

Original Paper

Corporate Social Responsibility and Earnings Management of Listed Companies in Power Industry

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Research on the identification and governance of new labor relations under the casual labor economy (KJQN202000905).

Abstract

Due to the particularity of business operation of electric power industry enterprises, their social responsibility will have an important impact on national economic development and residents' life. In this paper, 303 Listed Companies in the power industry from 2013 to 2018 are taken as samples to measure the degree of social responsibility of the power industry based on the contribution of the power industry enterprises to the government, employees, shareholders, creditors, suppliers and customers, and to test the correlation between the Listed Companies in the power industry and earnings management. The empirical results show that the more the power industry enterprises pay to the outside world, the lower the degree of earnings management, that is, the better the degree of social responsibility of listed companies in the power industry, the lower the degree of earnings management. Through the research results of this paper, we can think that the social responsibility behavior of power industry enterprises is "altruistic" rather than "egoistic", which explains the importance of non-marketization of large state-owned power enterprises such as State Grid Corporation of China.

Keywords

Corporate social Responsibility, Earnings Management, Power Industry

1. Introduction

Corporate social responsibility refers to a series of activities, such as pursuing the maximization of shareholders' profits, taking into account the welfare of other relevant interest groups, such as attaching importance to the working environment and welfare of employees, improving product quality and service to enhance consumers' rights and interests, avoiding accounting fraud such as internal transactions, and conducting charitable donation, etc. The concept of corporate social responsibility originates from the western developed countries in the early 20th century. Later studies have found that good social responsibility will bring sustainable development momentum and stable market remuneration to enterprises (Ruf et al., 2001; Schnietz & Epstein, 2005), but the behavior of not paying attention to corporate social responsibility will lead to the direct loss of employees' interests (Su &

Zhong, 2010), and will also be punished by the capital market (Xiao et al., 2010). In recent years, with the outbreak of many malignant events of enterprises that do not attach importance to social responsibility, such as melamine incident, Foxconn employees' jumping off buildings, etc., Chinese enterprises have gradually attached importance to the concept of social responsibility, and gradually implemented the behavior of fulfilling social responsibility, such as donating Hope Project, donating after Wenchuan earthquake, spending on post disaster construction, etc., which Chinese enterprises have fulfilled. The event of social responsibility has also been recognized by the capital market and market investors (Chen & Zhang, 2012).

It can be seen that social responsibility is an internal and external issue of enterprises. From the internal point of view, social responsibility is the "cost" of an enterprise and the performance of an enterprise will be affected to a certain extent by the performance of social responsibility. Brammer et al. (2006) and Li et al. (2006) found that the higher the level of performance of social responsibility is, the worse the performance will be. From the external point of view, although the performance of corporate social responsibility will bring better impact and reputation to the enterprise, it will make the enterprise facing more external supervision, enterprises can reduce the degree of information asymmetry between enterprises and investors, but it may also make enterprises transfer investors' attention to financial reports through the disclosure of social responsibility information, so as to achieve the purpose of operating financial reports. So from the perspective of earnings management, it is still an unknown question whether the performance of social responsibility will make enterprises have a better sense of social responsibility and reduce the degree of earnings manipulation, or whether enterprises will use social responsibility as a means to cover up their manipulation. Deng et al. (2011) found that there was a significant negative correlation between corporate social responsibility and earnings management, and social responsibility behavior may also be a cover for listed companies to smooth earnings and reduce or increase earnings in loss years. Deng et al. (2013) also found that enterprises with better performance in social responsibility do less earnings management, indirectly indicating that enterprises with better performance in social responsibility are "good citizens" who perform social responsibility. Ai (2012) found that there is a "moral standard" between social responsibility and earnings management in the study of commercial banks. The better the performance of social responsibility, the lower the degree of earnings management.

Different from the performance of social responsibility in other industries, power industry enterprises have certain particularity. On the one hand, the current Chinese power industry enterprises are more coal-fired power production, which will cause certain environmental pollution, which is contrary to the social responsibility of sustainable environmental protection development of enterprises. On the other hand, He et al. (2011) and Zhang et al. (2013) also found that the degree of social responsibility of power industry enterprises is not high, and the concept of social responsibility needs to be strengthened. Therefore, this paper takes the listed companies in the power industry as a sample to study. On the one hand, it hopes to find out the status of the listed companies in the power industry in fulfilling their social responsibilities, and on the other hand, it hopes to find out the real reasons for the listed companies in the power industry in fulfilling their social responsibilities.

2. Theoretical Analysis and Research Hypothesis

Corporate social responsibility comes from its own charitable behavior, response to social pressure, management of social risks, balance of comprehensive goals, and contribution to maximizing social welfare (Li & Xiao, 2011). Whether corporate social responsibility is voluntary or involuntary, it needs to pay more economic costs, and thus it will receive more attention from the society and the securities market. This kind of passive attention, to some extent, is also a kind of pressure, which makes enterprises have to abide by market rules and be responsible for market investors. Gelb and Strawser (2001) found that when enterprises fulfill their social responsibilities, they will provide external financial announcements with more extensive and more informative content than the regulatory requirements. This is because these announcements are full of information that is conducive to enterprises, so enterprises can stimulate short-term interests without earnings management.

From the perspective of stakeholders, power industry enterprises are in the relationship of multi stakeholders, which makes them need to take responsibility for other stakeholders in the operation process. Therefore, if the managers of power industry only consider personal interests, and carry out earnings management, it will increase the agency cost, affect the interests of shareholders, and affect the interests of stakeholders, which will lead to retaliatory response. Therefore, social responsibility emphasizes that the management should not only pay attention to the current interests, but also pay attention to the relationship with stakeholders. At the same time, in the power industry enterprises with more social responsibilities, on the one hand, the management will be subject to more moral constraints and higher moral standards, so they will not deliberately conceal or whitewash the financial report, because this behavior is contrary to their moral standards, on the other hand, in order to fulfill their social responsibilities, the management has voluntarily given up part of the profits and the performance of social responsibility must be the result of management's consideration of current interests and long-term interests, so the power industry enterprises will not operate earnings for short-term interests when performing social responsibility. Therefore, this paper holds that:

Hypothesis 1: The higher the degree of corporate social responsibility in the power industry, the lower the degree of earnings management.

Since social responsibility is a kind of "cost" of enterprises, in the short term, the higher the level of social responsibility performed by power industry enterprises, the corresponding financial performance will decline. Therefore, for managers who need to pursue short-term interests, they must make up for the short-term losses caused by the performance of social responsibility through earnings management. For example, when an enterprise donates to charity, the return given by the market is only in a short period of several days. Although charity donation is beneficial to enhance the brand image and increase the enterprise value (Li & Liu, 2010), it is mostly a rapid gathering in a short period of time, but rarely brings long-term market return. Therefore, if the donation does not occur during the disclosure period of the regular report, the enterprise if the short-term benefits are maximized, earnings management will be carried out. At the same time, Jensen (2001) thinks that when enterprises attach importance to social responsibility, it may aggravate the agency problem between managers and stakeholders. And Prior et al. (2008) also found that social responsibility may damage the financial performance of enterprises. The so-called social responsibility behavior implemented by managers is to get a certain social image, but it often becomes the camouflage of management's operating profit. In other words, the management of electric power industry enterprises will use the disclosure of social responsibility information to conduct impression management, that is, when fulfilling social responsibility, enterprises can not only take the way of whitewashing information, but also choose the way of

selective disclosure of information, so that the disclosed information can best serve their own interests (Meng et al., 2010). Therefore, this paper holds that:

Hypothesis 2: The higher the degree of corporate social responsibility performance in the power industry, the higher the degree of earnings management in the corresponding power industry.

3. Research Design

3.1 Variable Definition and Empirical Model

Explained Variable: Earnings Management. The measurement method of earnings management was first proposed by Jones (1991), and then most of the literature revised the original model accordingly. This paper uses the modified model proposed by Dechow et al. (1995) for measurement. Dechow et al. (1995) believed that the earnings management value of listed companies is the value of manipulated accrued profits, which is the difference between the total accrued profits and the non manipulated accrued profits, that is, $DA=TA-NDA$. TA is the total accrued profit value, the difference between the net profit and the net cash flow of operating activities, which is adjusted by the total assets of the previous period, while NDA is the non manipulative accrued profit value, which is not disclosed in the financial statements, that is, it needs to be calculated. The specific calculation formula is as follows:

$$NDA = a_1 \frac{(REV_t - REV_{t-1}) - (REC_t - REC_{t-1})}{A} + a_2 \frac{PPE}{A} + a_3 \frac{INTAN}{A} + a_4 \frac{1}{A} \quad (1)$$

In the formula (1), REV_t and REV_{t-1} are the operating revenue of the current period and the previous period respectively, REC_t and REC_{t-1} are the change value of accounts receivable of the current period and the previous period respectively, PPE is the fixed assets of the current period, $INTAN$ is the intangible assets of the current period, and a is the coefficient to be appraised, which needs to be obtained through the following regression equation:

$$TA = b_1 \frac{(REV_t - REV_{t-1}) - (REC_t - REC_{t-1})}{A} + b_2 \frac{PPE}{A} + b_3 \frac{INTAN}{A} + b_4 \frac{1}{A} + \varepsilon \quad (2)$$

Where, b obtained by regression in formula (2) is a in formula (1).

Explanatory Variable: Social Responsibility. There are many indicators to measure corporate social responsibility. Some literatures use indicators in social responsibility reports to measure corporate social responsibility (Vilanova et al., 2009). On the one hand, not all listed companies have published social responsibility reports, on the other hand, not all listed companies that do not publish social responsibility reports do not perform social responsibility. Therefore, this paper references and improves Xiao and Yang (2011), based on From the perspective of different stakeholders, six indicators are set to measure the degree of corporate social responsibility of Listed Companies in the power industry by using the information of regular financial reports.

CSR_1 : government contribution rate=(taxes paid-tax refunds received)/operating cash inflow value; CSR_2 : employee contribution rate=cash/operating income paid to and for employees; CSR_3 : shareholder contribution rate=dividend payable/operating income; CSR_4 : contribution rate of creditors=financial expenses/operating income; CSR_5 : supplier contribution rate=cash paid for goods purchased and services received/cash outflow from operations; CSR_6 : customer contribution rate=operating cost/operating revenue.

Control Variables. Referring to the research of Xia (2003), Chen and Zhang (2004), this paper adds $\ln(\text{Size})$, Debt , Big , Year and ROE as control variables. The specific variables are explained in Table 1.

Table 1. Definition of Variables

Variables	Variable Symbol	Variable Measurement Method
Earnings management	<i>DA</i>	Measured by Jones modified model
Social responsibility	<i>CSR</i>	Based on different stakeholders, set six measures of using the information of regular financial report
Total assets	$\ln(\text{Size})$	Measured by natural logarithm of total assets of the company
Debt ratio	<i>Debt</i>	Measured by the ratio of total liabilities to total assets
Scale of accounting firm	<i>Big</i>	Measured by the scale of the company's accounting firm, if the company's accounting firm is the top four in the world, then $\text{Big}=1$, otherwise $\text{Big}=0$
Time to market	<i>Year</i>	Measured by the difference between the sample year and the listing year of the company
Signs of earnings	<i>ROE</i>	Virtual variable measurement based on the real value of ROE, if the value of ROE is negative or between 6-7%, then $\text{ROE}=1$, otherwise $\text{ROE}=0$

According to the research content and design variables, this paper sets the following empirical model.

$$DA = \alpha_1 CSR + \alpha_2 \ln(\text{Size}) + \alpha_3 Debt + \alpha_4 Big + \alpha_5 Year + \alpha_6 ROE + C + \varepsilon \quad (3)$$

In formula (3), it is the coefficient of variable to be estimated, C is the constant term. In this paper, we will test formula (3) separately according to the classification of variable *CSR*.

3.2 Data Description

This paper chooses the listed companies in the power industry as the empirical analysis sample, because the listed companies will regularly disclose information. Considering the amendment of industry classification made by CSRC in 2012, this paper will locate the sample period in 2012-2018. At the same time, this paper will delete the sample of listed companies in the power industry which are specially processed in the sample year and the sample of Listed Companies in the power industry which lack more data. Finally, this paper gets 303 samples of Listed Companies in the power industry from 2012 to 2018. The data source of this paper is Xenophon economic and financial database.

4. Empirical Analysis

4.1 Descriptive Statistics

Table 2. Descriptive Statistics

	<i>Mean</i>	<i>Median</i>	<i>Maximum</i>	<i>Minimum</i>	<i>Std. Dev.</i>
<i>DA</i>	-0.0001	0.0032	0.5242	-0.2681	0.0675
<i>CSR</i> ₁	0.0813	0.0776	0.2116	-0.0612	0.0386
<i>CSR</i> ₂	0.0973	0.0804	0.6997	0.0162	0.0701
<i>CSR</i> ₃	0.0238	0.0104	0.3698	0.0000	0.0425
<i>CSR</i> ₄	0.0752	0.0632	0.5788	-0.0235	0.0700
<i>CSR</i> ₅	0.7244	0.7592	0.9597	0.1553	0.1566
<i>CSR</i> ₆	0.8044	0.8145	1.6494	0.3033	0.1622
<i>ln(Size)</i>	22.7922	22.6001	26.3262	20.1356	1.4242
<i>Debt</i>	0.6231	0.6406	0.9369	0.0932	0.1575
<i>Big</i>	0.1089	0.0000	1.0000	0.0000	0.3120
<i>Year</i>	10.9340	11.0000	19.0000	1.0000	4.2131
<i>ROE</i>	0.1980	0.0000	1.0000	0.0000	0.3992

Table 2 shows the descriptive statistical results of the main variables in this paper. From the results of Table 2, the mean value of the explained variable *DA* is -0.0001, almost 0, that is to say, the degree of earnings management of listed companies in the power industry is not high, while the median value is 0.0032, which indicates that more listed companies in the power industry operate positive earnings management, but from the maximum and minimum value of the variable *DA*, the degree of earnings management of listed companies in different power industries is quite different. From the six explanatory variables of social responsibility, the mean value of variable *CSR*₁ is 0.0813, which shows that the net value of tax of listed companies in the power industry accounts for about 8% of the cash inflow value of operation, but the tax returns received by some listed companies in the power industry are greater than the taxes paid, that is to say, some listed companies in the power industry have not made corresponding contributions to the government; the mean value of variable *CSR*₂ is 0.0973. It shows that the cash paid to employees by listed companies in the power industry accounts for nearly 10% of the operating revenue, but the gap between different companies in terms of employee benefits is very large; the average value of variable *CSR*₃ is 0.0238, which indicates that listed companies in the power industry will give about 2% of the operating revenue to shareholders. The average value of variable *CSR*₄ is 0.0752, which indicates that the financial expenses of listed companies in the power industry account for about 10% of the operating revenue. The average value of variable *CSR*₅ is 0.7244, indicating that more than 70% of the outflow cash of listed companies in the power industry is used to purchase goods and accept labor services, and even the most listed companies in the power industry have 90% of the outflow cash used to purchase goods and accept labor services; the average value of variable *CRS*₆ is 0.8044, indicating that the operating cost of the power industry accounts for about 80%

of the operating revenue about. From the six social responsibility indicators of Listed Companies in the power industry, the average value of these six indicators is greater than 0. It can be seen that listed companies in the power industry have the belief of fulfilling social responsibility, but the degree of fulfilling social responsibility is not high. According to the statistics of control variables, the average value of $\ln(\text{Size})$ is 22.7922, indicating that the total assets of listed companies in the power industry are about 7.9 billion yuan, and the assets of listed companies in the power industry are large. The average value of variable *Debt* is 0.6231, indicating that the total liabilities of listed companies in the power industry account for more than 60% of the total assets, and the debt pressure of listed companies in the power industry is large. The mean value of the volume *Big* is 0.1089, which indicates that about 10% of the listed companies in the power industry choose four international accounting firms as their certification firms, and more of the listed companies in the power industry still choose domestic firms. The median value of the variable *YEAR* is 11, which indicates that the listed companies in the power industry have been listed for 11 years on average, indicating that more of the listed companies in the power industry have been listed earlier. The mean value of the variable *ROE* is 0.1980, indicating that nearly 20% of the listed companies in the power industry have a negative ROE value or between 6-7%, that is to say, nearly 20% of the listed companies in the power industry show signs of operating earnings management, and more listed companies in the power industry do not deliberately operate earnings.

In addition, from the standard error value of each variable, except that the standard error values of $\ln(\text{Size})$ and year are greater than 1, the standard error values of other variables are less than 1, which means that most of the variables are relatively concentrated and there is no large dispersion.

4.2 Correlation Test

Table 3. Correlation Test

	<i>DA</i>	<i>CSR</i> ₁	<i>CSR</i> ₂	<i>CSR</i> ₃	<i>CSR</i> ₄	<i>CSR</i> ₅	<i>CSR</i> ₆	$\ln(\text{Size})$	<i>Debt</i>	<i>Big</i>	<i>Year</i>	<i>ROE</i>
<i>DA</i>	1											
<i>CSR</i> ₁	0.17	1										
<i>CSR</i> ₂	0.02	0.18	1									
<i>CSR</i> ₃	0.24	0.38	0.06	1								
<i>CSR</i> ₄	0.03	0.29	-0.06	0.07	1							
<i>CSR</i> ₅	0.11	-0.72	-0.46	-0.29	-0.47	1						
<i>CSR</i> ₆	0.18	-0.67	-0.23	-0.44	-0.30	0.76	1					
$\ln(\text{Size})$	0.01	0.07	-0.41	0.19	0.22	0.21	0.04	1				
<i>Debt</i>	-0.21	-0.07	-0.10	-0.27	0.37	0.10	0.14	0.38	1			
<i>Big</i>	-0.02	-0.09	-0.21	-0.03	-0.07	0.25	0.29	0.43	0.08	1		
<i>Year</i>	0.02	-0.15	-0.05	-0.08	-0.11	0.19	0.23	0.05	-0.11	0.04	1	
<i>ROE</i>	-0.20	-0.26	0.07	-0.17	0.10	0.13	0.34	-0.08	0.12	0.01	0.03	1

Table 3 shows the correlation test results of the main variables in this paper. From the correlation coefficient values of each variable, in addition to the large correlation coefficient values among individual variables, the correlation coefficient values between explanatory variables, control variables and control variables are small, and the largest is not more than 0.5, which indicates that there is no collinearity problem between variables, which shows that the empirical results in the following paper will not be distorted due to the problem of multicollinearity.

4.3 Empirical Results

Table 4. Regression Results

	(1)	(2)	(3)	(4)	(5)	(6)
CSR_1	-0.1901* (0.1030)					
CSR_2		-0.0427** (0.0059)				
CSR_3			-0.2647*** (0.0994)			
CSR_4				-0.1242** (0.0590)		
CSR_5					-0.0395* (0.0255)	
CSR_6						-0.0463*** (0.0270)
$\ln(Size)$	0.0042	0.0059*	0.0017	0.0039	0.0056*	0.0042
$Debt$	-0.0933***	-0.0996***	-0.0683**	-0.1148***	-0.0969***	-0.0907***
Big	-0.0057	-0.0089	-0.0029	-0.0045	-0.0057	-0.0013
$Year$	0.0002	-0.0001	0.0003	0.0001	0.0002	0.0003
ROE	0.0225**	0.0269***	0.0245***	-0.0286***	-0.0247***	-0.0211**
C	-0.0490	-0.0695	0.0002	-0.0207	-0.0344	-0.0021
R^2	0.0920	0.0832	0.1030	0.0951	0.0889	0.0906
F -statistic	4.9978***	4.4749***	5.6666***	5.1845***	4.8135***	4.9119***

Note. *** and * indicate passing the test at 1%, 5% and 10% significance levels respectively, with standard error values in brackets.

Table 4 shows the regression results in this paper. From the perspective of the six regression results as a whole, although the R^2 value of each regression result is not high, it can not be simply compared with the R^2 value, but also needs to be combined with the F statistics of each regression result, and the F statistics of each regression result can pass the significance test of the conventional confidence level, which shows that each regression result has a certain degree of credibility, and the regression result is credible.

Specific to the regression results, when the explanatory variable is CSR_1 , its coefficient value is 0.1901, and it can pass the test at a significant level of 10%, which shows that from the perspective of the contribution to the government, there is a significant negative correlation between the degree of social responsibility of the power industry and earnings management, that is, the higher the contribution rate of listed companies to the government, the lower the degree of earnings management. When the variable is CSR_2 , the coefficient value is -0.0427, which can be tested by 5% significant level. It shows that from the perspective of contribution to employees, there is a significant negative correlation between the degree of social responsibility of the power industry and earnings management, that is, the higher the contribution rate of listed companies to employees in the power industry, the less likely they are to manipulate earnings management. When the variable is CSR_3 , the coefficient value is -0.2647, which can be set by routine setting the significance test of credit level shows that from the perspective of shareholder contribution rate, the more return the listed companies in the power industry give to shareholders, the less likely they are to carry out high-level earnings management. When the variable is CSR_4 , the variable coefficient value is -0.1242, which can also be tested by the significance test of conventional confidence level of 5%, indicating the greater the contribution of the listed companies in the power industry to the social responsibility of creditors, the corresponding degree of earnings management will be lower. The coefficient value of variable CSR_5 is -0.0395, which can pass the significance level of 10% confidence level, indicating that from the contribution rate of suppliers, the larger the ratio of cash paid by the listed companies in the power industry to cash outflow value is, the corresponding degree of earnings management will be lower. The coefficient value of variable CSR_6 is -0.0463, which can pass The significance test of 1% confidence level shows that from the perspective of customer contribution rate, the higher the contribution of listed companies to customers in the power industry, the less easy it is to carry out earnings management. According to the six indicators of social responsibility set in this paper, all the coefficient values are negative, which means that the higher the degree of social responsibility performance in the power industry, the lower the corresponding degree of earnings management, that is to say, the original intention of the listed companies in the power industry to perform social responsibility is to be responsible for all stakeholders, not for their own private interests.

From the test results of the control variables, there is a positive correlation between the variable $\ln(Size)$ and the explained variables, but not all of them pass the significance test of the conventional confidence level, that is to say, the larger the scale of the listed companies in the power industry, the higher the degree of earnings management, but it is not stable. There is a negative correlation between the variable $Debt$ and the explained variables, and it can pass the conventional confidence water the average significance test, that is to say, the higher the debt ratio of the listed companies in the power industry, the lower the corresponding degree of earnings management, further indicating that there is no higher degree of earnings management behavior of the listed companies in the power industry. There is a negative correlation between the variable Big and the explained variables, but it fails to pass the significance test of the conventional confidence level, which shows that although in the power

industry among the municipal companies, the audit governance of the four major international accounting firms is higher, but there is instability, that is to say, among the listed companies in the power industry, the audit effect of the four major international accounting firms seems to be no significant difference from that of the domestic accounting firms. The regression results between the variable *YEAR* and the explained variable do not pass the significance test of the conventional confidence level, and the results show that the listed companies in the power industry have no significant impact on their earnings management behavior, and the long and short listing time will not affect their earnings management behavior. There is a significant positive correlation between the variable *ROE* and the explained variables, indicating that the listed companies in the power industry with signs of earnings will indeed manipulate earnings management to a greater extent.

In order to test the robustness of the research conclusion, this paper conducts the corresponding robustness test. First of all, this paper uses Jones original model to measure the degree of earnings management of listed companies in the power industry. On the basis of re measuring the degree of earnings management, it conducts empirical test. Secondly, this paper uses the comprehensive indicator of social responsibility to measure the degree of social responsibility of listed companies in the power industry, which is based on the measurement of Xiao and Yang (2011) from the perspective of different stakeholders on the basis of the weight value calculated by Shen (2005), this paper constructs a comprehensive index of social responsibility of listed companies in the power industry and conducts empirical test. Finally, in order to prevent the impact of extreme value in the sample on the empirical results, this paper conducts empirical test after winsorize treatment of extreme value. There is no substantial difference between the results of the robustness test and the previous empirical results, so it can be considered that the regression results of this paper are credible.

5. Research Conclusion

From the research of existing literature, the social responsibility of power industry enterprises is not good, but because of the particularity of power industry, the social responsibility of power industry enterprises is very important. In this paper, 303 listed companies in the power industry from 2012 to 2018 are selected as samples to empirically test the relationship between social responsibility and earnings management of listed companies in the power industry. The results show that based on the contributions of government, employees, shareholders, creditors, suppliers and customers, we find that listed companies in the power industry contribute to the government the more employees, shareholders, creditors, suppliers and customers pay, the lower the corresponding degree of earnings management. That is to say, the better the degree of social responsibility of listed companies in the power industry, the lower the degree of earnings management. From the empirical results of this paper, we can see that although the degree of the listed companies in the power industry to fulfill their social responsibilities is not very high, but the behavior of the listed companies in the power industry to fulfill their social responsibilities is “altruistic”, not “egoistic”, that is to say, the original intention of the listed companies in the power industry to fulfill their social responsibilities is relatively simple, and there are no special purposes. At the same time, the empirical evidence of this paper also shows that the lower the debt ratio and the signs of surplus manipulation, the higher the degree of earnings management. Although there is a positive correlation between the asset size and the year of listing and earnings management of the listed companies in the power industry, and there is a negative correlation between the audit behavior and earnings management of the listed companies in the power industry some relationships are unstable.

For the power industry, because its business involves the national economic development and the normal life of residents, its social responsibility is very important, so the power industry enterprises not only need to pay attention to the implementation of social responsibility, but also need to fulfill the social responsibility. On the one hand, power industry enterprises should learn from the practices of other industry enterprises, ensure the issuance of social responsibility reports of power industry enterprises, so as to release the behavior of social responsibility reports, disclose the performance status of their social responsibility to the society and ensure the accuracy of relevant information; on the other hand, power industry enterprises should also increase their efforts to fulfill social responsibility, in addition to ensuring the industry In addition to the implementation of environmental protection related social responsibilities, we should also increase efforts in such aspects as hope projects and charitable donations, so as to ensure that more stakeholders' interests are met. At the same time, considering the unity of data availability and measurement standards, this paper selects the general listed companies in the power industry as the sample of empirical evidence, but some large-scale power industry enterprises, including the State Grid, and the better performance of social responsibility, are not included. Therefore, in the follow-up study, we should strengthen the non listed power such as the State Grid Attention to the social responsibility of industrial enterprises.

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