a bankruptcy crisis that will seriously affect the survival and development of the company. If a company has idle capital and its resources are not used reasonably and effectively, it will reduce the financial performance of the company. Therefore, the capital structure of a company can have a significant impact on financial performance. This paper sets the leverage ratio as a controlled variable and uses the company's debt to capital ratio to represent it.④Capital intensity. Capital intensity refers to the ratio of a company's net operating income to the average total assets of a company in a certain period, and is measured by the total asset turnover ratio. The greater the total asset turnover ratio, the faster the total asset turnover of the company, the stronger the company's sales capacity and the better its financial performance. Therefore, capital intensity also affects a company's financial performance. This paper sets capital intensity as a controlled variable. Russo and Fouts[20] and Schaltegger and Figge[21] used the total asset turnover ratio to measure capital intensity, and this paper also uses the total asset turnover ratio to indicate the capital intensity of a firm.⑤Growth capability. The growth capability of a company reflects the future development prospects of the company and affects the expansion of the company's scale. The better the growth capability of a firm, the greater the scope for growth, the greater the profitability and the better the financial performance of the firm. Therefore, this paper sets the growth capability as a controlled variable and uses the growth rate of operating income to represent it.⑥R&D intensity. Investments in R&D by the company can improve labour productivity, reduce labour costs, increase production output, meet customers' cognitive demand for new technologies and products, expand market share and thus improve the financial performance of the company. In the long run, the level of R&D intensity of a company determines the independent
innovation capability of the company. Firms can invest their surplus capital into R&D activities to cultivate new economic growth points and promote sustainable development. Therefore, R&D intensity also affects corporate financial performance. We set R&D intensity as a controlled variable. R&D intensity is defined as the ratio of company’s R&D expenditure to main business income. However, as the main business income in financial statements is modified, this paper uses the ratio of R&D expenditure to total assets to represent R&D intensity. In addition, this paper includes year dummy variables and industry dummy variables to control the effect of year and industry on financial performance.

The specific variable definitions are shown in Table.1.

| Variable type | Variable name | Variable symbol | Variable definition |
|---------------|---------------|-----------------|---------------------|
| Explained variable | The financial performance of the company | CFP | Return on total assets |
| Explanatory variable | The degree of a company’s greenwashing | GREENWASH | A company's peer-relative greenwashing score = (a normalized measure representing a company's relative position to its peers in the distribution of the ESG disclosure score) - (a normalized measure representing a company's relative position to its peers in the distribution of the ESG performance score). The higher the score, the greater the company’s greenwashing. |
| Controlled variable | Company size | SIZE | Natural logarithm of the total assets at the end of the period |
| | Ownership property | OWNER | State-owned takes 1, otherwise takes 0 |
| | Leverage Ratio | LEV | Company's debt to capital ratio |
| | Capital intensity | CAPI | Total asset turnover ratio |
| | Growth capability | GROWTH | Growth rate of operating income |
| | R&D intensity | RDI | Ratio of R&D expenditure to total assets |
| | Year | YEAR | Year dummy variables |
| | Industry | INDUSTRY | Industry dummy variables |

4.3 Research model

To examine the impact of corporate greenwashing behaviors on financial performance, a regression model is constructed:

\[
CFP = \alpha_0 + \alpha_1 \text{GREENWASH} + \alpha_2 \text{SIZE} + \alpha_3 \text{OWNER} + \alpha_4 \text{LEV} + \alpha_5 \text{CAPI} + \alpha_6 \text{GROWTH} + \alpha_7 \text{RDI} + \sum \text{YEAR} + \sum \text{INDUSTRY} + \epsilon
\]
5. Empirical results and analysis

5.1 Descriptive statistics

Table 2. Descriptive statistics of the study variables

| Variable | Number of samples | Mean   | Standard deviation | Maximum value | Minimum value |
|----------|------------------|--------|--------------------|---------------|---------------|
| GREENWASH| 1261             | 0.3143 | 0.7283             | -1.4240       | 2.4210        |
| CFP      | 1261             | 0.0638 | 0.0582             | 0.2830        | -0.0470       |
| SIZE     | 1261             | 1.1182 | 1.2803             | 4.8708        | -1.2040       |
| OWNER    | 1261             | 0.5700 | 0.4950             | 1             | 0             |
| LEV      | 1261             | 0.4903 | 0.1742             | 0.8579        | 0.0997        |
| CAPI     | 1261             | 0.7349 | 0.4568             | 2.7370        | 0.0659        |
| GROWTH   | 1261             | 0.1893 | 0.3517             | 2.2377        | -0.4723       |
| RDI      | 1261             | 1.9443 | 2.0355             | 9.4510        | 0.0030        |

Table 2 shows the descriptive statistics of the study variables. It can be seen from the table that the mean of GREENWASH is 0.3143, the maximum value is 2.4210, the minimum value is -1.4240, and the standard deviation is 0.7283. It shows that the distribution of the degree of the company’s greenwashing is uneven, and there are large differences between companies. The minimum value of CFP is -0.0470, the maximum value is 0.2830, the mean is 0.0638 and the standard deviation is 0.0582, indicating that the differences between the financial performance of different companies are small and the financial performance of the company is at a relatively low level. The mean of SIZE is 1.1182, the minimum value is -1.2020, the maximum value is 4.8708, and the standard deviation is 1.2803. It indicates that there are large differences in the scale of corporate assets in the sample. The mean of OWNER is 0.4950, indicating that 49.50% of the companies in the sample are state-owned and 50.50% are non-state-owned. The mean of RDI is 1.9443, the minimum value is 0.0030, the maximum value is 9.4510 and the standard deviation is 2.0355. It indicates that some companies focus on R&D investments and spend more on R&D, but the R&D intensity of most companies is at a relatively low level. And there is a large difference in R&D intensity between different companies. The rest of the controlled variables, including LEV, CAPI and GROWTH, are fairly evenly distributed, and there is no great difference between firms.

5.2 Correlation analysis

Table 3. Pearson correlation analysis

|       | CFP   | GREENWASH | SIZE | OWNER | LEV   | CAPI | GROWTH | RDI |
|-------|-------|-----------|------|-------|-------|------|--------|-----|
| CFP   | 1     |           |      |       |       |      |        |     |
| GREENWASH | 0.063*  | 1         |      |       |       |      |        |     |
| SIZE  | 0.322* | 0.067**   | 1    |       |       |      |        |     |
| OWNER | 0.278* | -0.004    | 0.343* | 1     |       |      |        |     |
| LEV   | 0.512* | 0.020     | 0.587* | 0.230* | 1     |      |        |     |
In this paper, Pearson correlation analysis was conducted for all variables and the results are shown in Table.3. It is generally accepted that a multicollinearity problem exists when the absolute value of the correlation coefficient between the variables is greater than 0.8. As can be seen from Table.3, the correlation coefficients of all variables are below 0.8, indicating that there is no problem of multicollinearity. There is a significant correlation between the degree of greenwashing and the financial performance of companies, which lays the foundation for the subsequent regression analysis.

### 5.3 Regression analysis

|     | CFP       |
|-----|-----------|
| GREENWASH | -0.006*** |
| SIZE    | 0.004***  |
| OWNER   | -0.015*** |
| LEV     | -0.189*** |
| CAPI    | 0.032***  |
| GROWTH  | 0.034***  |
| RDI     | 0.001     |
| _cons   | 0.130***  |
| Year    | Yes       |
| Industry| Yes       |
| N       | 1261      |
| adj. $R^2$ | 0.403    |

$t$ statistics in parentheses

*** indicates 1% statistical significance level.

Table.4 shows the results of the regression between corporate greenwashing behaviours and financial performance. As shown in Table.4, the coefficient of GREENWASH is -0.006, which is significantly negative at the 1% level. This result indicates that there is a negative relationship between corporate greenwashing behaviours and financial performance. The hypothesis is valid.

The higher the degree of greenwashing of the company, the greater the negative impact on the financial performance and the lower the financial performance of the company. When the degree of greenwashing is high, firstly, the company will spend a lot of energy and financial resources to cover...
up its false environmental practices to avoid being discovered by the regulatory authorities and the public. The extra costs can reduce the financial performance. Secondly, when a company's greenwashing behaviours are exposed, the higher the degree of greenwashing, the greater the disciplinary effect it receives. Investors and consumers cannot stand the feeling of being cheated. And the production operation and marketing of the company will suffer a huge impact, which makes a seriously negative impact on corporate financial performance. Therefore, there is a negative correlation between the degree of corporate greenwashing and the financial performance.

5.4 Robustness tests

|                | (1)     | (2)     |
|----------------|---------|---------|
| ROE            |         |         |
| CFP            |         |         |
| GREENWASH      | -0.006**| -0.008***|
|                | (-2.12) | (-3.69) |
| SIZE           | 0.007***| -0.002  |
|                | (3.51)  | (-1.10) |
| OWNER          | -0.030***| -0.013***|
|                | (-7.17) | (-4.06) |
| LEV            | -0.124***| -0.147***|
|                | (-8.77) | (-13.34)|
| CAPI           | 0.046***| 0.023***|
|                | (9.80)  | (6.36)  |
| GROWTH         | 0.045***| 0.021***|
|                | (8.15)  | (4.94)  |
| RDI            | 0.003***| 0.001   |
|                | (2.79)  | (1.30)  |
| _cons          | 0.141***| 0.125***|
|                | (17.13) | (19.42) |
| year           | Yes     | Yes     |
| industry       | Yes     | Yes     |
| N              | 1261    | 1047    |
| adj. $R^2$     | 0.242   | 0.322   |

$t$ statistics in parentheses
***, ** indicate 1% and 5% statistical significance levels respectively.

The following robustness tests are conducted in this paper:

(1) Many studies have used return on equity (ROE) to examine the financial performance of companies. In this paper, return on equity (ROE) is substituted into the model as a replacement variable of CFP for regression and the results are shown in column1 of Table.5. It can be seen that GREENWASH is significantly negatively correlated with ROE at the 5% level. The regression results for other variables are essentially unchanged. It indicates that corporate greenwashing behaviours have a negative impact on financial performance.

(2) Considering the lagging impact of corporate greenwashing behaviors on financial performance, while avoiding endogeneity problems, the paper uses one-period lagged corporate financial performance as the explanatory variable to replace corporate financial performance. The results are shown in column2 of Table.5. It can be seen that GREENWASH is significantly negatively correlated with lagged one-period CFP at the 1% level.

The results of the robustness tests further enhance the reliability of the findings.
6. Conclusions

6.1 Research conclusions

This study uses the data of Chinese A-share listed companies from 2017-2020 as the sample and uses the difference between a normalized measure representing a company's relative position to its peers in the distribution of the ESG disclosure score and a normalized measure representing a company's relative position to its peers in the distribution of the ESG performance score as a company's peer-relative greenwashing score to empirically investigate the impact of the degree of corporate greenwashing on financial performance.

The study finds that there is a negative relationship between corporate greenwashing behaviors and financial performance. The higher the degree of greenwashing, the worse the financial performance of the company. When a company has a high degree of greenwashing, it will spend a lot of energy and financial resources to cover it up, which can reduce the financial performance. Moreover, when greenwashing behaviours are exposed, the company will be punished by relevant departments and the market, which also has a negative impact on financial performance.

6.2 Recommendations

Based on the research findings, we put forward the following recommendations:

(1) Companies should focus on sustainable development and limit the occurrence of greenwashing. For companies, greenwashing will bring temporary benefits in a short period of time. However, according to the conclusions of the paper, the higher the degree of greenwashing, the lower the corporate financial performance. Therefore, companies should focus on limiting their greenwashing behaviours and insist on sustainable development.

(2) Government departments and regulatory agencies should establish a sound regulatory mechanism to scientifically manage the greenwashing behaviours of companies. The study finds that there is a negative correlation between the degree of corporate greenwashing and the financial performance. Therefore, regulatory agencies can focus on abnormal corporate financial performance and conduct in-depth investigations on companies that exhibit abnormal financial performance. If it’s found that the degree of greenwashing does exceed a reasonable limit, then measures should be taken to curb the greenwashing behaviours of companies.

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