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# The Impact of Corporate ESG Performance on Institutional Investors' Shareholding Ratio

Ruixi Sun *

Department of Accounting, Zhongnan University of Economics and Law, Wuhan, China
*Corresponding Author: yucy20030203@163.com

## ABSTRACT

With the extensive dissemination and recognition of ESG investment concepts, ESG performance of enterprises has attracted widespread attention from all walks of life, and investors have gradually incorporated ESG performance into their investment decisions. The current study examines the impact of environmental, social and corporate governance (ESG) performance on institutional investors' shareholding. From 2012 to 2023, the data combined and analyzed by the data of the China A-SHARE market company. As a result of the study, companies with higher ESG scores tend to attract more attention and investment from institutional investors, which suggests that institutional investors are increasingly emphasizing corporate sustainability metrics in their asset allocation. Further research also found that internal control quality and information transparency play an important positive role in the relationship between the company's ESG performance and institutional investor shareholders.

## KEYWORDS

Esg performance; Institutional investors; Institutional investor shareholdings

## 1. INTRODUCTION

During the early 1990s, the UNEP recommended that financial bodies integrate ESG outcomes into their investment strategies. By 2004, a collaborative effort between the IFC, UN Global Compact, and Switzerland's government solidified the ESG concept, highlighting its critical role in fostering sustainable environmental growth in both the economy and society. This highlights the critical role of ESG in fostering the economy and society's sustainable green growth. Presently, investments in ESG have emerged as a significant global investment movement, steering capital towards more environmentally friendly and accountable practices.

The impact of ESG performance extends beyond boosting a company's image and cutting down on its financing expenses; it also contributes to increased market value (Zhang Lin et al., 2019; Zhang Xuan et al., 2019). A company's strong ESG results can greatly boost its capacity for innovation and economic success, and foster enduring corporate worth through the enhancement of operational efficiency and the diminution of financial hazards (Li Jinglin et al., 2021; Zhang Xue et al., 2021). In the actual capital market, institutional investors are also gradually taking ESG performance as an important investment consideration. Good ESG performance usually means lower market risk and better market performance (Ma Xili, 2019). More and more investors have begun to emphasize companies' performance in terms of ESG, as these factors are crucial to assessing companies' long-term value and risk (Zhou Fangzao et al., 2020; Wang Linlin et al., 2022). Ma Xiaofeng et al. (2016) pointed out that mandatory ESG disclosure can improve corporate transparency, attract investors' attention to long-term corporate development and sustainability, and contribute to the stability of the

capital market. The study by Liu, Y. and He, M. Y. (2017) further supports this view by showing that surplus sustainability is positively related to institutional investors' shareholding ratio, indicating that transparency and long-term performance are one of the important considerations for institutional investors. Consequently, it holds significant practical value to elucidate the link between the performance in corporate ESG responsibility and the shareholding ratio of institutional investors, and to enhance corporate zeal in meeting their social responsibilities.

Drawing from the preceding analysis, this study primarily examines the substantial beneficial effect of corporate ESG performance on the investments of institutional investors, and delves deeper into how ESG performance influences institutional investors, focusing on the caliber of corporate internal control and the clarity of information.

## 2. LITERATURE REVIEW

The swift expansion of socially responsible investing (SRI) in recent times has made the ESG aspects of corporate performance increasingly crucial for institutional investors in their investment choices. As stated by Eccles et al. (2018), a global survey involving 582 institutional investors revealed their active contemplation or intention to incorporate ESG elements into their investment choices. Ma Xiaofeng et al. (2016) discovered that revealing compulsory ESG practices enhances the company's openness and focuses on its long-term growth and sustainability, aiding in the steady evolution of the capital market. For institutional investors, the voluntary disclosure of social responsibility reports by listed companies is conducive to reducing the implicit and explicit costs of obtaining information, which in turn reduces investment risk and attracts more institutional investors to invest (Mustaruddin Saleh et al. 2010; Mingzhu Wang et al. 2017; Deng Bofu et al. (2016). Park et al. (2021) utilized the hierarchical analysis to construct an ESG model. If listed companies actively fulfill their social responsibilities, the more actively their shares are traded and the higher the stock market returns may be, which in turn will receive more attention from institutional investors (Graves et al. 1994; Lois et al. 2007; Li Shu et al. 2012). Institutional investors will favor listed companies with good ESG performance (Zhou Fangzao et al., 2020).

Institutional investors not only focus on short-term financial performance but also on long-term surplus sustainability and intrinsic value when evaluating firms (Liu, Y. and He, M. Y., 2017). Therefore, firms with high ESG performance, especially high levels of social responsibility disclosure, tend to be more attractive to long-term and non-sensitive institutional investors (Deng Bofu et al., 2016), as these firms have more optimistic long-term value expectations (Zhang Zhengyong and Xie Jin, 2018).

Nonetheless, the potential exists that the link between Corporate Social Responsibility actions and a company's worth might diminish in the near future, subsequently influencing the stock decisions of certain investors (Li Zheng, 2006). Nonetheless, good overall social responsibility performance significantly reduces firm-specific risks, which in turn enhances institutional investors' stockholding confidence (Yang Yan and Landon, 2015).

Further research shows that varied responses of institutional investors to the ESG outcomes of companies. Long-term stable institutional investors are more inclined to invest in firms with good social responsibility performance because they value the long-term growth potential and intrinsic value appreciation of firms (Zhou Fangzao et al., 2020). In addition, high-quality ESG disclosure can reduce a firm's financing costs and debt default risk, thereby increasing its attractiveness to institutional investors (Wang, Kai and Zhang, 2022; Feng, Liyan et al., 2016)

# 3. RESEARCH ASSUMPTIONS

With the growing significance of corporate ESG achievements in shaping business success and sustainable growth, entities like regulatory bodies, financial organizations, investors, and the general public are increasingly focusing on how third-party institutions assess the ESG of publicly traded companies (Baixiong et al., 2020). The study of Dimson et al. (2015) points out that the better a company's ESG performance is, the more favorable its future development will be correspondingly more favorable. companies with good ESG are more noticed by the market (Wang Bo, Yang Maojia, 2022). Institutional investors tend to invest cautiously, preferring to hold shares of listed companies with complete ESG disclosure, high transparency, superior corporate governance, and lower risk. Higher ESG scores indicate, on the one hand, that a company possesses strong environmental awareness and profitability, and that it has high capacity and sufficient investment to comply with ESG requirements. This approach diminishes the imbalance in mutual information between the firm and its investors, enhancing the investors' evaluation of the company's long-term worth and earning their confidence, while also circumventing the policy hazards posed by environmental factors and other factors. Conversely, firms excelling in ESG demonstrate a role in generating value (Bai Xiong et al., 2020), along with considerably greater returns in the medium and long term (Dorfleitner et al., 2018). They also show a readiness to meet their societal duties and prospects for long-term growth, aiding in balancing commercial and societal advantages, executing agreements with institutional investors and various stakeholders of superior quality, earning their confidence and backing, and securing the necessary resources for sustainable growth.

Stakeholder theory states that enterprises have the responsibility to proactively fulfill their environmental and social responsibilities and promote harmonious coexistence with nature and society, and that enterprises must rely on the support of stakeholders to achieve sustainable development. The non-financial information reflected in ESG has a good guiding effect on the future operating conditions of enterprises, and good ESG performance conveys the signal that an enterprise is trustworthy (Wang Linlin et al., 2022). From the perspective of external governance, institutional investors are more capable of actively obtaining information about an enterprise's ESG performance than individual investors, who have extensive information collection channels, professional data analysis skills, and rational investment judgment. Achieving outstanding ESG results in businesses can lure additional institutional investors to invest in stocks, offering prospective advantages; once these investors possess a specific portion of shares, they gain the ability to utilize shareholder privileges as "other major shareholders", encompassing the right to vote in corporate governance (Ruan Qingsong et al. 2022). Additionally, this approach aims to stabilize the capital market and secure the company's enduring profitability. Based on the preceding analysis, the following hypothesis 1 is proposed: Ceteris paribus, a firm's environmental, social, and governance (ESG) performance positively correlates with the proportion of shares held by institutional investors.

# 4. SAMPLE SELECTION AND RESEARCH DESIGN

## 4.1. Sample Selection and Data Sources

The study analyzes A-share companies listed on the Shanghai and Shenzhen stock exchanges from 2012 to 2023, using ESG scores from the WIND database, institutional investors' shareholding ratios, and control variables from the CSMAR database. The sample selection includes: (1) Excluding financial and insurance companies to avoid industry-specific effects; (2) Removing ST and *ST companies to prevent biases; (3) Omitting samples with incomplete data for completeness. The final dataset includes 39,127 observations. To address outliers and improve data normality, winsorizing is applied to the top and bottom 1% of continuous variables.

## 4.2. Variables and Modeling

### 4.2.1. Explained Variables

For this study, institutional investor shareholding (Inst) is chosen as the explanatory variable, representing the aggregate of institutional shares as a proportion of the company's total A-shares, with the data sourced from the csmar database.

### 4.2.2. Explanatory Variables

This study uses ESG scoring data from Shanghai CSI Index Information Services Co., Ltd. due to its data availability, reliability, and relevance to A-share companies. CSI's ESG framework includes 3 primary, 14 secondary, and 26 tertiary indicators, with over 130 fundamental data points. It integrates traditional and alternative data through quarterly assessments and ongoing monitoring to evaluate ESG performance of A-share companies over the past decade, and its use has grown in domestic research.

### 4.2.3. Control Variables

Utilizing insights from academics like Zhou Fangzhao (2020) and integrating them with China's real securities market context, this paper identifies several control variables in its empirical analysis: the size of the company (Size), listing duration (Age), asset-liability ratio (lev), operational income growth rate (Growth), net asset return (Roe), and the ratio of independent directors (Indep). Furthermore, in our particular regression analysis, we regulate the fixed effects related to industry and year.

Table 1. delineates the explanatory, explanatory, mediating, and control variables in this study:

**Table 1.** List of variable definition

| Variable Type | Variable Name | Variable Symbol | Variable Definition |
|---|---|---|---|
| Explained variable | Proportion of institutional shareholding | Inst | Proportion of shares of listed companies held by institutional investors |
| Explanatory Variables | ESG Responsibility Performance | ESG | CSI ESG Responsibility Score |
| | Environmental Responsibility Performance | Enviro | CSI Corporate Environmental Responsibility Score |
| | Social responsibility performance | Social | CSI Corporate Social Responsibility Score |
| | Corporate Governance Performance | Govern | CSI Index Corporate Governance Score |
| Control Variables | Enterprise size | Size | Natural logarithm of total corporate assets |
| | Number of years listed | Age | Length of time the company has been listed |
| | Asset-liability ratio | Lev | Total liabilities/total assets |
| | Revenue growth rate | Growth | Increase in operating income for the current year/total operating income for the previous year |
| | Return on Common Stockholders' Equity | Roe | Net profit/average net worth |
| | Proportion of independent directors | Indep | Number of independent directors/number of board members |

#### 4.2.4. Model Design

To confirm the link between a company's performance in ESG responsibility and the equity ratio of institutional investors, the models developed in this paper are outlined below:

$$Inst_i=\beta_0+\beta_1 ESG_i+\beta_2 Controls_i+Year_i+Industry_i+\varepsilon_i \quad (1)$$

This article constructs various models to delve deeper into the company's commitment to environmental, social, and corporate governance performance, focusing on institutional investors' attention during investment:

$$Inst_i=\beta_0+\beta_1 Enviro_i+\beta_2 Controls_i+Year_i+Industry_i+\varepsilon_i \quad (2)$$

$$Inst_i=\beta_0+\beta_1 Social_i+\beta_2 Controls_i+Year_i+Industry_i+\varepsilon_i \quad (3)$$

$$Inst_i=\beta_0+\beta_1 Govern_i+\beta_2 Controls_i+Year_i+Industry_i+\varepsilon_i \quad (4)$$

# 5. EMPIRICAL RESULTS AND ANALYSIS

## 5.1. Descriptive Statistics

Table 2 table illustrates that institutional investors (Inst) have a maximum shareholding ratio of 92.1%, a minimum of 0.3%, and a significant standard deviation reaching up to 24.9%. Observations reveal varying ratios of institutional investments among companies; the average worth of the secondary institutional investor (Inst) stands at 42.7%, signifying a higher significance of the institutional investor in the capital market. Regarding China's ESG scores, the average ESG score for publicly traded companies in China ranges from 73.3, peaking at 84.1, to dipping to 58.5, revealing inferior ESG performance and a broader disparity between them, suggesting a need for enhanced focus on ESG performance in China's listed companies and a need for better ESG disclosure strategies. The standard deviation of social responsibility is the largest, indicating that the gap between enterprises' attention to social responsibility is the largest.

**Table 2.** Descriptive statistics

| Variable | Mean | Minimum | Maximum | Standard Deviation | Sample Size |
|---|---|---|---|---|---|
| Inst | 0.427 | 0.00300 | 0.921 | 0.249 | 39217 |
| ESG | 0.733 | 0.585 | 0.841 | 0.0480 | 39217 |
| Enviro | 0.611 | 0.458 | 0.809 | 0.0710 | 39217 |
| Social | 0.750 | 0.475 | 0.968 | 0.0850 | 39217 |
| Govern | 0.791 | 0.553 | 0.907 | 0.0640 | 39217 |
| Size | 22.22 | 19.74 | 26.27 | 1.303 | 39217 |
| Age | 14.56 | 0 | 31 | 8.546 | 39217 |
| Lev | 0.412 | 0.0560 | 0.903 | 0.205 | 39217 |
| Growth | 0.338 | -0.751 | 6.242 | 0.887 | 39217 |
| Roe | 0.0440 | -1.043 | 0.329 | 0.164 | 39217 |
| Indep | 0.378 | 0.333 | 0.571 | 0.0530 | 39217 |

## 5.2. Basic Regression Results

Table 3 shows that ESG responsibility and corporate governance performance positively correlate with institutional shareholding, while social responsibility negatively correlates with it. No significant correlation was found with other performance measures. These results support Hypothesis 1,

indicating that higher ESG and governance performance leads to greater institutional ownership, while higher social responsibility leads to lower institutional shareholding.

**Table 3.** Basic regression results

| Variable | (1) | (2) | (3) | (4) |
|---|---|---|---|---|
| | Inst | Inst | Inst | Inst |
| ESG | 0.0736*** | | | |
| | (2.9881) | | | |
| Enviro | | 0.0028 | | |
| | | (0.1683) | | |
| Social | | | -0.1523*** | |
| | | | (-10.9024) | |
| Govern | | | | 0.2397*** |
| | | | | (12.8998) |
| Size | 0.0746*** | 0.0756*** | 0.0782*** | 0.0731*** |
| | (68.7281) | (71.3138) | (75.1347) | (69.8522) |
| Age | 0.0011*** | 0.0010*** | 0.0007*** | 0.0012*** |
| | (7.0072) | (6.5902) | (4.7346) | (7.9052) |
| Lev | -0.0389*** | -0.0426*** | -0.0422*** | -0.0162** |
| | (-5.5732) | (-6.2265) | (-6.1756) | (-2.2581) |
| Growth | 0.0042*** | 0.0042*** | 0.0041*** | 0.0043*** |
| | (3.4053) | (3.3781) | (3.2778) | (3.4243) |
| Roe | 0.1178*** | 0.1203*** | 0.1259*** | 0.1072*** |
| | (17.9299) | (18.4075) | (19.1688) | (16.4409) |
| Indep | -0.2411*** | -0.2369*** | -0.2387*** | -0.2706*** |
| | (-11.6820) | (-11.5169) | (-11.6255) | (-13.0636) |
| Constant | -1.1334*** | -1.1033*** | -1.0541*** | -1.2482*** |
| | (-40.3074) | (-41.1466) | (-39.2938) | (-44.1874) |
| Year | Yes | Yes | Yes | Yes |
| Industry | Yes | Yes | Yes | Yes |
| N | 39217 | 39217 | 39217 | 39217 |
| Adjusted $R^2$ | 0.262 | 0.262 | 0.264 | 0.265 |

Note: ***, ** and * indicate significant at the 1%, 5% and 10% levels by two-tailed tests, respectively, with robust t-values for standard errors adjusted for heteroskedasticity in parentheses, as in later tables.

## 5.3. Endogeneity Test

Considering the endogenous problems between the company's ESG responsibility performance and the equity ratio of institutional investors, to reduce the interference of endogenous problems in the return results, this article adopts a lagging method and variability method to reintegrate the return. The return test model of the test (1).

### 5.3.1. Lagged variable method

This document chooses the delayed one-period and delayed two-period corporate ESG performance as regression explanatory variables to address the issue of reverse causality. Table 4 displays the regression outcomes, with columns and representing lag one and lag two, respectively. The regression analysis in Table 4 reveals that the corporate ESG performance coefficients are favorable in both the initial and subsequent lagged periods, with the companies' ESG performance in the latter being statistically significant at a 5% level. Conversely, the ESG performance of firms in both lagged periods meets the 10% significance threshold, indicating a positive link between corporate ESG

responsibility and the shareholding ratio of institutional investors, hinting that this paper's sample is free from reverse causality issues.

**Table 4.** Lagged variable test table

| Variable | (1) | (2) | (3) |
|---|---|---|---|
| | Inst | Inst | Inst |
| ESG | 0.0736*** | | |
| | (2.9881) | | |
| L.ESG | | 0.0499** | |
| | | (1.9730) | |
| L2.ESG | | | 0.0407* |
| | | | (1.5991) |
| Constant | -1.1334*** | -1.1670*** | -1.1732*** |
| | (-40.3074) | (-38.9176) | (-37.1880) |
| Controls | Yes | Yes | Yes |
| Year | Yes | Yes | Yes |
| Industry | Yes | Yes | Yes |
| N | 39217 | 33654 | 28800 |
| Adjusted $R^2$ | 0.262 | 0.282 | 0.308 |

### 5.3.2. Instrumental variable method

This article refers to the methods of Wang Bo and Yang Maojia, and further uses the instrumental variable method to test the empirical results of the average ESG scores of other domestic companies. For fulfilling ESG responsibilities, the identical industry from the same year (excluding certain sample companies) is chosen as the instrumental variable (IV), and panel fixed effects regression is performed using the two-stage least squares method (2SLS). Given that publicly traded firms within the same sector exhibit comparable economic and social progress, along with distinct policies in a single year, a parallel is observed in ESG outcomes. However, the ESG achievements of other firms don't directly influence the shareholding of institutional investors in this venture, thus the instrumental variable adheres to the limitations of correlation and exogeneity. As shown in Table 5, at the end of the regression, it can be found that the coefficient of the instrument variable in the first stage of regression results is positive and at a level of 1 %, and the return result of the second stage indicates that the regression coefficient ESG responsibility performance is positive, and it is significant at a level of 5 %.

**Table 5.** 2SLS regression results for instrumental variables

| Variable | (1) | (2) |
|---|---|---|
| | first stage | second stage |
| | ESG | Inst |
| IV | 0.5744*** | |
| | (0.021) | |
| ESG | | 0.2854** |
| | | (0.183) |
| Constant | 0.0104 | -1.2222*** |
| | (0.016) | (0.082) |
| Controls | Yes | Yes |
| Year | Yes | Yes |
| Industry | Yes | Yes |
| Observations | 39,178 | 39,178 |
| R-squared | 0.223 | 0.263 |

## 5.4. Robustness Test

This document employs two specific methods to conduct the robustness test, aiming to further confirm the dependability and resilience of the research findings.: the first is to replace the explanatory variables, and the second is to adjust the sample period.

### 5.4.1. Replacement of explanatory variable

The above study adopts the ESG rating data of CSI to measure the ESG responsibility performance of enterprises, in order to test the robustness of the model, this paper chooses the discrete random variable ESG rating to replace the continuous random variable ESG rating to re-run the regression analysis of the model. ESG rating is divided into nine levels, from high to low, AAA, AA, BBB, BB, B, CCC, CC, C, in order of assigned as 9, 8, 7, 6, 5, 4, 3, 2, and 1. Table 6 displays the regression outcomes, where the variables explaining institutional investor shareholding (Inst), ESG responsibility performance (ESG), environmental responsibility performance (Enviro), and corporate governance performance (Govern) hold significant importance at the 5%, 10%, and 1% levels, respectively. Findings from the regression analysis indicate that firms with superior ESG scores exhibit a greater proportion of institutional investors in their shares and a heightened inclination to retain shares. Therefore, the finding further supports Hypothesis 1 and more validates the robustness of the findings.

**Table 6.** Regression results with replacement of explanatory variables

| Variable | (1) | (2) | (3) | (4) |
|---|---|---|---|---|
| | Inst | Inst | Inst | Inst |
| ESG | 0.0028** | | | |
| | (2.3599) | | | |
| Enviro | | 0.0017* | | |
| | | (1.7528) | | |
| Social | | | -0.0079*** | |
| | | | (-10.8148) | |
| Govern | | | | 0.0114*** |
| | | | | (12.5095) |
| Constant | -1.0970*** | -1.0962*** | -1.1327*** | -1.1232*** |
| | (-41.3036) | (-41.1467) | (-42.6502) | (-42.7767) |
| Controls | Yes | Yes | Yes | Yes |
| Year | Yes | Yes | Yes | Yes |
| Industry | Yes | Yes | Yes | Yes |
| N | 39217 | 39217 | 39217 | 39217 |
| Adjusted $R^2$ | 0.262 | 0.262 | 0.264 | 0.265 |

### 5.4.2. Adjust the sample period

From the perspective of sample period, this paper shortens the sample window to six years, 2018-2023, to conduct robustness tests on the basic regression results. Table 7 reveals that institutional investor shareholding (Inst), along with ESG responsibility performance (ESG) and corporate governance performance(Govern), exhibit a notable positive correlation at the 1% significance level. This aligns well with the fundamental regression findings, thereby reinforcing the strength of these regression outcomes in this paper.

**Table 7.** Results of the regression after adjusting the sample period

| Variable | (1) | (2) | (3) | (4) |
|---|---|---|---|---|
| | Inst | Inst | Inst | Inst |
| ESG | 0.1553*** | | | |
| | (4.8775) | | | |
| Enviro | | 0.0060 | | |
| | | (0.2777) | | |
| Social | | | -0.1246*** | |
| | | | (-6.4136) | |
| Govern | | | | 0.2830*** |
| | | | | (11.9651) |
| Constant | -1.2720*** | -1.2106*** | -1.1639*** | -1.3673*** |
| | (-34.5138) | (-34.3162) | (-32.7555) | (-37.3618) |
| Controls | Yes | Yes | Yes | Yes |
| Year | Yes | Yes | Yes | Yes |
| Industry | Yes | Yes | Yes | Yes |
| N | 24273 | 24273 | 24273 | 24273 |
| Adjusted $R^2$ | 0.263 | 0.262 | 0.263 | 0.266 |

# 6. FURTHER ANALYSIS

## 6.1. Further Analysis Based on the Quality of Internal Control

Internal control encompasses the procedures, policies, and measures designed to ensure effective business operations, accurate financial reporting, and legal compliance. Its quality is vital for organizational governance and performance, enhancing oversight and reducing agency conflicts. Effective internal control is associated with improved corporate ESG performance (Chang Mingzhu, 2024), suggesting that strong internal controls support better ESG practices and disclosure.

**Table 8.** Further analysis based on the quality of internal controls

| Variable | (1) | (2) |
|---|---|---|
| | Inst | Inst |
| ESG | 0.0658** | 0.6981*** |
| | (2.5632) | (3.4848) |
| ESG×IC | | 0.3985*** |
| | | (3.6718) |
| IC | | -0.2266*** |
| | | (-2.9923) |
| Constant | -1.1343*** | -0.6928*** |
| | (-37.8951) | (-4.7944) |
| Controls | Yes | Yes |
| Year | Yes | Yes |
| Industry | Yes | Yes |
| N | 31864 | 30994 |
| Adjusted $R^2$ | 0.282 | 0.285 |

To investigate how internal control quality affects the ESG responsibilities related to institutional investors' shareholding ratios, this study follows the approach of Chen Zhi et al. (2023) and Cui Xiumei et al. (2022), using the natural logarithm of Dibble's internal control index as a measure of

internal control quality (IC) and as a moderating variable. Regression analysis in Table 8 reveals a significant positive relationship between ESG performance and IC. This finding indicates that robust internal control enhances the effect of corporate ESG performance on institutional investors' shareholding ratios, highlighting the role of strong internal controls in advancing ESG responsibilities.

## 6.2. Further Analysis Based on Information Transparency

Information transparency can alleviate information asymmetry, and a good information environment can strengthen the regulation of management and help to improve the fulfillment of corporate ESG responsibilities, and institutional investors are more inclined to hold stocks with higher levels of corporate governance and better transparency of corporate disclosure (Chan et al. 2005; Leuz et al. 2010; McCahery et al. 2016; Bushee et al. 2014). In order to explore how the transparency of information affects the role of company ESG responsibility performance in institutional investor shareholders. Information transparency plays a positive moderating role between corporate social responsibility and financing efficiency (Zhang Lin and Zhao Haitao, 2019). The paper employs Zhang Hua(2024) to assess the clarity of accounting data (Trans), utilizing the data disclosure analysis of publicly traded firms released by the Shanghai and Shenzhen Stock Exchange. The Stock Exchanges of Shanghai and Shenzhen evaluate the promptness, precision, and thoroughness of publicly traded companies' information release, with the evaluation outcomes being outstanding (A), favorable (B), competent (C), and not qualified (D), sequentially allocated the values 4, 3, 2, and 1. The evaluation of information disclosure thoroughly scrutinizes both the quality and volume of emerging listed companies, offering a degree of credibility, with similar assessment outcomes. Table 9's findings reveal a notably positive ESG ×Tran coefficient, suggesting a greater significance of the company's ESG responsibility performance in influencing the proportion of institutional investors exhibiting high information transparency.

**Table 9.** Further analysis based on information transparency

| Variable | (1) | (2) |
|---|---|---|
| | Inst | Inst |
| ESG | 0.0505* | 0.3056*** |
| | (1.8033) | (4.1248) |
| ESG×Tran | | 0.1740*** |
| | | (5.3619) |
| Tran | | 0.0944*** |
| | | (4.0229) |
| Constant | -1.0908*** | -1.1165*** |
| | (-32.5315) | (-19.1397) |
| Controls | Yes | Yes |
| Year | Yes | Yes |
| Industry | Yes | Yes |
| N | 29112 | 29112 |
| Adjusted $R^2$ | 0.259 | 0.264 |

## 6.3. Heterogeneity Analysis Based on the Nature of Ownership

This study, referencing Zhou Fangzhao, investigates how ESG performance affects the equity ratio of institutional investors between state-owned and non-state-owned firms, categorizing them as state-owned enterprises. Corporate ownership is characterized by state ownership, with Soe holding a value of 1; conversely, corporate ownership involves non-state ownership, and Soe's value stands at 0. Table 10 displays the related regression outcomes. The data in Columns and of Panel A indicate a direct relationship between the share of equity owned by institutional investors and the performance of corporate ESG (ESG) at a 5% significance level, as well as with the effectiveness of corporate

governance (Governance) at a 1% significance. Nonetheless, Panel B reveals that in the case of non-state-owned businesses, solely the performance of corporate governance (Govern) positively influences the shareholding of institutional investors, with a notable significance at the 1% level. Consequently, institutional investors exhibit a stronger inclination towards holding shares in favor of the ESG outcomes of SOEs over non-SOEs. This may be due to the fact that non-state-owned enterprises tend to pursue profit maximization, and institutional investors will consider more about the business operation aspect and less about the ESG responsibility performance aspect when investing. In contrast, state-owned enterprises have higher requirements for the fulfillment of ESG responsibilities, and state-owned enterprises with better ESG responsibility performance are more likely to obtain preferential policies from the government (Lai, Wenjing, 2015; Ma, Xili, 2019), which in turn increases the attractiveness of investment to institutional investors.

**Table 10.** Heterogeneity analysis based on the nature of ownership

| Variable | (1) | (2) | (3) | (4) |
|---|---|---|---|---|
| | Inst | Inst | Inst | Inst |
| Panel A: Soe=1 | | | | |
| ESG | 0.0648** | | | |
| | (2.2166) | | | |
| Enviro | | -0.0014 | | |
| | | (-0.0717) | | |
| Social | | | -0.0158 | |
| | | | (-1.0073) | |
| Govern | | | | 0.1300*** |
| | | | | (5.4520) |
| Constant | -0.7590*** | -0.7334*** | -0.7287*** | -0.8073*** |
| | (-24.3667) | (-25.0209) | (-24.7696) | (-25.2665) |
| Controls | Yes | Yes | Yes | Yes |
| Year | Yes | Yes | Yes | Yes |
| Industry | Yes | Yes | Yes | Yes |
| N | 12319 | 12319 | 12319 | 12319 |
| Adjusted $R^2$ | 0.402 | 0.401 | 0.401 | 0.403 |
| Panel B: Soe=0 | | | | |
| ESG | -0.0481 | | | |
| | (-1.4546) | | | |
| Enviro | | -0.0316 | | |
| | | (-1.4574) | | |
| Social | | | -0.1946*** | |
| | | | (-10.0430) | |
| Govern | | | | 0.1366*** |
| | | | | (5.4487) |
| Constant | -0.8704*** | -0.8824*** | -0.8345*** | -0.9829*** |
| | (-18.9196) | (-20.0334) | (-19.0316) | (-21.0836) |
| Controls | Yes | Yes | Yes | Yes |
| Year | Yes | Yes | Yes | Yes |
| Industry | Yes | Yes | Yes | Yes |
| N | 26898 | 26898 | 26898 | 26898 |
| Adjusted $R^2$ | 0.150 | 0.150 | 0.153 | 0.151 |

## 6.4. Heterogeneity Analysis Based on Firm Size

**Table 11.** Heterogeneity analysis based on firm size

| Varieble | (1) | (2) | (3) | (4) |
|---|---|---|---|---|
| | Inst | Inst | Inst | Inst |
| Panel A: Large-scale enterprises | | | | |
| ESG | 0.1595*** | | | |
| | (4.9191) | | | |
| Enviro | | 0.0581*** | | |
| | | (2.6906) | | |
| Social | | | -0.1070*** | |
| | | | (-5.8289) | |
| Govern | | | | 0.2876*** |
| | | | | (11.2745) |
| Constant | -1.4127*** | -1.3653*** | -1.3181*** | -1.5024*** |
| | (-31.3101) | (-31.1810) | (-29.8748) | (-33.0831) |
| Controls | Yes | Yes | Yes | Yes |
| Year | Yes | Yes | Yes | Yes |
| Industry | Yes | Yes | Yes | Yes |
| N | 19609 | 19609 | 19609 | 19609 |
| Adjusted $R^2$ | 0.265 | 0.265 | 0.266 | 0.269 |
| Panel B: Small-scale enterprises | | | | |
| ESG | -0.0212 | | | |
| | (-0.5363) | | | |
| Enviro | | -0.0727*** | | |
| | | (-2.8155) | | |
| Social | | | -0.1867*** | |
| | | | (-8.2080) | |
| Govern | | | | 0.1901*** |
| | | | | (6.5137) |
| Constant | -0.2888*** | -0.2722*** | -0.2584*** | -0.4437*** |
| | (-3.9678) | (-3.8432) | (-3.6795) | (-6.0344) |
| Controls | Yes | Yes | Yes | Yes |
| Year | Yes | Yes | Yes | Yes |
| Industry | Yes | Yes | Yes | Yes |
| N | 19608 | 19608 | 19608 | 19608 |
| Adjusted $R^2$ | 0.083 | 0.083 | 0.086 | 0.085 |

This study aims to delve deeper into how ESG responsibility performance affects the shareholding ratio of institutional investors across firms of varying sizes. It classifies the chosen samples according to the median value of their total assets, categorizing larger firms as large and smaller ones as small, followed by performing group regression analyses. Table 11 displays the related regression findings. The columns in Panel A reveal a notable positive correlation between institutional investor shareholding (Inst) and corporate ESG responsibility performance (ESG), environmental responsibility performance (Enviro), and corporate governance performance (Govern) in major corporations at a 1% level. On the other hand, Panel B indicates that in the case of smaller companies, solely the performance in corporate governance (Govern) positively influences the shareholding of institutional investors, with a significance level of 1%. This indicates that institutional investors exhibit a stronger inclination towards the ESG outcomes of major corporations over those of smaller

firms. A possible explanation for this phenomenon is that large-scale firms are more mature, have more resources, are better able to implement and report ESG performance, and have more comprehensive and stable ESG-related information, which makes it easier for institutional investors to obtain the relevant information to make effective investment decisions. On the other hand, small companies are generally weaker in disclosing ESG performance and it is difficult for institutional investors to acquire adequate information to assess their ESG performance.

## 7. RESEARCH CONCLUSIONS

The research explored how environmental, social, and corporate governance (ESG) influences the share equity ratio among institutional investors, utilizing empirical methods. Findings indicated that effective ESG outcomes substantially boosted the attraction of institutional investors. Below is a detailed description of the exact result:

First, companies boasting elevated ESG ratings have the potential to lure a greater number of institutional investors. This shows that institutional investors are increasingly concerned about the company's sustainability indicators, not just financial performance during asset allocation. This aligns with earlier studies, indicating that institutional investors predominantly favor ESG investment strategies.

Second, internal control quality and information transparency play an important moderating role between firms' ESG performance and institutional investors' shareholding. High-quality internal control and highly transparent information disclosure can increase investor confidence in companies, which further improves companies' ability to attract institutional investors.

In addition, our study finds that institutional investors have a more pronounced shareholding preference for the ESG performance of SOEs and large-scale firms. This may be due to the fact that SOEs as well as large-scale firms have advantages in terms of resources and policy support, which make it easier to meet higher ESG standards and thus attract more institutional investors.

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