

## Controlling Shareholder Equity Pledge and Corporate ESG Responsibility Fulfillment Inhibition or Promotion

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### Abstract

*Corporate ESG responsibility fulfillment has become an important measure for enterprises to practice low-carbon development concepts at the micro level and promote corporate social responsibility fulfillment and corporate governance. During this process, the behavior of corporate shareholders has also become an important factor affecting the fulfillment of corporate ESG responsibilities. Based on the data of China's A-share listed companies from 2010 to 2022, this paper studies and analyzes the impact of the controlling shareholder's equity pledge behavior on the performance of corporate ESG responsibilities. The study found that the controlling party's equity pledge behavior inhibits the fulfillment of ESG responsibilities; optimizing the internal control environment and increasing corporate social attention can reduce the negative impact of pledge behavior on the fulfillment of ESG responsibilities to a certain extent; in the analysis of corporate heterogeneity, Equity pledge has less inhibitory effect on state-owned enterprises' performance of ESG responsibilities, and the effect on non-state-owned enterprises is more obvious. Based on this, the research puts forward three dimensions of policy suggestions to improve ownership structure, strengthen internal control and strengthen external supervision, in order to bring effective guidance for standardizing enterprise ESG performance.*

**Keywords:** *Equity pledge; ESG responsibility; Controlling shareholder behavior.*

## 1 INTRODUCTION

China's " 14th Five-Year Plan " outline pointed out that the current economic and social development must fully implement the new development concept, continue to promote high-quality transformation, and build a new green and low-carbon development model. Under the guidance of this concept, enterprises in various industries have also begun to continue to pay attention to the comprehensive benefits brought by multiple dimensions such as economy, society, and ecology in the process of enterprise activities (Zhong, et al., 2023) .

It is against this background that corporate ESG responsibilities emerge. ESG is an abbreviation for Environmental, Social, and Governance. It is a concept widely used in business and investment circles to evaluate and measure a company's sustainability and social responsibility performance (Fang, et al., 2023). The Environmental dimension focuses on a company's environmental impact and sustainability practices. It includes corporate carbon emissions, energy use, water resource management, waste disposal, and biodiversity protection (Zahid ,et al., 2023). The Social dimension focuses on the relationship between the company and its employees, customers, communities, and other relevant stakeholders. This includes employee rights, labor standards, diversity and

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inclusion, product safety, and community support (Lian, et al., 2023). Governance, is the dimension that emphasizes the quality and transparency of the company's decision-making and management system (Lucia, et al., 2020). This includes independence of company leadership, board structure, financial transparency, compliance and ethical standards, among others. The importance of the ESG concept is that it not only considers the company's financial performance, but also pays attention to the company's long-term impact on society and the environment (Li ,et al., 2023). More and more investors, shareholders and consumers take ESG factors into consideration, and believe that a social responsibility performance is one of the key factors in deciding whether to support and invest in a company (Tang, 2022) . The specific model is shown in Figure 1.



Figure 1 ESG System Composition

The equity pledge of the controlling shareholder of an enterprise refers to the behavior in which a major shareholder of a company (usually the founder or controlling shareholder) uses the company's equity held by him as collateral to obtain financing or borrowing. This kind of equity pledge is usually used to provide a source of funds for the shareholders' personal or company's capital needs (Hao&Lixia, 2023) . The equity pledge process is shown in Figure 2.

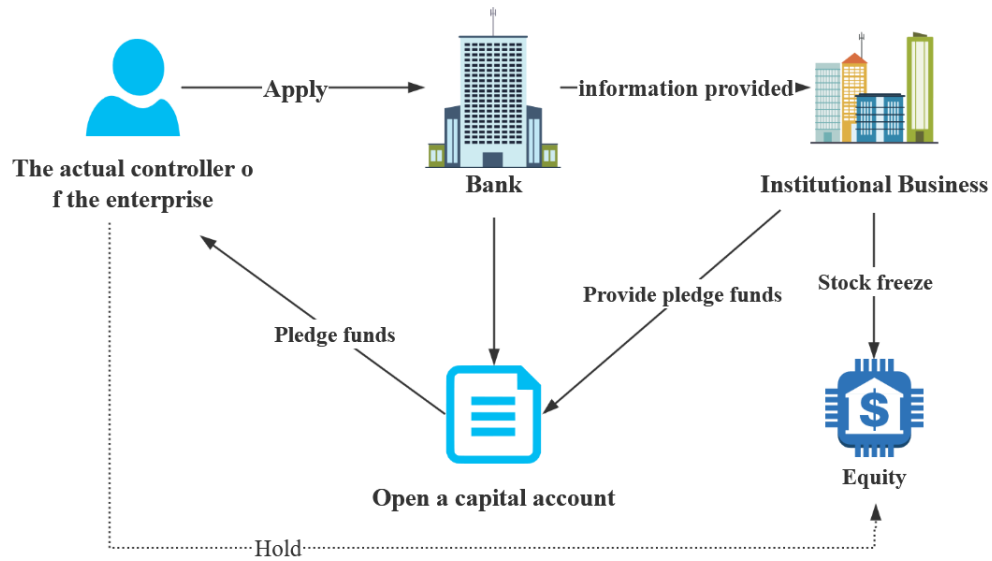


Figure 2 Controlling Shareholder Equity Pledge Process

Generally speaking, the equity pledge behavior of the controlling shareholder of an enterprise has positive and negative effects on corporate governance. From the perspective of negative impact, although equity pledge will not cause the loss of the controlling shareholder's equity, it will reduce the cash flow of shareholders, induce some shareholders to hollow out the enterprise out of self-interest, and enhance the possibility that the equity resources of the enterprise will be maliciously occupied. It is not only difficult to change the financial situation of the enterprise, but will make the enterprise face a worse financing environment (Hulse, 2021). From the perspective of positive impact, in order to avoid the adverse impact caused by the stock price decline caused by the equity pledge, the controlling shareholder of the enterprise will also be motivated by the market value management of the stock, and take actions such as enhancing donations, fulfilling social responsibilities, and disclosing carbon information to the market. Signals and the establishment of a good corporate reputation to stabilize stock prices have a positive effect on corporate operations (Yu-Kun, et al., 2021;Deshui, et al., 2023). Specifically shown in Figure 3.

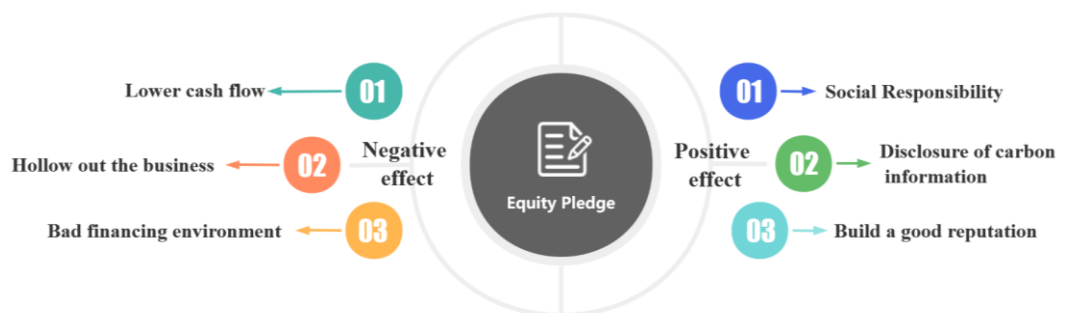


Figure 3 Effect Analysis of Equity Pledge

By exploring the behavior of corporate shareholders and the performance of corporate ESG responsibility as a whole, the contribution of the research is divided into three levels. First, it enriches the existing research on the factors affecting the performance of ESG responsibility. This paper analyzes the equity pledge of major shareholders as an important influence variable, and considers the diversified influence of equity pledge on corporate governance. Second, it expands the analysis of the influence of shareholders' equity pledge behavior on corporate governance. In traditional studies, the influence on

corporate governance is limited to corporate value, corporate financial status, etc., and there are few discussions on the performance of corporate ESG responsibilities. Thirdly, the author combs out the role of shareholder pledge on the performance of corporate ESG responsibility, and discusses the heterogeneous influence brought by corporate ownership. The specific contribution is shown in Figure 4.

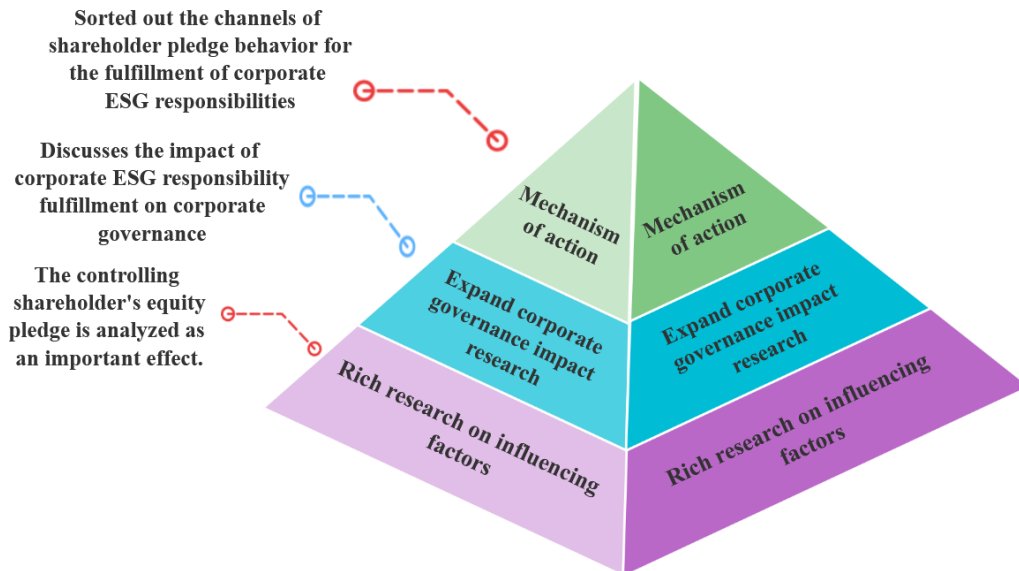


Figure 4 Research Contributions

## 2 THEORETICAL MECHANISM AND RESEARCH DESIGN

### 2.1 Analysis of the mechanism of action

Equity pledge by controlling shareholders of enterprises may have a negative impact on the performance of ESG responsibility of enterprises, specifically, its negative mechanism mainly lies in two aspects. On the one hand, equity pledge behavior of controlling shareholders will reduce the willingness of enterprises to fulfill ESG responsibilities, on the other hand, it will reduce the ability of enterprises to fulfill their responsibilities. From the mechanism of reducing enterprise ESG performance willingness, there are three paths as follows. Prioritizing short-term interests: Controlling shareholders may put financing needs ahead of ESG responsibilities, especially when facing financial pressure or short-term economic interests (Zumente&Bistrova, 2021). In order to meet repayment obligations or maintain collateral value, they may take decisions that compromise ESG responsibilities, such as reducing environmental protection spending, reducing employee benefits or community investment; lack of long-term vision: controlling shareholders may be too short-sighted when considering ESG responsibilities, because equity Staking is often associated with short-term funding needs. They may not be willing to pay for the implementation of long-term ESG strategies, but pay more attention to the immediate financial pressure (Treepongkaruna, et al., 2022). Loss of influence : Once the equity is pledged, the creditor may gain a certain degree of influence. This may lead to the weakening of controlling shareholders' influence on the enterprise , further reducing their willingness to fulfill ESG responsibilities. From the perspective of the mechanism for reducing the ability of companies to fulfill their ESG responsibilities , there are three paths as follows. Financial constraints : If equity pledges restrict the company's liquidity, it may be difficult for companies to commit sufficient funds to support ESG projects and initiatives. This may include investments in environmental protection, employee training and welfare improvements (Dikolli,et al., 2022). Market reaction: Once the equity pledge is disclosed, the market may have concerns about the company's stability and long-term

sustainability, leading to a decline in investor trust and an increase in financing costs. Legal and compliance issues: Equity pledge transactions may involve complex legal and compliance issues, which may require the company's resources and efforts to resolve these issues, thereby reducing resources devoted to ESG responsibilities (Welch&Yoon, 2022). Therefore, the equity pledge of the controlling shareholder of the enterprise may have an adverse impact on the fulfillment of the ESG responsibility of the enterprise. It can lead to conflicts between short-term economic interests of shareholders and long-term ESG responsibilities, and may also expose companies to financial and market risks, thereby affecting their ability to fulfill ESG responsibilities. The diagram of the negative mechanism of action is shown in Figure 5.

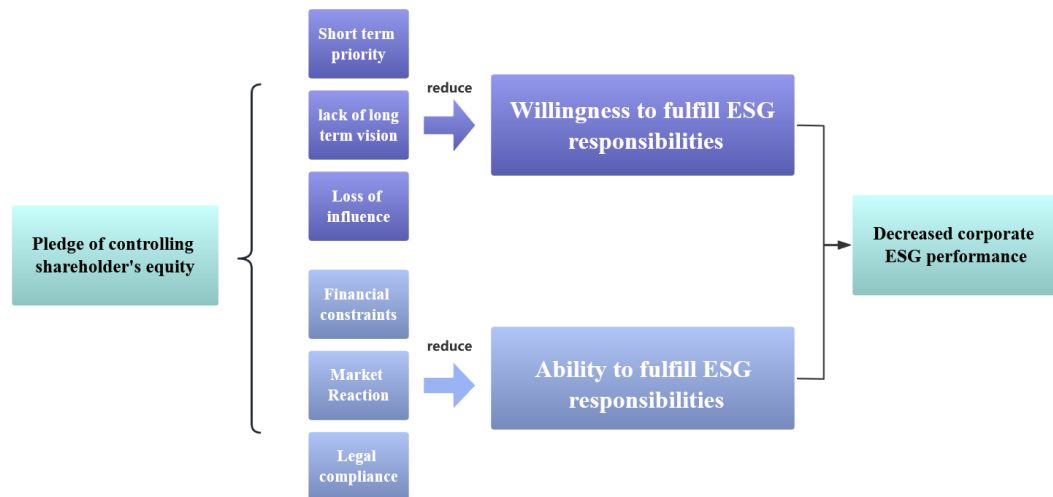


Figure 5 The mechanism of the negative effect of equity pledge on the performance of corporate ESG responsibilities

The equity pledge of the controlling shareholder of an enterprise can also have a positive impact on the fulfillment of ESG responsibilities in some cases. One aspect is the mechanism of the signaling effect. First of all, due to the clarity of ESG commitments , when controlling shareholders decide to pledge their equity, they usually need to sign a specific contract with creditors, which may include ESG commitments. This can include specific goals and obligations in terms of environmental protection, social responsibility and governance. This clear commitment can send a positive signal to the outside world, indicating that the company and its major shareholders have a clear commitment to ESG responsibilities and consciously pursue ESG goals (Bauer, et al., 2023) . Second, transactions with creditors often require stricter financial and non-financial disclosures, including ESG data. This can prompt companies to increase information transparency and provide stakeholders with more ESG information. The improvement of transparency helps to monitor and evaluate the fulfillment of ESG responsibilities of enterprises, thus improving the credibility of their social and environmental performance (Freeburn&Ramsay, 2021). Finally, by coupling ESG goals with equity pledge financing, controlling shareholders can ensure that the use of financing is related to the fulfillment of ESG responsibilities. This can prevent financing funds from being used for purposes that are inconsistent with ESG and strengthen the company's commitment to ESG (Dikolli, et al., 2022) . On the other hand, it is the mechanism for corporate reputation establishment . The first is the emphasis on social responsibility . This behavior conveys the concern of the company's major shareholders for social and environmental issues, which helps to enhance the company's reputation among stakeholders, customers and investors. Second, sustainability reputation . A company's sustainability and ESG reputation is critical to long-term value creation. By demonstrating their ESG responsibility, companies can build a more sustainable reputation, which may attract more ESG-oriented investors and partners. Finally, the emphasis on compliance and ethical

standards , equity pledge can be seen as the company's commitment to compliance and ethical standards. This helps to maintain the company's ethical reputation, allowing it to maintain a competitive advantage in the industry and the market (Nekhili, et al., 2021). The positive impact mechanism is shown in Figure 6.

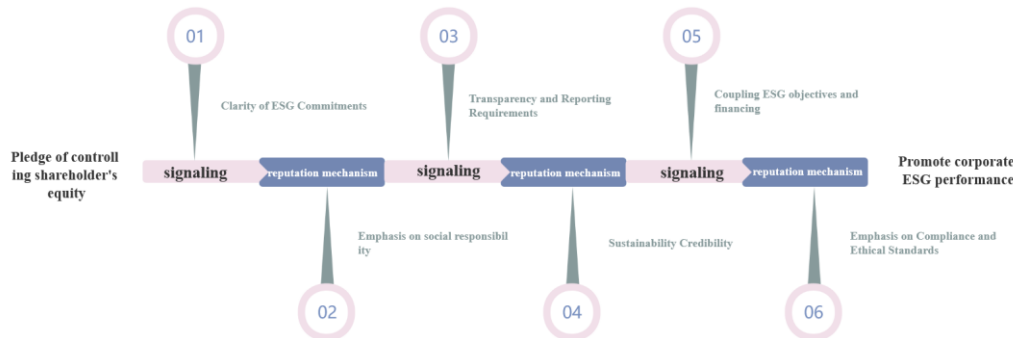


Figure 6 The mechanism of the positive effect of equity pledge on the performance of corporate ESG responsibilities

### 2.2 Variables and samples

The study takes China's A-share listed companies from 2010 to 2022 as the research sample. After eliminating outliers and financially listed companies, a total of 23,518 observations are obtained. The data used in the research are all from the Wind database and the CSMAR database. The specific research variables and explanations are shown in Table 1.

Table 1 Description of study variables

Variable type	name	Symbolic representation	Instructions
Explained variable	Enterprise ESG implementation	ESG	According to the ESG evaluation standard given in Wind data, the value is 9-1 from high to low according to the performance.
Explanatory variable	Controlling shareholder equity pledge or not	Judge	The value of equity pledge is 1, and the value of no equity pledge is 0
	Pledge ratio	RA	Proportion of shares pledged by shareholders
Control variable	Establishment years of enterprises	AGE	Establishment time of enterprise
	Enterprise scale	SIZE	Total assets size
	Leverage level	LEV	Corporate financial leverage ratio
	Nature of enterprise	NA	Whether it is a Chinese state-owned enterprise is assigned a value of 1, not 0
	Shareholding ratio of controlling shareholders	HO	The proportion of shares held by the number one shareholder
	Combined-Title-of-Board-Chair-and-CEO	CO	Whether the chairman and the general manager are the same person is 1, not 0
	Board independence	IN	Proportion of independent directors on the board of directors

### 2.3 Model establishment

Based on the above variables, combined with the objectives of this research, the regression model for benchmark analysis is constructed as follows:

$$ESG_{i,t} = \alpha_0 + \alpha_1 Judge_{i,t} + \beta Control_{i,t} + \varepsilon_{i,t} \quad (1)$$

$$ESG_{i,t} = \alpha_0 + \alpha_1 Judge_{i,t} + \alpha_2 RA_{i,t} + \beta Control_{i,t} + \varepsilon_{i,t} \quad (2)$$

Formulas 1 and 2 are the regression results of two benchmarks. Formula 1 shows the impact on the fulfillment of corporate ESG responsibilities when only considering whether there is a controlling shareholder’s equity pledge. Formula 2 further explores the impact of the controlling shareholder’s equity pledge on corporate ESG responsibilities. performance impact. Among them, i and t respectively represent the situation of enterprise i in year t, a0 is a constant item, a1, a2 are parameters to be estimated for corresponding variables, β is a parameter to be estimated for control variables, control is a control variable involved in the research, and ε is a random error item.

At the same time, the study further uses the instrumental variable method to test, the instrumental variable is tested using the two-stage regression method, and the average equity pledge ratio mRA is used as the instrumental variable for analysis. The specific two-stage regression model is as follows:

$$RA_{i,t} = \alpha_0 + \alpha_1 mRA_{i,t} + \beta Control_{i,t} + \varepsilon_{i,t} \quad (3)$$

$$ESG_{i,t} = \alpha_0 + \alpha_1 RA_{i,t} + \beta Control_{i,t} + \varepsilon_{i,t} \quad (4)$$

In the heterogeneity analysis, the study divided the samples according to the nature of the enterprise, so the regression models of two different samples were obtained as follows:

$$\begin{cases} ESG_{kn,t} = \alpha_0 + \alpha_1 Judge_{kn,t} + \alpha_2 RA_{kn,t} + \beta Control_{kn,t} + \varepsilon_{kn,t} \\ ESG_{fn,t} = \alpha_0 + \alpha_1 Judge_{fn,t} + \alpha_2 RA_{fn,t} + \beta Control_{fn,t} + \varepsilon_{fn,t} \end{cases} \quad (5)$$

### 3 EMPIRICAL STUDY ON THE IMPACT OF SHAREHOLDER PLEDGE BEHAVIOR ON ESG PERFORMANCE

#### 3.1 Descriptive statistics results

Based on the variables provided by the research, a descriptive statistical analysis was carried out. From the results of the descriptive statistical analysis, it can be seen that the current average value of the overall performance of ESG responsibilities of Chinese companies is 6.922, which is close to 7, but the standard deviation is 1.123, which is relatively high. It shows that the overall situation of Chinese enterprises in fulfilling ESG responsibilities is relatively good, but there are still obvious differences, and some enterprises still have a lot of room for fulfilling ESG responsibilities. Judging from the equity pledge of controlling shareholders, the average value is 0.438, indicating that nearly 40% of listed companies’ controlling shareholders have pledged equity. However, in terms of proportion, although the maximum value has been pledged in full, most of the pledge ratios are around 20%. The current reality of China’s capital market is consistent. The data of other control variables are also basically within a reasonable range. Descriptive statistics are shown in Table 2.

Table 2 Descriptive statistical results

	N	Mean value	S.D	Maximum	Minimum
ESG	23518	6.922	1.123	9	1
Judge	23518	0.438	0.502	1	0
RA	23518	0.240	0.315	1	0
AGE	23518	14.984	4.163	33	2
SIZE	23518	22.662	1.256	26.623	19.234
LEV	23518	0.485	0.193	0.892	0.041
NA	23518	0.539	0.531	1	0



HO	23518	0.370	0.422	0.796	0.101
CO	23518	0.380	0.365	1	0
IN	23518	0.226	0.612	0.472	0.211

### 3.2 Benchmark regression analysis

After completing the descriptive statistics, the research conducted a baseline regression analysis based on the aforementioned model 1 and model 2, and the specific regression results are shown in Table 3. The first column is the regression result considering only the pledge or not, the second column is the regression result adding control variables, and the third column is the regression result considering the pledge situation and the pledge ratio.

Table 3 Baseline regression results

	1	2	3
Judge	-0.411 *** (-5.231)	-0.268 *** (-7.231)	-0.272 *** (-6.261)
RA			-0.382 *** (-8.252)
AGE		0.001 ( 0.414 )	0.002 ( 0.152 )
SIZE		0.371 *** ( 2.831 )	0.382 *** ( 2.951 )
LEV		-0.616 *** ( -2.911 )	-0.712 *** ( -3.051 )
NA		0.253 *** ( 4.922 )	0.307 *** ( 5.301 )
HO		0.192** (2.035)	0.351** (2.016)
CO		-0.244 (-0.984)	-0.311 (-0.991)
IN		-0.231 (-0.024)	-0.252 (-0.033)
Year	√	√	√
Industry	√	√	√
N	23518	23518	23518
R <sup>2</sup>	0.277	0.315	0.328

In results that whether it is the pledge of equity by the controlling shareholder of the enterprise, or the proportion of the pledge is significantly negatively correlated with the fulfillment of the ESG responsibility of the enterprise at a significant level of 1%. This result shows that. For general listed companies, the pledge of corporate controlling shareholders' equity will inhibit the performance of corporate ESG responsibilities, and with the increase in the proportion of corporate controlling shareholders' equity pledges, the inhibitory effect on corporate ESG responsibility fulfillment will be more obvious. That is to say, compared with the positive effects such as signal transmission and confidence building brought about by the controlling shareholder's equity pledge explained in the aforementioned theoretical mechanism, the negative impact brought by the controlling shareholder's equity pledge is greater. In terms of control variables, it can also be seen from the variable coefficients that the larger the scale of the enterprise, the higher the shareholding ratio of the controlling shareholder, and the state-owned listed companies are better at fulfilling ESG responsibilities, the leverage ratio shows a significant negative correlation. The years of establishment, the combination of two positions, and the structure of the board of directors are not related to the performance of corporate ESG responsibilities.



### 3.3 Endogeneity and Robustness Test

After completing the benchmark regression, in order to further verify the validity of the results, this study conducted endogeneity and robustness tests on the model.

In the test of endogeneity, the study uses two methods to test endogeneity, one is the two-stage regression of instrumental variables (2SLS), and the other is the one-period lag test.

In the instrumental variable two-stage regression (2SLS) test (Table 4), according to the content of the aforementioned formulas 3 and 4, the annual average equity pledge ratio (mRA) of the province where the corresponding enterprise is located was selected as its alternative instrumental variable for testing.

Table 4 Endogeneity test

	One-stage regression (RA)	Two-stage regression (ESG)
RA		-1.802 *** (-2.82)
MRA	0.282 *** (4.25)	
C	√	√
Year	√	√
Industry	√	√
N	23518	23518
Anderson-Rubin Wald		6.02**
LM		18.245***
Wald F		17.341

From the endogenous test results in Table 4, it can be seen that for the endogenous regression test in the first stage, the average equity pledge level of the province where the listed company is located and the equity pledge level of the company's own controlling shareholder are significant at the 1% level. The positive correlation proves that the instrumental variables selected by the research are effective. Furthermore, after considering the endogenous issue, the equity pledge level of the controlling shareholder of the enterprise still shows a significant negative correlation with the fulfillment of the ESG responsibility of the enterprise. It shows that the conclusion of this study is still valid after considering the endogeneity problem.

In the one-stage lag test, in order to better avoid the endogeneity problem caused by the reverse causality problem of dependent variables, all continuous variables are treated with one-stage lag, and "L." is used to indicate that variables are treated with one-stage lag. The endogeneity test results of the specific lagged one-period items are shown in Table 5. The first column is the test considering the pledge behavior, and the second column is the test considering the behavior and proportion. Considering the first-order lag item, the regression results are still consistent with the baseline regression, and the equity pledge of corporate controlling shareholders will still inhibit corporate ESG performance. Combining the results of the two tests, it can be seen that after considering the potential endogenous problems, the original conclusion remains unchanged.

Table 5 Result of endogeneity test of the delayed project

	1	2
L. Judge	-2.044 *** (-3.41)	-1.802 *** (-2.82)
L.RA		-0.282 *** (-4.25)
L.C	√	√
Year	√	√

Industry	√	√
N	22241	22241
R <sup>2</sup>	0.252	0.311

In the process of checking the robustness of the model, the research uses two forms of replacing the explained variable and adjusting the model to check the robustness. In the replacement of the explained variables, the study chooses to divide ESG into three dimensions of environmental responsibility (E), social responsibility (S), and corporate governance (G), and respectively use the three-dimensional indicators as alternative explanatory variables for regression. The specific test results is shown in Table 6. It can be seen from the results in the table that after sub-dimension replacement of ESG indicators, the value of the core explanatory variables has not changed significantly in terms of the size of the coefficient and the direction of the coefficient, which proves that the obtained model results are robust.

Table 6 Results of robustness tests for alternative explanatory variables

	ESG	E.	S	G
Judge	-0.272 *** (-6.26)	-0.284 *** (-5.92)	-0.269 *** (-6.03)	-0.294 *** (-6.12)
RA	-0.382 *** (-8.25)	-0.391 *** (-7.52)	-0.388 *** (-7.26)	-0.396 *** (-8.52)
C	√	√	√	√
Year	√	√	√	√
Industry	√	√	√	√
N	23518	23518	23518	23518
R <sup>2</sup>	0.328	0.314	0.309	0.336

Furthermore, the research used the form of changing the model regression method to conduct a second test on the model. Since the fulfillment of ESG responsibilities is not an ordered variable of 1-9, the research chose to use the Ologit model to replace the original OLS model. The regression results are shown in Table 7. After replacing the regression form, the regression results are still robust. It further proves the robustness of the model.

Table 7 Test results after replacement of the Ologit model

	1	2
Judge	-0.310 *** (-3.23) _ _	-0.329 *** (-3.95)
RA		-0.402 *** (-4.12)
C	√	√
year	√	√
Industry	√	√
N	23518	23518
R <sup>2</sup>	0.311	0.339

### 3.4 Discussion on Heterogeneity

Under the current background of China's unique political system, state-owned enterprises are of great significance to the development of China's national economy. Therefore, state-owned enterprises are also endowed with more demands for social responsibility in their business management activities, so whether the differences in the nature of enterprises will affect the inhibitory effect of corporate controlling shareholders' equity pledges on corporate ESG behavior is the main issue discussed in this part. Based on this, the study divided the samples into two groups, the state-owned enterprise group and the non-state-owned enterprise group, and performed regression. The specific results are shown in Table 8.

Table 8 Discussion on heterogeneity

	State-owned enterprise	Non-state-owned enterprise
Judge	-0.204 <sup>***</sup> (-4.27) _ _	-0.411 <sup>***</sup> (-4.15)
RA	-0.314 <sup>***</sup> (-5.29)	-0.552 <sup>***</sup> (-6.31)
C	√	√
Year	√	√
Industry	√	√
N	14428	9090
R <sup>2</sup>	0.327	0.304

It can be seen from the regression results that although the equity pledge behavior of the controlling shareholder of the enterprise in the two regressions still significantly inhibited the company's ESG performance, but from the coefficient point of view, both the equity pledge behavior and the proportion of equity pledge of state-owned enterprises were less than Non-state-owned enterprises, indicating that equity pledge behavior has a more obvious inhibitory effect on the performance of ESG responsibilities of non-state-owned enterprises. The reasons for this result may lie in two aspects. On the one hand, the special status of state-owned enterprises makes them more susceptible to policy support, and the supervision and approval of equity pledge are more strict, which inhibits their motivation to carry out business activities that are not conducive to enterprises through equity pledge. On the other hand, state-owned enterprises need to shoulder their social responsibilities more actively. Even if they adopt equity pledges, they also need to actively fulfill their ESG responsibilities, so they are less inhibited (Busch, et al., 2021).

### 3.4 Research Implications

The study puts forward three dimensions of enlightenment for regulating the equity pledge behavior of corporate controlling shareholders and reasonably guiding the performance of corporate ESG responsibilities.

First, improve the corporate ownership structure and establish a check and balance mechanism for the board of directors. By forming a diverse board membership structure, governments can encourage companies to ensure that board members are diverse, including in terms of gender, race, age and background. By increasing the number of independent directors, the Government can encourage enterprises to increase the proportion of independent directors and ensure that independent voices are given more opportunities on the board. By providing incentives for ESG-related director compensation, the government can push companies to design director compensation mechanisms and encourage boards to pay more attention to and improve ESG performance.

The second is to improve the quality of internal control and pay attention to internal supervision. To establish an effective internal audit and supervision mechanism, companies can be required to establish an effective internal audit and supervision system to ensure the implementation of ESG responsibilities. Strengthen the supervision of ESG reporting and information disclosure, strengthen the supervision of company ESG reporting and information disclosure, and ensure the accuracy and transparency of information. Conduct internal training and education and encourage companies to conduct internal training and education to raise employees' awareness of ESG issues.

Third, use market forces to strengthen external oversight. Establish an ESG rating and ranking system to support the development of an independent ESG rating and ranking system to help investors and consumers better identify ESG leaders and underperforming companies (Gillan, et al., 2021). Formulate market requirements for ESG information transparency, and promote the capital market to require listed companies to provide more

ESG information. Support enhancing the voting power of shareholders so that they are better able to push companies to improve their ESG responsibilities. This is shown in Figure 7.

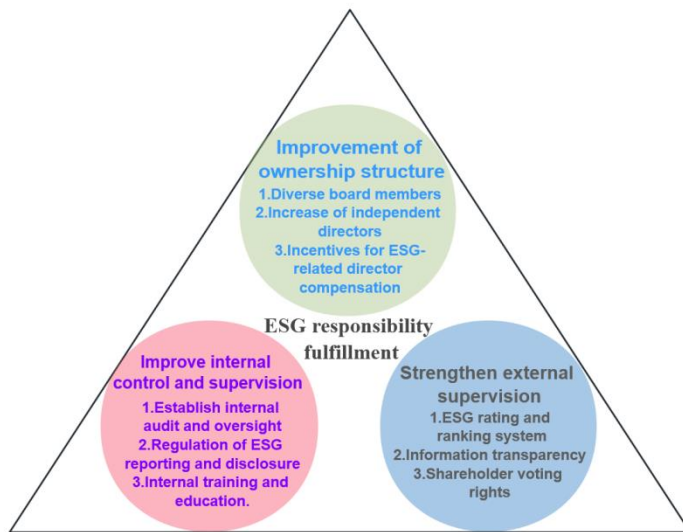


Figure 7 Three dimensions of corporate ESG performance

#### 4 CONCLUSIONS

Under the guidance of the current new development concept, it is of great significance for enterprises to practice the concept of ESG development and improve the level of fulfillment of ESG responsibilities for the long-term sustainable development of enterprises. This study explores its impact on the performance of corporate ESG responsibilities through the analysis of the equity pledge behavior of internal controlling shareholders. The study believes that the equity pledge behavior of controlling shareholders will significantly inhibit the fulfillment of corporate ESG responsibilities, and the research conclusion is still valid after various endogeneity and robustness tests. At the same time, compared with non-state-owned enterprises, state-owned enterprises are less inhibited and fulfill their ESG responsibilities more actively. Based on this, the study provides enlightenment and suggestions from three aspects: improving corporate equity governance structure, strengthening internal control supervision, and enhancing external supervision, in order to better provide effective guidance for relevant companies to practice ESG social responsibilities. In the follow-up research, with the further deepening of the understanding of ESG, more corporate governance issues will be taken into consideration, which will enrich the connotation of this research.

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