ISSN: 2688-9323

ESG Performance of Listed Companies and Auditors' Decision Making Behavior

Yanyan Wang

School of Finance and Economics, Accountancy University, Anhui 233030, China

Abstract

This article takes A-share listed companies from 2016 to 2020 as a sample to study the impact of ESG performance of listed companies on auditor decision-making behavior and the moderating role of corporate governance in this process. Research has found that the better the ESG performance of listed companies, the more tolerant their auditors' decision-making behavior is, specifically manifested in reducing audit fees, reducing audit investment, and expressing unqualified opinions. Further research has found that corporate governance capability plays a positive moderating role in the relationship between the two. The research conclusion is still valid after the robustness test of substitution variables and Instrumental variables estimation. The research conclusion of this article provides scientific evidence for practical issues such as how listed companies improve ESG ratings and how stakeholders utilize ESG performance decision-making.

Keywords

ESG; Corporate Governance; Audit Investment; Audit Fees; Audit Opinion.

1. Introduction

For a long time, enterprises have been blindly pursuing Profit maximization while ignoring their social responsibilities, which has led to endless acts of polluting the environment and harming stakeholders. Against the backdrop of high-quality economic development, the new development concept has deeply rooted in people's hearts. While paying attention to the profitability of listed companies, people are increasingly concerned about their sustainable development capabilities. President Xi Jinping emphasized at the 2021 Central Economic Work that we must firmly promote high-quality development and achieve carbon neutrality. Enterprises are the driving force for high-quality economic development, and in the process of sustainable development, their actions are the key to achieving green transformation and development of the economy and society.

ESG comprehensively examines the sustainable development ability of enterprises from three aspects: environment, society, and governance. The term ESG first appeared in the 2004 United Nations report "Care is Win". The establishment of the United Nations Principles of Responsible Investment in 2006 has made ESG investment an emerging investment method. The implementation of the "Management Measures for Legal Disclosure of Enterprise Environmental Information" on February 8, 2022 has ushered in a new era of ESG information disclosure in China. With the continuous expansion of the influence of ESG concept, the ESG performance level of listed companies is receiving increasing attention from investors, gradually incorporating ESG into investment decision analysis. As the information disclosed by enterprises to the outside world, ESG is not only attracting the attention of investors, but also inevitably attracting the attention of audit institutions.

As the verifier of the economic situation and financial management behavior of enterprises, the audit decisions taken by accounting firms play a significant role for investors and the public.

ISSN: 2688-9323

ESG performance level is not only an important carrier for companies to demonstrate their sustainable development capabilities to relevant stakeholders, but also an important consideration factor for auditors' risk assessment. As the verifier of enterprise information, auditors can timely understand the internal operating conditions of the enterprise and make reasonable analysis of the formation process of external financial reports. Therefore, auditors can evaluate the ability of the audited entity to continue as a going concern based on the enterprise's ESG performance and the actual operating conditions of the audited entity, and analyze the impact of ESG on the quality of financial reports. This concern may be manifested through the auditor's decision-making behavior.

Since the concept of ESG was proposed, the academic community has given high attention. In the context of "dual carbon", in recent years, domestic scholars have continuously deepened their exploration of the economic consequences of ESG. Research has confirmed that ESG performance of listed companies is beneficial for promoting enterprise innovation and improving performance. Good ESG performance can also alleviate financing constraints, reduce overinvestment, and improve investment efficiency for enterprises. In addition, the higher level of corporate governance can reduce the business risk and control risk of enterprises, and further reduce the Audit risk. Therefore, will the level of corporate governance, as the core of enterprise management and risk prevention, affect auditor decision-making? And what role does internal control play in the relationship between ESG performance of listed companies and auditor decision-making behavior? In order to answer the above questions, this article takes A-share listed companies in China from 2016 to 2020 as the research object, empirically tests the impact of ESG performance of listed companies on auditor decision-making behavior, and examines the moderating effect of corporate governance level on the relationship between the two.

The possible contributions of this article are as follows: firstly, auditor decision-making behavior has always been a hot topic of research by scholars, but there is little literature on the impact of ESG performance of listed companies on auditor decision-making. This article conducts research on this issue, enriching the literature related to ESG and audit decision-making; Secondly, examining the moderating effect of corporate governance on ESG performance and auditor decision-making is beneficial for promoting the improvement of internal control systems; Thirdly, this article starts from the perspective of auditors and provides policy recommendations and support for relevant government departments to study how to reasonably utilize ESG ratings of listed companies, which has certain practical significance.

2. Literature Review

The existing literature is mainly based on a company perspective, studying the impact of corporate ESG performance on internal companies. A small amount of literature has studied the impact of ESG performance on external auditors. The following will review the existing literature from two aspects: the economic consequences of corporate ESG performance and factors affecting auditor decision-making behavior.

2.1. The Economic Consequences of ESG Performance

In recent years, the influence of the enterprise's ESG performance on the company's decision-making has gradually increased. The concern of the government and society has made the enterprise pay more attention to the ESG performance, which will have a significant economic impact on its performance and value. With the embedding and strengthening of the ESG concept in the operation and management process of enterprise strategic development, the academic community has continued to deepen the discussion of ESG, mainly from the perspective of enterprise performance, investment and financing.

In terms of the impact of corporate ESG performance on performance, there are currently different opinions in the academic community. Atan et al. (2016) evaluated the impact of ESG performance on corporate financial performance by modifying the ESG index. She believes that due to the time lag between information disclosure and corporate performance, there is no correlation between ESG and corporate performance efficiency. Naeem (2022) used emerging countries as a sample and found that both the three categorical and comprehensive indicators of ESG have a positive impact on the profitability of enterprises. Velte (2017) found that ESG performance has a positive impact on ROA, but has no impact on TobinQ. Further research found that corporate governance has the greatest impact on financial performance compared to environmental and social responsibility. On the other hand, companies with good ESG performance have released positive market signals, increased market attention, and thus increased the company's book value and market value. In terms of corporate investment, companies with good ESG performance have lower agency costs and can effectively alleviate financing constraints. Therefore, ESG has a positive impact on reducing investment shortage and improving investment efficiency. The lower the investment efficiency of enterprises, the more significant this effect. Zhou Fangzhao et al. (2020) found from the perspective of investors that companies with good ESG performance have stronger risk resistance and can obtain higher cumulative excess returns. Investors prefer companies with good ESG performance in the A-share market, especially independent and short-term trading institutional investors. In the context of ecological civilization construction, the role of the environment in corporate financing is gradually increasing. ESG can not only reduce financing costs, but also increase market value. Among the three classification indicators, the impact of environment and corporate governance on corporate financing costs is greater. In addition, ESG performance can suppress corporate financialization through financing constraint mechanisms, and this inhibitory effect is more pronounced in terms of environmental and social responsibility, but not in terms of corporate governance.

2.2. Factors Affecting Auditor's Decision-making Behavior

Existing scholars mainly study auditor decision-making behavior from three perspectives: audit fees, audit inputs, and audit opinions. The audit fees and audit inputs of firms are influenced by various factors such as the size, business complexity, and operational risks of listed companies. In the context of risk oriented auditing, auditors' decision-making behavior is highly correlated with audit risk. Audit risk includes control risk, inherent risk and inspection risk, of which the inherent risk and control risk are closely linked with the auditee. To reduce the risk of audit failure, auditors need to fully understand the operating environment, internal control, and governance structure of the audited entity. With the continuous progress of society, the audit needs of accounting information users are constantly increasing, and the gap in audit expectations requires auditors to understand the audited unit from more aspects. Auditors need to measure the relationship between audit investment and audit fees. The auditor's assessment of the audited entity with significant misstatements can affect the decision-making process of the audit, thereby affecting audit fees and opinions.

In terms of information disclosure and auditor decision-making behavior, the better the quality of information disclosure of listed companies, the more relaxed the auditor's risk should be towards behavior, and the lower the audit pricing. Su Kun and Yang Ruohan (2021) studied the impact of information interaction between listed companies and investors on audit fees, and found that the more frequent the information interaction, the higher the information transparency, which reduces Audit risk, and thus reduces auditor fees. Huang Can and Wang Miaoyuan (2022) studied the negative consequences of information disclosure violations and found that information disclosure violations have a positive impact on auditors' risk decision-making, increasing audit investment and costs. In terms of environmental and social responsibility information disclosure. Enterprises with good social responsibility performance can increase their reputation, reduce the risk of information asymmetry and auditor misstatement, and thus reduce the investment time and audit costs of auditors. Huang Rongbing (2020) found a negative correlation between the degree of corporate greening and the level of auditor fees by studying the impact of corporate greening behavior on auditor decision-making. At the same time, greening behavior did not have an impact on the expression of audit opinions.

In summary, most existing literature studies the impact of ESG on the enterprise itself. Even if there are studies on the impact of sustainable development information on auditing, they only focus on a certain element, and most studies only start with audit pricing. Therefore, this article will study the impact of ESG performance on auditor decision-making behavior based on the Huazheng ESG rating index and assign values, attempting to clarify its mechanism of action, in order to make incremental contributions to the existing literature.

3. Theoretical Analysis and Research Hypotheses

3.1. ESG Performance and Audit Fees of Listed Companies

According to the Simunic audit fee driver model, the auditor fee level is affected by the complexity of the audited unit, Audit risk and other factors. Enterprises with good ESG performance have lower business complexity. According to reputation theory, enterprises with good ESG performance send positive signals to the outside world, which is conducive to shaping the corporate image and reputation, reducing business complexity, and reducing audit procedures, thereby reducing audit fees. Enterprises with good ESG performance have lower risk, higher ESG performance will reduce the total risk and Systematic risk of enterprises, and face lower regulatory risk. At the same time, signal transmission theory indicates that there is information asymmetry between management and investors. The disclosure of ESG information will reduce the degree of information asymmetry, and the company will face less information risk. In addition, based on the theory of sustainable Development theory, enterprises that focus on ESG performance will not only achieve higher corporate economic performance, but also be more likely to gain the favor and trust of investors. The cost of capital will decline significantly, the value of enterprises will be improved, and the operational risk will be effectively reduced. In the context of risk oriented audit, auditors will determine the audit premium charged according to the level of Audit risk. Low operational risk and Systemic risk will reduce the Audit risk faced by auditors. At this time, auditors can reduce the requirements for Audit risk premium and cost compensation, thereby reducing audit fees. In addition, ESG information can more comprehensively reflect the performance of management. Enterprises with good ESG performance demonstrate their social and ethical behavior, which can help auditors reduce their valuation of risks and audit fees. Based on the above analysis, this article proposes the following assumptions:

H1: The better the ESG performance of a listed company, the lower the audit fees.

3.2. ESG Performance and Audit Investment of Listed Companies

Audit investment refers to the time, personnel, and audit procedures required by auditors during the audit process. Firstly, audit investment is related to the auditor's understanding of the audited entity. The disclosure of ESG information in a company will increase the auditor's understanding of the company's management and business activities. The auditor may reduce the allocation of resources, implement more targeted audit procedures, and improve audit efficiency. According to the risk oriented theory, when the Audit risk is too high, auditors need to implement more audit procedures, such as understanding industry policies, assessing environmental risks, using expert work and other audit procedures, and take longer to achieve

ISSN: 2688-9323

reasonably guaranteed assurance levels. However, enterprises with good ESG performance can reduce Audit risk by improving financial performance and reducing operational uncertainty, so that auditors can spend less time collecting sufficient audit evidence. In addition, companies with good ESG performance have good internal control and high-quality pre audit earnings. When the quality of internal control is improved, the reliability and availability of audit evidence are higher, and auditors will also trust the internal control of the audited entity more. By utilizing internal audit work, control testing is reduced, and audit investment is reduced.

According to the Impression management theory, the enterprise's ESG performance creates a "Impression management" for the public, which helps to shape the company's good social image and reduce the assessment level of operational risks. Auditors will reduce the substantive procedures of relevant aspects when planning audit work, and will not use or reduce the use of expert work, saving audit time. Based on the above analysis, this article proposes the following assumptions:

H2: The better the ESG performance of a listed company, the less auditor investment.

3.3. ESG Performance and Audit Opinions of Listed Companies

ESG's performance on audit opinions is mainly reflected in four aspects: auditors, Audit risk, earnings quality and corporate advantages. From an auditor's perspective, when issuing an audit opinion, auditors not only focus on the on balance sheet information, but also increasingly value the financial or non-financial information implied outside the balance sheet. In the face of companies with good ESG performance, auditors inevitably have a favorable impression and are more willing to believe that the likelihood of significant financial misstatement or fraud is lower, and auditors are more likely to express an unqualified opinion. From the perspective of Audit risk, auditors will give full consideration to the risk of audit failure when expressing their opinions. On the one hand, enterprises with good ESG performance have higher information transparency and lower operational risk, thus reducing the probability of audit failure. On the other hand, such enterprises face fewer lawsuits than other enterprises, which indirectly reduces the Audit risk, and the greater the probability of auditors issuing unqualified audit opinions. The audit opinion to a certain extent reveals the level of corporate governance and the operational capabilities of the management team. Good ESG performance indicates that the company has strong governance capabilities and the management team has a high level of ideological and moral cultivation. From the perspective of earnings quality, firstly, based on the principal-agent theory, companies with good corporate governance performance can help reduce transaction costs and alleviate opportunistic behavior among corporate executives. Secondly, companies with good ESG performance are more willing to disclose more information, and therefore are subject to more external supervision from analysts, investors, or media, which suppresses management's earnings management behavior. However, companies with better earnings quality are more tolerant of auditors' opinions. From the perspective of enterprise advantages, good ESG performance can also establish a competitive advantage for enterprises. According to the theory of competitive strategy, enterprises will continuously improve their innovation ability in the process of improving their ESG performance level, while optimizing organizational structure and business processes. The competitive advantage of enterprises has a positive effect on the improvement of company value, and auditors will be more objective in evaluating their sustainable development ability, Often, non unqualified audit reports are not issued. Based on the above analysis, this article proposes the following assumptions:

H3: The better the ESG performance of a listed company, the more likely the auditor is to express an unqualified opinion.

ISSN: 2688-9323

4. Research Design

4.1. Sample Source and Data Selection

This article selects listed companies from 2011 to 2020 as the research sample, and excludes listed companies in the financial and insurance categories, ST or PT according to research needs, and conducts a 1% bilateral tail reduction on the sample. Most of the data comes from Guotai An, with ESG data sourced from the China Securities Index.

4.2. Variable Definition and Description

4.2.1. Dependent Variable

This paper refers to the practice of Wang Jianling and Chang Yuyuan (2021), and uses the natural logarithm of audit fees to measure.

Audit investment is measured by the audit lag, that is, the time interval between the balance sheet date and the audit report date, and then the Natural logarithm.

Audit opinion (Aop), if the audit report is a non unqualified audit opinion, the value is 1, otherwise it is 0.

4.2.2. Explanatory Variable

Based on the approach of Wang Bo and Yang Maojia (2022), this article assigns scores to the nine ESG ratings in the Huazheng ESG evaluation system, using a 9-point system. The higher the score, the better the ESG performance. At the same time, take the average score for each quarter to measure annual ESG performance.

4.2.3. Adjusting Variables

Corporate Governance Level (IC). This article draws inspiration from the approach of Yan Ruosen et al. (2018), and uses principal component analysis to find a linear combination of the 10 corporate governance variables, including the shareholding ratio of the largest shareholder, equity balance, and executive shareholding ratio. The first major principal component is selected as an indicator to measure the level of corporate governance.

4.2.4. Control Variables

Referring to existing research, the control variables and calculation methods selected in this article are shown in Table 1.

Table 1. Variable Definition

Variable type	Variable name	Variable symbol	Variable Description
Dependent variable	Audit fees	Afee	Natural logarithm of audit fees
	Audit investment	Ainvest	Log the number of days between the accounting deadline and the audit report date
	Audit opinion	Aop	An unqualified audit report with a value of 0, otherwise 1
Explanatory variable	ESG performance	Esg	According to the Huazheng ESG evaluation system, quarterly data is divided into "9-1" points from high to low, and the annual average is taken
Adjusting variables	Corporate governance level	Gov	Drawing on relevant research results, 10 corporate governance variables were selected and a comprehensive indicator was constructed using principal component analysis method
Control variable	Return on assets	Roa	Net profit/total assets
	Asset liability ratio	Lev	Total liabilities/total assets
	Company size	Size	Natural logarithm of total assets
	Listing period	Listage	Ln (year of year - year of listing+1)
	Earnings per share	Eps	Net profit/weighted average of the number of ordinary shares at the end of the year
	Auditor tenure	Tenure	Continuous tenure in the accounting firm
	Integration of two positions	Dual	1 for Chairman concurrently serving as General Manager, otherwise 0
	Institutional investor shareholding	Inst	Number of shares held by institutional investors/total number of shares
	Proportion of independent directors	Indep	Number of independent directors/total number of directors
	Shareholding by the largest shareholder	Top1	Number of shares held by the largest shareholder/total number of shares held
	Tobin Q value	TbinQ	Company Market Value/Asset Replacement Cost
	Is it one of the four major audits	Big4	The four major audits are assigned a value of 1, while non four major audits are assigned a value of 0
	Industry	Ind	Control industry fixed effects
	Year	Year	Control annual fixed effects

4.3. Model Construction

To examine the impact of ESG performance of listed companies on auditor decision-making behavior, this article constructs the following model:

$$Afee/Ainvest/Aop=\alpha 0+\alpha 1ESG+\sum Controls+\sum Industry+\sum Year+\varepsilon \quad (1)$$

In the above equation, if ESG performance has a negative impact on the auditor's decision-making behavior, then α Expectations are negative. According to the data type of the dependent variable, OLS regression is used when the dependent variables are Afee and Ainvest, and Logit regression is used when the dependent variable is Aop. In addition, we also control the year and industry.

ISSN: 2688-9323

5. Empirical Results and Analysis

5.1. Descriptive Statistics

Table 2 presents the descriptive statistical results of the main variables in this article. The maximum and minimum audit fees are 16.44 and 12.77 respectively, indicating a significant difference in audit fees when facing listed companies with different ESG performance; The maximum value of audit investment is 4.796, which is converted into 121 days, while the minimum value is 4.043, which is converted into 57 days. This indicates that the amount of audit investment is greatly influenced by ESG performance. The standard deviation of ESG is 1.142, indicating significant differences in ESG scores among companies.

Table 2. Descriptive Statistical Results

Variable	Mean	Median	Standard deviation	Minimum	Maximum
Afee	14.10	14.00	0.712	12.77	16.44
Ainvest	4.614	4.682	0.171	4.043	4.796
Aop	0.020	0.000	0.139	0.000	1.000
ESG	6.492	6.000	1.142	1.750	9.000
Roa	0.039	0.040	0.0720	-0.415	0.244
Lev	0.427	0.420	0.189	0.055	0.972
Size	22.57	22.40	1.310	19.730	26.390
Listage	2.225	2.303	0.716	0.693	3.367
Eps	0.390	0.289	0.636	-1.710	3.320
Tenure	7.774	7.000	5.594	1.000	24.000
Indep	0.379	0.364	0.0540	0.308	0.571
Dual	0.315	0.000	0.464	0.000	1.000
Inst	0.399	0.405	0.235	0.000	0.880
Top1	0.322	0.300	0.146	0.084	0.732
TbinQ	1.987	1.606	1.266	0.799	11.46
Big4	0.072	0.000	0.259	0.000	1.000

5.2. Multiple Regression Analysis

Table 3 provides the regression results of the impact of ESG performance on auditor decision-making behavior of listed companies after controlling for industry and year fixed effects. Columns (1) and (2) respectively report the impact of ESG performance of listed companies on audit fees and audit investment after adopting OLS regression. From the first row of the table, it can be seen that the coefficients of ESG are all negative and significant at the 1% level. This indicates that the higher the ESG performance of a company, the more lenient the decision-making behavior that auditors will take: reducing audit fees, reducing audit investment, or expressing unqualified opinions. The above conclusion validates hypothesis 1-3 of this article.

ISSN: 2688-9323

Table 3. ESG Performance and Auditor Decision Behavior of Listed Companies

	(1)	(2)	(3)
ESG	-0.014***	-0.010***	-0.651***
	(-2.88)	(-4.68)	(-6.84)
Roa	-0.539***	-0.197***	2.337
	(-5.04)	(-4.40)	(1.29)
Lev	0.065*	-0.022	2.9710***
	(1.93)	(-1.54)	(4.98)
Size	0.3400***	0.011***	-0.375***
	(61.01)	(3.89)	(-2.61)
Listage	-0.028***	-0.024***	0.649***
	(-3.30)	(-6.61)	(3.08)
Eps	-0.024*	-0.017***	-1.543***
	(-1.88)	(-3.30)	(-4.84)
Tenure	0.003***	0.0003	-0.041**
	(3.57)	(0.70)	(-2.22)
Indep	-0.026	0.045	0.287
	(-0.30)	(1.20)	(0.15)
Dual	0.017	0.002	0.033
	(1.54)	(0.34)	(0.144)
Inst	-0.005	-0.006	1.405**
	(-0.18)	(-0.55)	(2.16)
Top1	-0.001	-0.048***	-3.871***
	(-0.03)	(-3.00)	(-3.75)
TobinQ	0.003	-0.002	-0.027
	(0.66)	(-0.75)	(-0.24)
Big4	0.563***	-0.065***	-0.053
	(27.52)	(-7.63)	(-0.08)
Cons	5.313***	4.5326***	7.637**
	(33.91)	(69.18)	(2.34)
IND/YEAR	YES	YES	YES
Adj/PseudoR^2	0.705	0.101	0.308
N	7036	7036	5597

Note: *, * *, and * * respectively indicate significant differences at the 10%, 5%, and 1% levels

5.3. Robustness Testing

5.3.1. Replace Variables

We use a non logarithmization audit time delay to replace the audit input, and replace the audit cost by dividing the audit cost by the logarithmized value of the total assets at the end of the period. The audit opinion adopts an ordered variable AOP_ Replace with 'oder' (1 for unqualified audit opinion, 2 for unqualified audit opinion with emphasized matter section, 3 for qualified opinion, 4 for strengthened matter section with qualified opinion, and 5 for opinions that cannot be expressed and negative opinions). Columns 1-3 of Table 4 report the regression results after replacing audit fees, audit inputs, and audit opinions, respectively. The coefficients of ESG are -0.015, -0.954, and -0.019, respectively, and they are all significant at the 1% level, indicating that the regression results of ESG performance of listed companies after replacing variables are consistent with the basic regression results. The research conclusion of this article is robust.

ISSN: 2688-9323

Table 4. Replacement Variables

	(1)	(2)	(3)
ESG	-0.015***	-0.954***	-0.019***
	(-2.87)	(-4.96)	(-7.07)
Roa	-0.356***	-18.914***	-0.532***
	(-3.20)	(-4.55)	(-9.25)
Lev	0.109***	-1.972	0.071***
	(3.11)	(-1.51)	(3.95)
Size	-0.603***	0.938***	-0.003
	(-88.74)	(3.69)	(-0.87)
Listage	-0.026***	-2.213***	0.004
	(-2.98)	(-6.68)	(0.88)
Eps	-0.052***	-1.677***	-0.001
	(-3.97)	(-3.44)	(-0.14)
Tenure	0.003***	0.017	-0.001
	(3.57)	(0.50)	(-1.56)
Indep	-0.053	4.065	0.011
	(-0.57)	(1.18)	(0.24)
Dual	0.021*	0.215	-0.004
	(1.91)	(0.52)	(-0.67)
Inst	-0.009	-1.027	0.015
	(-0.32)	(-0.98)	(1.00)
Top1	-0.033	-4.363***	-0.073***
	(-0.84)	(-2.94)	(-3.53)
TobinQ	0.008*	-0.122	0.007***
	(1.70)	(-0.67)	(2.97)
Big4	0.535***	-6.454***	0.009
	(25.14)	(-8.11)	(0.78)
Cons	5.362***	96.597***	1.350***
	(32.95)	(15.88)	(16.05)
IND/YEAR	YES	YES	YES
Adj_R^2	0.798	0.109	0.077
N	7036	7036	7036

Note: *, * *, and * * respectively indicate significant differences at the 10%, 5%, and 1% levels.

5.3.2. Instrumental Variables Estimation Method

Further considering the endogeneity problem that may exist in the model, this paper uses the research of Quan Xiaofeng et al. (2015) to select the ESG score that lags behind one phase as the Instrumental variables estimation and use the 2SLS method for regression analysis. The regression results of the second phase are shown in Table 5. The coefficient of the first line is significantly negative, indicating that the research conclusions of this paper are still robust after considering the endogeneity problem.

ISSN: 2688-9323

Table 5. Instrumental variables estimation Test

	(1)	(2)	(3)
ESG	-0.018**	-0.012***	-0.275***
	(-2.24)	(-3.68)	(-3.77)
Roa	-0.560***	-0.190***	-1.446
	(-4.31)	(-4.01)	(-1.40)
Lev	0.076*	-0.017	1.532***
	(1.74)	(-0.97)	(4.38)
Size	0.387***	0.007**	-0.169**
	(44.91)	(1.96)	(-2.04)
Listage	-0.024*	-0.031***	0.308**
	(-1.87)	(-5.80)	(2.34)
Eps	-0.021	-0.015**	-0.287
	(-1.33)	(-2.30)	(-1.64)
Tenure	0.003**	0.001	-0.013
	(2.28)	(1.20)	(-1.23)
Indep	0.040	0.082*	0.122
	(0.35)	(1.78)	(0.12)
Dual	0.015	-0.007	0.108
	(1.15)	(-1.26)	(0.87)
Inst	0.016	0.001	0.620
	(0.45)	(0.08)	(1.63)
Top1	-0.011	-0.057**	-2.040***
	(-0.22)	(-2.53)	(-3.28)
TobinQ	-0.003	-0.001	-0.042
	(-0.43)	(-0.39)	(-0.58)
Big4	0.576***	-0.057***	-0.271
	(20.33)	(-5.29)	(-0.55)
Cons	5.689***	4.717***	3.752**
	(28.69)	(65.25)	(2.03)
IND/YEAR	YES	YES	YES
N	7036	7036	3298
Adj_R^2	0.685	0.105	

5.4. Further Analysis

5.4.1. The Regulatory Effect of Corporate Governance

When auditors make behavioral decisions, their assessment of the risk level of the audited entity is influenced by the level of corporate governance. The higher the level of corporate governance, the better the quality of internal control. As a result, the management is subject to stricter constraints, reducing their opportunistic behavior, enhancing the stability of the company's development, and reducing the likelihood of significant misstatement risks in the company's financial reports, thereby affecting the decision-making behavior of auditors. Therefore, in order to further analyze the impact of corporate governance level on the relationship between ESG performance and auditor decision-making behavior, this article constructs a model (2):

$$Afee/Ainvest=0+\beta1ESG+\beta2ESG*Gov+\beta3Corg+\beta4CONTROLS+\sum Industry+\sum Year+\varepsilon \qquad (2)$$

The new control variables added in Model 2 include State (1 for state-owned enterprises, otherwise 0), Bm (book to market ratio), and Nkze (DiBo Internal Control Index). Introducing the moderating variable Gov to represent the level of corporate governance, the regression results are shown in Table 5. The dependent variables corresponding to columns (1), (2), and (3) are Afee, Ainvest, and Aop, respectively. The coefficients of the interaction term ESG * Gov are -0.011, -0.0305, and -0.175, all less than 0, and are significant at the 5% or 10% level. This indicates that the level of corporate governance enhances the positive impact of ESG performance on auditor decision-making in listed companies. Under the same level of ESG performance, compared to companies located in poor corporate governance, auditors tend to be more tolerant in their risk response behavior when facing companies with higher levels of corporate governance, reducing audit fees and investment, and also tend to issue unqualified opinion reports.

Table 6. Regulatory effects of corporate governance

	(1)	(2)	(3)
ESG	-0.002	-0.673***	-0.520***
	(-0.47)	(-3.50)	(-5.69)
ESG*Gov	-0.011**	-0.305*	-0.175*
	(-2.28)	(-1.66)	(-1.78)
Cov	0.071**	1.775	0.706
	(2.29)	(1.47)	(1.25)
Roa	-0.535***		0.437
	(-4.91)		(0.26)
Lev	0.081**	-0.188**	2.357***
	(2.31)	(-2.24)	(4.01)
Size	0.410***		-0.475***
	(60.29)		(-3.16)
Listage	-0.043***	-0.109***	0.580***
	(-4.74)	(-3.27)	(2.76)
Eps	-0.019		-1.273***
	(-1.49)		(-4.20)
Tenure	0.003***	0.011	-0.031*
	(3.53)	(0.30)	(-1.75)
Indep	-0.003	5.951	1.356
	(-0.02)	(1.34)	(0.54)
Inst	-0.028	-0.983	0.707
	(-0.90)	(-0.86)	(1.07)
Top1	-0.039	-0.040***	-4.124***
	(-1.01)	(-2.70)	(-3.93)
Tobinq	0.006		0.080
	(1.23)		(0.81)
Big4	0.563***	-4.956***	-0.374
	(27.33)	(-6.44)	(-0.54)
State	-0.025*	-2.298***	-1.250***
	(-1.75)	(-4.12)	(-3.77)
Bm	-0.013**		0.409***
	(-2.26)		(3.73)
Nkze		-0.018***	
		(-7.57)	
Cons	5.260***	125.755***	7.732**
	(35.01)	(34.02)	(2.28)
IND/YEAR	YES	YES	YES
Adj/PseudoR^2	0.685	0.085	0.293
N	7036	7036	6854

Note: *, * *, and * * respectively indicate significant differences at the 10%, 5%, and 1% levels.

5.4.2. Mechanism Analysis

As mentioned above, the disclosure level of ESG information of listed companies will reduce the operating risk and Audit risk of enterprises, so auditors will reduce audit input and increase audit fees when meeting enterprises with good performance of ESG. So does the level of ESG information performance of listed companies reduce operational risk and Audit risk? First, we examine the relationship between Digital transformation and business risk. The specific empirical model is as follows:

$$Lev\ /Roa=\gamma0+\gamma1\ ESG+\gamma1CONTROLS+\sum INDUSTRY+\sum YEAR+\xi \tag{3}$$

This article draws inspiration from Wen Wen's (2020) approach and uses asset liability ratio (Lev) and return on assets (Roa) to measure the operational risk of a company. Roa is a measure of the company's profitability, and Lev is a measure of the company's debt paying ability. If the Roa is larger and the Lev is smaller, it indicates that the company's operational risk is smaller. The dependent variables Lev and Roa correspond to columns (1) and (2) of Table 6, respectively. The test results show that the coefficient of ESG corresponding to the dependent variable Lev is significantly negative, while the coefficient of ESG corresponding to ROA is significantly positive, indicating that the better the ESG performance of listed companies, the stronger their profitability and debt paying ability, and the lower their operational risk.

Secondly, we test the relationship between the ESG performance of listed companies and Audit risk. The specific empirical model is as follows:

$$Audrisk =\delta0+\delta1ESG+\delta2CONTROLS+\sum INDUSTRY+\sum YEAR+\xi \tag{4}$$

Table 7. Mechanism Analysis

	(1)	(2)	(3)
ESG	-0.014***	0.002***	-0.003***
	(-8.23)	(3.05)	(-4.26)
Roa	-0.758***		-0.389***
	(-20.46)		(-27.37)
Size	0.075***	-0.002***	-0.000
	(34.63)	(-3.11)	(-0.27)
Listage	0.012***	0.004***	-0.004***
	(3.81)	(3.74)	(-3.11)
Eps	0.020***	0.084***	0.020***
	(4.50)	(85.83)	(11.77)
Tenure	-0.001***	0.000***	-0.000
	(-3.31)	(2.60)	(-1.02)
Indep	-0.049	-0.006	0.015
	(-1.55)	(-0.65)	(1.31)
Dual	-0.006	-0.001	-0.000
	(-1.49)	(-0.44)	(-0.17)
Inst	-0.022**	-0.003	-0.008**
	(-2.30)	(-0.89)	(-2.11)
Top1	0.015	0.026***	-0.005
	(1.10)	(6.19)	(-0.96)
Tobinq	-0.005***	0.003***	0.005***
	(-3.02)	(4.81)	(7.93)
Big4	-0.038***	-0.011***	-0.003
	(-5.24)	(-4.98)	(-1.17)
Lev		-0.075***	0.001
		(-20.46)	(0.21)
Cons	-1.256***	0.045***	0.113***
	(-23.37)	(2.59)	(5.43)
IND/YEAR	YES	YES	YES
Adj_R^2	0.467	0.638	0.184
N	7036	7036	7036

ISSN: 2688-9323

This paper uses the absolute value of abnormal accruals to measure Audit risk. Its measurement method refers to the research of Ghosh and Tang (2015). The abnormal accruals are calculated by the modified Jones model. The explained variable AUDRISK in model (4) represents the level of Audit risk, and the control variable is the same as the basic regression analysis. The test results are shown in column (3) of Table 6. The regression coefficient of ESG coefficient is significantly negative, indicating that the higher the ESG performance level of listed companies, the lower the Audit risk.

6. Conclusion and Inspiration

6.1. Research Conclusion

Regarding ESG information of listed companies, most existing literature studies the impact of ESG performance on the company itself. Unlike existing literature, this article selects A-share listed companies from 2011 to 2020 as research samples to examine the impact of ESG performance of listed companies on auditor decision-making behavior. Research has found a significant negative correlation between ESG performance of listed companies and auditors' decision-making behavior. Further research has found that the moderating effect of corporate governance enhances the impact between the two.

The research conclusion of this article can provide theoretical guidance for ESG information disclosure and risk management in enterprises, and also provide reference for auditors to take more reasonable and effective decisions towards listed companies.

6.2. Research Inspiration

First, for listed companies, they should attach importance to the information disclosure of ESG, and actively improve their own ESG performance. They should regard improving ESG performance as a "Value investing" rather than a simple "cost investment", and focus on strategic ESG management. At the same time, we should actively invest in protecting the ecological environment and assuming social responsibility. This article analyzes the moderating effect of corporate governance on the impact of ESG performance on auditor risk decision-making behavior, providing feasible ideas and suggestions for listed companies to improve ESG performance capabilities.

Secondly, for audit institutions, it is necessary to enhance their audit capabilities and match the development of ESG. Pay full attention to the enterprise's ESG performance level, reasonably assess Audit risk, measure the relationship between audit pricing and audit cost, and consider the impact of ESG performance on determining the level of importance. Providing reference for auditors to adopt more effective decision-making behaviors is beneficial for saving audit costs and improving resource allocation efficiency.

Thirdly, for the government, firstly, it is necessary to improve the mandatory ESG information disclosure system and guide enterprises to make substantive disclosures of ESG information; The second is to encourage the development of ESG rating agencies and provide professional ESG consulting services for the market.

References

[1] Gao Jieying, Chu Dongxiao, Lian Yonghui, Zheng Jun. 2021. Can ESG performance improve corporate investment efficiency? Securities Market Introduction, 11:24-34+72.

[2] Gao Wanqing. 2014. Research on the relationship between information disclosure quality, Audit risk and audit pricing based on Empirical evidence of A-share companies in Shenzhen Stock Exchange. Economic Jingwei, 4:150-155.

ISSN: 2688-9323

[3] Huang Can, Wang Miaoyuan. 2022. The impact of information disclosure violations on audit fees. Securities Market Journal, 2:56-66.

[4] Hong Jinming, Lin Runyu, Cui Zhikun. 2021. Enterprise Assumption of risk level, audit input and audit opinion. Audit Research, 3:96-105.

[5] Huang Rongbing. 2020. Does Enterprise Greening Behavior Affect Auditor Decisions Audit Research, 3:57-67.

[6] Li Jinglin, Yang Zhen, Chen Jin, Cui Wenqing. 2021. Research on the Mechanism of ESG Promoting Enterprise Performance: From the Perspective of Enterprise Innovation. Science and Technology Management, 09:71-89.

[7] Liu Bin, Ye Jianzhong, Liao Yingyi. 2003. An empirical study on the influencing factors of audit fees of listed companies in China - Empirical evidence from the 2001 annual report of Shenzhen and Shanghai Stock Exchanges. Audit Research, 1:44-47.

[8] Pan Haiying, Zhu Yidan, Xin Fu. 2022. ESG performance and corporate financialization: the moderating effect of both internal and external regulation. Journal of Nanjing Audit University, 2:60-69.

[9] Qiu Muyuan, Yin Hong. 2019. ESG Performance and Financing Costs of Enterprises in the Context of Ecological Civilization Construction. Quantitative Economic, Technical and Economic Research, 3:108-123.

[10] Quan Xiaofeng, Wu Shinong, Yin Hongying. 2015. Corporate Social Responsibility and the Risk of Stock Price Collapse: "Value Tool" or "Self interest Tool"? Economic Research, 11:49-64.

[11] Su Kun, Yang Ruohan. 2021. Does Information Interaction Help Reduce Audit Costs-- Empirical evidence from the network interactive platform. Journal of Nanjing Audit University, 1:8-16.

[12] Sun Fangcheng, Wu Guilin. 2022. Corporate Social Responsibility, Internal Control, and Audit Pricing. Financial and Accounting Communication, 3:1-6.

[13] Tang Yongjun, Li Peng. 2019. Business openness, corporate social responsibility report disclosure quality and audit fees. Journal of Nanjing Tech University (Social Science Edition), 1:65-77+112.

[14] Wang Aiguo, Liu Yang, Chen Jiaxian. 2021. Familiarization Management and Auditor Risk Decision. Audit and Economic Research, 5:47-56.

[15] Wang Baiqiang, Yang Yaning, Sun Changling (2021). Does the core competitiveness of enterprises affect auditor decision-making-- Empirical Research Based on A-share Listed Companies. Audit Research, 2:68-79.

[16] Wang Bo, Yang Maojia. 2002. Research on the impact mechanism of ESG performance on enterprise value - Empirical evidence from A-share listed companies in China. Soft Science, 2:1-10.

[17] Wang Fang, Shen Yanjie. 2018. How Product Market Competition Affects Auditor Risk Response. Audit Research, 6:81-89.

[18] Wang Jianling, Chang Yuyuan. 2011. Compulsory corporate social responsibility report and audit fees: a quasi Natural experiment. Management Review, 7:249-260.

[19] Wen Wen, Feng Xiaoqing, Song Yanheng. 2020. Corporate Debt Default and Auditor Risk Response. Accounting and Economic Research, 4:3-23.

[20] Xiaofang, Lan Fengyun, Shi Wen, Xiong Hao, Shen Huayu. 2021. Will ESG ratings of listed companies affect audit fees-- Quasi Natural experiment based on ESG rating events. Audit Research, 3:41-50.

[21] Yan Ruosen, Qian Jingjing, Qi Hao. 2018. Corporate Governance Level, Media Attention, and Radical Enterprise Taxation. Economic Management, 7:20-38.

[22] Yang Xudong, Peng Chenchen, Yao Ailin. 2018. Management Capability, Internal Control, and Sustainable Development of Enterprises. Audit Research, 3:121, 128.

[23] Yu Lianchao, Dong Jinting, Bi Xi. 2002. Environmental management system certification and audit fees - Empirical evidence from heavily polluting enterprises in China. Audit Research, 2:117-128.

[24] Zhai Huayun, Zheng Jun, Fang Fang. 2014. Social Responsibility Performance, Report Verification, and Audit Pricing. Securities Market Introduction, 6:32-37.

ISSN: 2688-9323

[25] Zhai Shengbao, Xu Haoran, Liu Yaosong, and Tang Wei. 2011. Controlling shareholder equity pledge and auditor risk response. Management World, 10:51-65.

[26] Zhang Junrui, Yu Sijia, Cheng Zijian. 2017. Will the pledge of major shareholder equity affect auditor decision-making-- Evidence based on audit fees and audit opinions. Audit Research, 3:65-73.

[27] Zhang Wangfeng, Zhang Zhaoguo, Yang Qingxiang. 2011. Research on internal control and audit pricing: Empirical evidence based on Chinese listed companies Audit research: 65-72.

[28] Zhou Fangzhao, Pan Wanying, Fu Hui. ESG responsibility performance of listed companies and institutional investors' shareholding preference - Empirical evidence from Chinese A-share listed companies. Scientific Decision, 11:15-41.

[29] Zhou Kaiguo, Ying Qianwei, Zhong Chang. Can media supervision play a role in external governance in 2016-- Evidence of violations by Chinese listed companies. Financial Research, 6:193-206.

[30] Zhu Xiaoping, Ye You. 2003. Comparison and analysis of the concept system of "Audit risk". Audit and Economic Research, 5:11-15.

[31] Velte P. 2017. Does ESG performance have an impact on financial performance? Evidence from Germany Journal of Global Responsibility, 8 (2): 64-82.

[32] Atan R, Razali F, Said J, et al. 2016. Environmental, social and governance (ESG) disclosure and its effects on firm's performance: A comparative study, 10 (2): 355-375.

[33] Hahn R, Kuhnen M.2013 Determinants of sustainability reporting: A review of results, trends, theory, and opportunities in an expanding field of research. Journal of Cleaner Production, 59 (5): 5-21.

[34] Simunic 1980. The Pricing of Audit Services. Journal of Accounting Research, 18 (1): 161-190.

[35] Naeem M, Ullah H, Shahid D. 2022. The Impact of ESG Practices on Firm Performance: Evidence From Emerging Counties.

[36] Santanu M, Bikki J, Talal A. 2017. The Effect of Managerial Stock Ownership on the Relationship between Material Internal Control Weaknesses and Audit Fees. Review of Accounting and Finance, 16 (2): 239-259.

[37] Porter M, Kramer M 2006. Strategy and Society Harvard Business Review, 84 (12): 78-91.

[38] Jensen M, Meckling W. 1976. Theory of the Firm: Managerial Behavior, Agency Costs and Ownership Structure. 3 (4): 305-360.