

# Institutional Investors, ESG Performance, and Audit Quality

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**Abstract:** In the process of promoting the high-quality development of China's economy, investors are paying increasing attention to the ESG performance and audit quality of listed companies. This paper empirically examines the impact and the mechanisms of institutional investors on audit quality, using Chinese A-share listed companies from 2015 to 2020 as the research object. The study finds that the higher overall shareholding of institutional investors, the higher audit quality of listed companies; and that the ESG performance of firms plays an intermediary role in mediating the influence of institutional investors on audit quality protocols. The heterogeneity test finds a more significant role of stable institutional investors in improving audit quality. The research conclusions enrich the relevant literature in the area of institutional investors and audit quality, and provide empirical evidence for strengthening ESG disclosure regimes.

## 1 INTRODUCTION

In the process of promoting the high-quality development of China's economy, enterprises are improving the quantity and quality of information disclosure in pursuit of high-quality and sustainable development. A quality audit by a CPA must have the ability to distinguish the earnings management phenomenon of enterprises and alert investors and stakeholders to the extent of it. Institutional investors have an incentive to monitor a company's management's use of manipulable accrued profits for surplus management and therefore institutional investors can improve audit quality to some extent.


Enterprises will take the initiative to report to the community on their own social responsibility and improve the quality and transparency of disclosure of information on the three aspects of environmental, social and governance (referred to as ESG). More and more investment entities promote continuous efforts by portfolio companies to improve their ESG performance, and higher ESG performance provides auditors with more basis for audits.


In the above context, this paper empirically examines the impact of institutional investors on audit quality and the intermediary role of ESG performance on the relationship between the two, using A-share listed companies in China from 2015-2020. From the perspective of institutional investors, this paper explores its impact on audit quality. And this paper provides a basis for how the capital market can improve internal corporate governance and audit quality. Besides, it also provides a reference for promoting the improvement of ESG information disclosure by enterprises.


## 2 LITERATURE REVIEW

### 2.1 Literature Review

Audit quality, as an important basis for corporate financial credibility, plays an increasingly important role in the capital market and has become a hot topic of research for experts and scholars in the field of auditing. Li and Li (2008) proposed that institutional investors should participate in corporate governance, timely supervise the management behavior, and

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promote the normal and good operation of the enterprise to bring more benefits. Institutional investors are able to accurately identify the presence of opportunistic behaviour due to their own advantages in terms of information, which improves the transparency of accounting information and the quality of financial reporting, which in turn contributes to the improvement of audit quality (Zhou et al., 2015). There are many academic views on the results of the impact of institutional investors on audit quality, but most scholars quite agree that institutional investors can overall improve the audit quality of listed companies (Feng, 2014).

In 2021, KPMG published a report on valuing companies from an ESG perspective, which explains how to incorporate the internal and external influence of ESG factors. They suggest that ESG is also one of the drivers of value that investors and company management should not ignore, and that relying solely on traditional financial metrics is an outdated and one-sided approach to valuation. According to Huang (2021), ESG is gradually becoming a core concept and framework system for evaluating the sustainability of companies. The existing literature on ESG has focused on examining ESG performance on financial performance (Wang et al., 2022), financing constraints (Li et al., 2022), and firm value (Liu and Tang, 2021), and has not considered the role of institutional investors in contributing to ESG performance

This paper introduces the phenomenon of enterprise ESG performance, link the internal governance characteristics of institutional investors and the auditor the external supervision mechanism, deduce the ESG performance in the bridge in the process of audit quality.

## 2.2 Research Hypotheses

An increasing number of institutional investors are now actively involved in the governance aspects of their investees, by virtue of exercising their rights to scrutinise management decisions and participate in corporate governance, thus greatly enhancing the quality of audits. This behavior can further effectively reduce the principal-agent cost and ease the conflict between the owner and the agent. Institutional investors are able to collect company information on their own and use their professional analytical skills to screen the information in the market to determine whether there are opportunistic acts such as false disclosures in the financial reports of listed companies, and share the results with other shareholders and investors, alleviating the

information asymmetry. Institutional investors participate in corporate governance, through field research, shareholders' proposal activities play its supervision effect, inhibit the opportunistic behavior, prompt the information disclosure, reduce the auditor work intensity and audit risk, which is conducive to the auditor issued a more fair audit opinions, and improve the quality of audit.

Institutional investors, who hold a larger stake than small and medium-sized investors and have specific criteria for selling their shares, can suffer significant losses in the event of more serious 'low audit quality'. For this reason, institutional investors who recognise that there is a clear 'insider control problem' in a listed company will put pressure on management to ensure the auditors' own independence characteristics.

Therefore, this paper proposes hypothesis 1:

Hypothesis 1(H1): The higher the overall shareholding ratio of institutional investors, the higher the audit quality of listed companies

Institutional investors promote truthful information disclosure by participating in corporate governance, optimising company operations and discouraging the occurrence of opportunistic behaviour. For companies with a higher shareholding ratio of institutional investors, the better their ESG performance is, which in turn makes it easier for problems to be identified and addressed. Information on corporate governance is included in ESG disclosures and can reflect the scientific nature of corporate governance. As financial information of listed companies is an important basis for the audit work of CPAs, ESG performance determines audit quality to a certain extent.

Therefore, this paper proposes hypothesis 2:

Hypothesis 2(H2): The higher shareholding ratio of institutional investors, the better ESG performance of the company, providing auditors with a more realistic, reliable and relevant audit basis, thus improving audit quality.

## 3 RESEARCH DESIGN

### 3.1 Sample and Data

This paper takes Chinese A-share listed companies as the research object and selects A-share listed companies in Shanghai and Shenzhen as the sample from 2015-2020. After data collection and collation, the final sample obtained contains 6 years of data from 2602 listed companies with a total of 11,854

observations. The data in this paper mainly comes from CSMAR database and WIND database.

### 3.2 Variable Definition

The Explained Variable: Audit Quality (AQ). Drawing on relevant research on surplus management, this paper adopts the negative of the absolute value of manipulated accrued profits estimated by the modified Jones model by industry by year as a proxy variable for audit quality, as follows.

$$\frac{TA_{it}}{A_{i,t-1}} = \beta_0 \frac{1}{A_{i,t-1}} + \beta_1 \frac{\square REV_{it} - \square REC_{it}}{A_{i,t-1}} + \beta_2 \frac{PPE_{it}}{A_{i,t-1}} + \varepsilon_{it} \quad (1)$$

where the subscript i represents the company, t represents the time.

The Explanatory Variable: Share-holding ratio of institutional investors (INVH).

The Intermediate Variable: ESG Performance (ESG). This paper uses the ESG rating data of China Securities, which is classified into AAA~C from high to low, and assigns 9~1 respectively. Enterprise ESG performance depends on the ESG score of the enterprise in the Wind database. The higher ESG score is, the better ESG performance of the enterprise is.

Control Variables. This paper draws on the studies, adding the following variables to the model: firm size (SIZE), financial leverage (LEV), firm growth opportunity (TQ), auditor firm (BIG), proportion of independent directors (INDEP). In order to control the impact of year and industry on audit quality, year, industry virtual variables were added to the regression model. Variables and their definitions are detailed in Table 1.

Table 1: Definitions of main study variables.

Type	Variable	Symbol	Calculation Method
Explained variable	Audit quality	AQ	Negative absolute value of manipulated accrued profits using the modified Jones model
Explanatory variable	Share-holding ratio of institutional investors	INVH	Number of institutional holdings as a percentage of the total number of such shares or shares outstanding
Control variables	Firm size	SIZE	Natural logarithm of total assets at the end of the year
	Financial leverage	LEV	Total liabilities at the end of the year / Total assets at the end of t
	Firm growth opportunity	TQ	(Market value of shares outstanding + number of non-marketable shares x net assets per share + book value of liabilities)/total assets
	Auditor firm	BIG	Virtual variable, value 1 if the company is audited by a Big 4 firm; 0 otherwise
	Proportion of independent directors	INDEP	Number of independent directors / total number of board members

### 3.3 Model Specification

To test H1, this paper constructs a regression model (2) for the relationship between institutional investor shareholding and audit quality:

$$AQ_{it} = \alpha_0 + \alpha_1 INVH_{it} + \sum \alpha_n Controls + \sum Year + \sum Industry + \varepsilon_{it} \quad (2)$$

where the subscript i represents the company, t represents the time.

If the  $\alpha_1$  is positive, which proves that the higher institutional investor shareholding ratio, the higher

audit quality, then H1 is true.

In order to investigate the intermediary role of ESG in institutional investors and audit quality, draw on the research results of Wen et al. (2004), use the intermediary effect test procedure, and construct the three-step regression model using the gradual regression method based on model (2):

$$ESG_{it} = \theta_0 + \theta_1 INVH_{it} + \sum \theta_n Controls + \sum Year + \sum Industry + \varepsilon_{it} \quad (3)$$

$$AQ_{it} = \mu_0 + \mu_1 INVH_{it} + \mu_2 ESG_{it} + \sum \mu_n Controls + \sum Year + \sum Industry + \varepsilon_{it} \quad (4)$$

where the subscript  $i$  represents the company,  $t$  represents the time.

If the  $\theta_1$  is positive, the higher institutional investor shareholding ratio, the better corporate ESG performs; if both  $\mu_1$  and  $\mu_2$  are positive, assumption 2 holds.

## 4 EMPIRICAL ANALYSIS

### 4.1 Descriptive Statistics

Table 2 presents the full sample descriptive statistics for the main variables. The minimum value of audit quality (AQ) is -0.28 and the maximum value is -0.0007, indicating a large degree of variation in

audit quality between different listed companies. The average shareholding ratio of institutional investors (INVH) is 0.45, indicating that the average shareholding of institutional investors in listed companies in the sample amounted to 45%.

The average ESG performance of the sample companies is 6.54, indicating that the ESG performance ratings of listed companies in the sample are relatively good, which is mainly because since 2018, the SSE and SZSE have taken corresponding initiatives for listed companies to monitor the disclosure of CSR information and set mandatory information disclosure requirements for some industries; the standard deviation is 1.22, indicating the large gap in the ESG information disclosure rating of the sample company.

Table 2: Descriptive Statistical Analysis.

Variable	N	Mean	Min	P50	Max	SD
AQ	11854	-0.05	-0.0	-0.04	-0.28	0.05
INVH	11854	0.44	0	0.45	1.01	0.24
ESG	11854	6.54	1	6	9	1.22
SIZE	11854	22.6	20.2	22.41	26.4	1.26
LEV	11854	0.44	0.07	0.43	0.87	0.20
TQ	11854	2.04	0.83	1.61	8.48	1.34
BIG	11854	0.06	0	0	1	0.25
INDEP	11854	0.38	0.33	0.36	0.57	0.05

### 4.2 Baseline Regression Results

Table 3 presents the results of the baseline regression. As can be seen from the regression results of model (2), the more institutional investors hold shares, the higher audit quality. Hypothesis 1 is verified. According to the regression results of the model (3), the more institutional investors hold their shares, the better corporate ESG performance is. According to the regression results of model (4), institutional investors play a partially mediating role through corporate ESG performance, thereby improving audit quality.

Institutional investors have a positive role in ESG performance, and the audit quality of listed companies will improve as institutional investors exert corporate governance effects and improve information transparency, namely institutional investors exert monitoring and governance effects through participation in corporate governance, curbing the occurrence of opportunistic behaviours, while alleviating the degree of information asymmetry and improving corporate ESG performance, which in turn facilitates the audit work of CPAs and contributes to the improvement of audit quality.

Table 3: Baseline Regression Results.

	Model(2)	Model(3)	Model(4)
	AQ	ESG	AQ
INVH	0.0078*** (3.18)	0.3887*** (7.62)	0.0064*** (2.60)
ESG			0.0036*** (7.62)
SIZE	0.0053*** (9.05)	0.4282*** (38.37)	0.0037*** (6.13)
LEV	-0.0426*** (-11.70)	-1.0224*** (-15.89)	-0.0389*** (-10.69)
TQ	-0.0025*** (-5.15)	0.0420*** (4.90)	-0.0027*** (-5.49)

BIG	0.0042** (2.38)	0.1323*** (3.55)	0.0038** (2.12)
INDEP	-0.0213** (-2.35)	0.0623 (0.36)	-0.0216** (-2.37)
_cons	-0.1419*** (-10.44)	-3.2965*** (-12.35)	-0.1300*** (-9.58)
Industry Effect	yes	yes	yes
Year Effect	yes	yes	yes
Observations	11854	11854	11854
Adj R <sup>2</sup>	0.0550	0.2490	0.0600

Note: \* p < 0.1, \*\* p < 0.05, \*\*\* p < 0.01

### 4.3 Heterogeneity Analysis

According to the characteristics of institutional investors, they can be divided into transactional institutional investors and stable institutional investors.

The Institutional Investor Heterogeneity Identifier Variable (INVW) indicator is obtained by drawing on Niu et al. (2013) and Li et al. (2014), which use two dimensions of time and industry to study the heterogeneity of institutional investors. The formula is as follows:

$$\begin{cases} SD_i = \frac{INVH_i}{STD(INVH_{i,t-3}, INVH_{i,t-2}, INVH_{i,t-1})} \\ INVW = \begin{cases} 1, SD_i \geq MEDIAN_j(SD_t) \\ 0, \text{其他} \end{cases} \end{cases} \quad (5)$$

where the subscript i represents the company, t represents the time, and j represents the industry.

The results of the institutional investor heterogeneity regressions are presented in Table 4. As can be seen from column (1), there is a positive correlation between stable institutional investors and audit quality. According to column (2), stable institutional investors are conducive to improving corporate ESG performance. As can be seen from the column (3), the stable institutional investors play some intermediary role through the enterprise ESG performance, so as to improve the audit quality. The regression results show that stable institutional investors are more likely to exert corporate governance effects through monitoring than transactional institutional investors, resulting in sound corporate ESG disclosure and providing more information for auditors to refer to, thereby improving audit quality.

Table 4: Institutional Investor Heterogeneity Regression Results.

	(1)	(2)	(3)
	AQ	ESG	AQ
INVW	0.0027*** (2.76)	0.2019*** (9.93)	0.0020** (2.01)
ESG			0.0036*** (7.60)
Controls	yes	yes	yes
_cons	-0.1510*** (-11.54)	-3.6421*** (-14.30)	-0.1379*** (-10.54)
Industry Effect	yes	yes	yes
Year Effect	yes	yes	yes
N	11854	11854	11854
r <sup>2</sup> a	0.0548	0.2516	0.0598

Note: \* p < 0.1, \*\* p < 0.05, \*\*\* p < 0.01

### 4.4 Robustness Tests

Substitution of explanatory variables. In this paper, audit opinion (OPIN: if the company's financial report is issued a standard opinion, the value is 1, otherwise 0) is used as a replacement variable for

audit quality and is used in the regression as an alternative to model (2).

Replacement of the ESG performance metric. Drawing on the replacement method of Gao et al. (2021), a more straightforward and simple assignment method is used to construct the mediating variable ESG\_R, which is constructed

directly based on the broad categories (A, B and C) of the ESG rating, with an assignment of 3 to 1.

Table 5 shows the results. The regression results are significant and prove that the baseline regression of this paper is robust.

Table 5: Robustness Tests Regression Results.

	(1)	(2)	(3)
	OPIN	ESG_R	AQ
INVH	0.0175**	0.1434***	0.0069***
	(2.35)	(6.36)	(2.81)
ESG_R			0.0062***
			(5.90)
Controls	yes	yes	yes
_cons	0.6663***	-1.3449***	-0.1336***
	(14.55)	(-12.24)	(-9.82)
Industry Effect	yes	yes	yes
Year Effect	yes	yes	yes
N	11854	11854	11854
r2_a	0.0276	0.2230	0.0577

Note: \* p < 0.1, \*\* p < 0.05, \*\*\* p < 0.01

## 5 CONCLUSIONS

This paper examines the relationship between institutional investors and audit quality, as well as the mediating role of ESG performance on the relationship between the two, using a sample of A-share listed municipal companies in Shanghai and Shenzhen in China for the period 2015-2020, and draws the following key conclusions: the higher shareholding of institutional investors, the higher audit quality; and ESG performance plays a partial intermediary effect in the role of institutional investors on audit quality; stable institutional investors are more helpful in improving ESG performance and audit quality of listed companies.

The entire impact path is that institutional investors actively participate in the governance aspects of their investees, by virtue of exercising their rights, to strictly monitor management decisions, participate in corporate governance and play a controlling role in their falsification, surplus manipulation, profit falsification and statement embellishment, thus greatly enhancing audit quality. By improving the ESG performance of companies, institutional investors provide auditors with a more truthful, reliable and relevant basis for audits, thus improving audit quality.

In order to promote the improvement of audit quality of listed companies in China, this paper puts forward relevant policy recommendations. Firstly, the governance effect of institutional investors

should be strengthened. Secondly, the development of institutional investors with stable shareholdings is a big step forward. Thirdly, strengthen the ESG information disclosure system and improve the ESG performance of listed companies.

The study in this paper only selected that ESG acted as the mediating variable, which found that ESG acted as a partial mediator, and proved that other variables will also mediate the role in this path of influence. In future research, other intermediary variables in the impact of institutional investors on audit quality can be studied to further broaden the research on audit quality.

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