The Impact of ESG Performance on Audit Fees: Evidence from Chinese Listed Companies

Yuanyi Feng

International College, Jiangxi University of Finance and Economics, Jiaoqiao Street, Nanchang, China
2202301492@stu.jxufe.edu.cn

Abstract. Amid growing global emphasis on ecological sustainability, ESG metrics have emerged as crucial indicators of corporate sustainability performance. This study examines the audit fee implications of environmental, social and governance factors by analyzing longitudinal data from A-share companies listed on China's Shanghai and Shenzhen stock exchanges (2016-2022). Utilizing a double fixed effects regression approach, the empirical results demonstrate that superior ESG performance is associated with lower audit fees. The analysis indicates that enhanced ESG disclosure and implementation significantly reduce external audit pricing. These findings suggest that robust ESG performance may decrease perceived audit risks, thereby leading to cost savings in the auditing process. The study employs rigorous econometric methods to establish this inverse relationship between ESG factors and audit service charges. Specifically, enterprises with superior ESG performance demonstrate lower audit costs, which can be attributed to three key mechanisms: increased information disclosure quality. Based on the empirical findings, this study proposes two policy recommendations aimed at supporting corporate ESG advancement and enhancing audit quality. These suggestions are designed to help firms overcome existing challenges in sustainable development practices while strengthening financial oversight mechanisms: enterprises should further develop and improve ESG-related systems and ESG information disclosure mechanisms. Auditors should improve their use of ESG information in their audits.

Keywords: ESG Performance, Audit Fee, ESG Rating.

1 Introduction

In the contemporary era, as economic globalization accelerates and public awareness of ecological preservation and climate-related challenges intensifies, a firm's ESG performance has emerged as a critical measure of its long-term viability and responsible business conduct. In the capital market, investors are increasingly inclined to choose companies with better ESG performance as good ESG ratings of companies often imply stronger core competencies and sustainability. For audit firms, firms with higher ESG ratings tend to have lower business risks, higher quality disclosures, and lower internal

M. M. Husin (ed.), *Proceedings of the 2025 International Conference on Financial Innovation and Marketing Management (FIMM 2025)*, Advances in Economics, Business and Management Research 353,
https://doi.org/10.2991/978-94-6463-874-5_35

and external information asymmetries, and therefore may have lower audit risks, which in turn may reduce audit fees.

Existing studies on audit pricing determinants primarily examine three key aspects: the internal characteristics of audited entities, external environmental factors affecting audit engagements, and attributes of auditing firms. The seminal work by Simunic initially identified firm scale as the most influential determinant of audit pricing, demonstrating a positive correlation between organizational size and external audit costs [1]. Zhou et al. found that different characteristics of key audit matters disclosed in the audit report increase the auditor's work input and thus increase the audit fee [2]. Drawing on empirical evidence from China's capital markets, Liu et al. revealed that audit pricing exhibits a statistically significant positive association with the scale of accounting firms in their analysis of domestic listed enterprises [3]. Academic investigations into corporate ESG practices have predominantly focused on analyzing the effects of ESG evaluations across three critical areas: corporate financial performance, cost of capital, and firm valuation in financial markets. Yuan and Xiong pointed out that with good ESG performances, companies will perform better in terms of performance level [4]. Maaloul et al. highlight that organizations effectively addressing and transparently reporting ESG issues tend to enhance their corporate image while simultaneously lowering their financing expenses [5]. Drawing on a sample of 150 S&P 500 constituent firms, Bejtush et al. compiled both financial indicators and ESG ratings spanning the 2017-2020 period for their empirical analysis, and the study found that companies with superior ESG ratings have higher market value [6].

In summary, much of the existing literature focuses on the determinants of audit fees and the relationship between corporate social responsibility and corporate governance performance, but there is still a lack of research linking these two areas. Consequently, the research sample comprises firms publicly traded on both the Shanghai and Shenzhen stock markets during the 2016-2022 period and the following empirical analysis was conducted to test the research hypothesis that the better a company's ESG performance is, the lower its audit fees will be, holding other variables constant.

2 Research Design

2.1 Sample Selection and Data Sources

This study employs a sample of A-share listed firms in China's Shanghai and Shenzhen stock exchanges during the 2016-2022 period for empirical investigation, with the sample selection criteria determined by data accessibility and temporal relevance. The data is mainly from CSMAR database and Wind Information Financial Terminal, while the data is processed as follows: the sample of listed firms with unusual trading conditions such as ST, PT, *ST, etc. is excluded; listed companies in the financial and insurance sectors were excluded from the sample; firms with severely missing data from the sample are excluded; and indentation of all continuous variables up and down by 1%. A total of 18,174 valid data were eventually obtained.

2.2 Variable Definition

Explained Variable. The explained variable of this study is corporate audit fee (TcostFee), and the methodology employed in this study draws upon established approaches developed by Qin J. et al, Hong J. M. et al, and Xiao F. et al. This study employs the natural log transformation of annual audit fees as the dependent variable measurement [7-9].

Primary Explanatory Variable. In this study, the primary explanatory variable is ESG rating performance (ESG), and this paper uses the research methodology of Xie et al, Wang et al, Zhang et al, and Xiao F. et al. It adopts the CSI ESG rating data, which has been widely recognised and practically applied by the industry and academia, as a core indicator for measuring the performance of ESG ratings of corporations [9,10-12]. The data is from Wind Information Financial Terminal.

Control Variables. Referring to the research ideas of Xu, Xie et al, Xiao et al, Qin and other scholars, the following key indicators were considered in the selection of control variables for this study[7,9,10,13]: Company size (Size) is quantified by computing the natural log of annual total assets; the leverage ratio (Lev) is computed by dividing a firm's year-end total liabilities by its corresponding total assets; Corporate profitability (ROA), quantified as the ratio of net income to total assets, reflects operational efficiency; Inventory-to-Value(INV), measured as the ratio of inventory to total assets; Operating profit growth rate(Growth) is computed by comparing current-year operating income to the preceding year's figure, then subtracting unity; Board Size(Board) is expressed as the natural logarithm of the total number of board members; Enterprise Value (TobinQ) is measured using the Tobin's Q index; The age of the firm (ListAge), is quantified by computing the logarithmic transformation of (1 + the number of years elapsed since the firm's initial public offering); and Big 4 Audit (Big4), a company audited by a “Big 4” firm is counted as 1 and vice versa. Table 1 provides comprehensive documentation of variable definitions and their respective computational methodologies.

Table 1. Definition of variables

Nature of Variables	Variable Names	Variable Symbols	Variable Definitions
Explained Variable	Corporate audit fees	TcostFee	Annual audit fees for public companies are calculated using the physical accountancy method.
Explanatory Variable	ESG performance	ESG	Classified as AAA-C9 according to the CSI ESG rating, assigned in order of 9-1
Control Variable	Company size	Size	Total year-end balance in natural logarithms

	gearing ratio	Lev	Financial leverage is computed as the proportion of a firm's total debt relative to its aggregate assets at fiscal year-end.
	Corporate profitability	ROA	net income divided by average total assets
	Inventory share	INV	The carrying amount of a company's inventory relative to its total assets at the fiscal year-end serves as the measurement metric.
	Operating profit growth rate	Growth	The year-over-year growth rate of operating revenue, calculated as (current year revenue/prior year revenue) - 1
	Number of Directors	Board	The total number of members of the Board of Directors is processed by natural logarithmic conversion.
	enterprise value	TobinQ	Tobin's Q indicator
	Age of business	ListAge	Takes the natural logarithm of current year minus listed year plus 1.
	Big Four Audit	Big4	1 if the company is audited by a "Big 4" firm, and 0 if it is not.

3 Model Construction

This research develops a dual fixed-effects econometric model to empirically examine the relationship between corporate ESG performance and audit fees, grounded in the theoretical framework of their interaction mechanisms, drawing on the research methodology of Xu, Zhang and other scholars [12,13]:

$$TcostFee_{i,t} = \beta_0 + \beta_1 ESG_{i,t} + \beta_k \sum Con_{i,t} + \lambda_1 + \gamma_t + \varepsilon_{i,t} \quad (1)$$

In the above model: $TcostFee_{i,t}$ denotes the audit fee of enterprise *i* in year *t*; $ESG_{i,t}$ denotes the ESG rating performance of enterprise *i* in year *t*; $\sum Con_{i,t}$ denotes all other control variables that may affect the audit fee; β_0 is a constant term; β_1 is the coefficient of the primary explanatory variables, negative numbers mean that audit costs can be reduced as a result of an ESG assessment, and both of them show a negative correlation, and vice versa, it is an increase in the audit fee; β_k denotes the estimated coefficients of the control variables in the regression model; *i* denotes firms; *t* denotes year; λ_1 denotes individual fixed effects; γ_t denotes year-level fixed effects; and $\varepsilon_{i,t}$ is a random perturbation term.

4 Empirical Results and Analysis

4.1 Descriptive Statistics

Table 2 presents the descriptive statistics of the research variables. Regarding the dependent variable, audit pricing exhibits an average value of 13.943 and a dispersion measure of 0.687. The recorded values range from 12.206 to 21.417, suggesting that while most observations cluster around the average, the dataset exhibits considerable variation in audit costs across sampled enterprises. This distribution pattern reveals both concentration tendencies and significant dispersion characteristics among the measured values. The core explanatory variable ESG has a sample size of 23,330, an average value of 4.180, and a standard deviation of 0.956, indicating that corporate ESG ratings as a whole are at a moderate level with some variation. Among the control variables, the average value of enterprise size is 22.290, with a standard deviation of 1.306, which is consistent with the characteristics of A-share listed companies; the average value of gearing ratio is 0.404, which indicates that the average debt level of the sample enterprises is moderate; the average value of return on total assets is 0.044, which indicates that the enterprise's overall profitability is relatively weak; the average value of inventory ratio is 0.130; and the average value of Big Four audit variables is 0.064, which indicates that only 6.4% of enterprises choose “Big Four” firms for auditing. 0.064, indicating that only 6.4% of the enterprises choose the “Big Four” firms for auditing.

Table 2. Descriptive statistics of variables

	Sample Size	Average Value	Standard Deviation	Minimum Value	Maximum Values
ESG	23,330	4.180	0.956	1.000	8.000
TcostFee	23,298	13.943	0.687	12.206	21.417
Size	23,330	22.290	1.306	19.807	26.430
Lev	23,330	0.404	0.197	0.052	0.924
ROA	23,329	0.044	0.069	-0.375	0.254
INV	23,059	0.130	0.114	0.000	0.661
Growth	23,323	0.164	0.368	-0.653	3.081
Board	23,328	2.103	0.195	1.609	2.708
TobinQ	23,330	1.979	1.268	0.802	10.767
ListAge	23,330	2.042	0.966	0.000	3.401
Big4	23,330	0.064	0.246	0.000	1.000

4.2 Benchmark Regression Results

This paper uses a double fixed effects model to conduct empirical research, by adding control variables to the model step by step and controlling for fixed effects, this study empirically examines the relationship between corporate ESG performance and external audit pricing, column (1) in Table 3 contains the primary explanatory variables ESG rating performance, the regression results demonstrate a statistically significant inverse relationship between ESG ratings and audit fees at the 1% confidence threshold. The findings demonstrate that superior ESG practices are significantly associated with

lower external audit fees. level is significantly negative, indicating that ESG rating performance reduces audit fees; column (2) in Table 3 controls for individual fixed effects compared to column (1) in Table 3, and the regression results show that the coefficient is still significantly negative at the 1% significance level, indicating that ESG rating performance reduces audit fees. And in column (3) of Table 3, with additional controls for year fixed effects, the regression coefficients maintain both their statistical significance and directional consistency across model specifications, demonstrating robust stability in the estimation outcomes and confirming the reliability of the core findings.

Table 3. Benchmark regression results

	(1)	(2)	(3)
	TcostFee	TcostFee	TcostFee
ESG	-0.015***	-0.005**	-0.007***
	(0.003)	(0.002)	(0.002)
Size	0.377***	0.281***	0.249***
	(0.003)	(0.005)	(0.005)
Lev	0.086***	0.058***	0.077***
	(0.019)	(0.020)	(0.019)
ROA	-0.954***	-0.289***	-0.300***
	(0.049)	(0.031)	(0.030)
INV	-0.245***	-0.037	-0.031
	(0.026)	(0.032)	(0.032)
Growth	-0.019**	-0.012***	0.000
	(0.008)	(0.004)	(0.004)
Board	-0.066***	0.028*	0.046***
	(0.015)	(0.016)	(0.015)
TobinQ	0.020***	-0.009***	-0.000
	(0.002)	(0.002)	(0.002)
ListAge	-0.027***	0.129***	0.038***
	(0.004)	(0.005)	(0.006)
Big4	0.605***	0.339***	0.340***
	(0.012)	(0.016)	(0.016)
Individual Fixed Effect	uncontrolled	controlled	controlled
Year-level Fixed Effect	uncontrolled	uncontrolled	controlled
constant	5.748***	7.368***	8.214***
	(0.067)	(0.115)	(0.119)
Observed Value	23019	22585	22585

Note: Standard errors in parentheses, * $p < 0.10$, ** $p < 0.05$, *** $p < 0.01$.

4.3 Robustness Testing

Replacement of Explanatory Variable Measures. In order to avoid false significant results brought about by the differential selection of statistical indicators, this paper will

replace the statistical indicators of the explanatory variables to re-measure the audit fee. This research builds upon Zhang's methodology by employing the logarithmic transformation of R&D expenditure relative to total resources as a key metric [12]. As presented in Table 4, Model (1) displays the initial regression outcomes. Subsequent analyses incorporating alternative measurement approaches (Model 2) reveal persistently significant negative coefficients for the principal explanatory factors. These consistent findings across different model specifications provide compelling evidence for the fundamental regression model's robustness.

Core Explanatory Variables Lagged One Period. To address potential endogeneity concerns arising from reverse causality, this study adopts the methodological approach proposed by Xu et al., implementing a one-period lag structure for key independent variables in robustness checks [13]. The empirical results demonstrate that while maintaining their statistical significance and negative sign, the coefficients of primary explanatory factors exhibit remarkable stability across temporal specifications (see Table 4). Importantly, neither the directional patterns nor the effect sizes of control variables undergo substantial alterations, thereby substantiating the baseline findings' reliability while effectively mitigating simultaneity bias.

Table 4. Robustness analysis results

	(1)	(2)	(3)
	TcostFee	TcostFee1	TcostFee
ESG	-0.007***	-0.008***	
	(0.002)	(0.002)	
ESG1			-0.007***
			(0.002)
Size	0.249***	-0.751***	0.232***
	(0.005)	(0.006)	(0.006)
Lev	0.077***	0.073***	0.065***
	(0.019)	(0.020)	(0.022)
ROA	-0.300***	-0.317***	-0.239***
	(0.030)	(0.031)	(0.031)
INV	-0.031	-0.012	-0.015
	(0.032)	(0.032)	(0.035)
Growth	0.000	-0.003	0.006
	(0.004)	(0.004)	(0.005)
Board	0.046***	0.049***	0.035**
	(0.015)	(0.015)	(0.016)
TobinQ	-0.000	0.004**	0.002
	(0.002)	(0.002)	(0.002)
ListAge	0.038***	0.038***	0.044***
	(0.006)	(0.006)	(0.010)
Big4	0.340***	0.334***	0.342***
	(0.016)	(0.016)	(0.017)

Individual Fixed Effect	controlled	controlled	controlled
Year Fixed Effect	controlled	controlled	controlled
constant	8.214***	8.206***	8.624***
	(0.119)	(0.120)	(0.136)
Observed Value	22585	22585	17732

Note: Standard errors in parentheses, * $p < 0.10$, ** $p < 0.05$, *** $p < 0.01$.

5 Conclusion

The results of this paper show that ESG performance is significantly and negatively related to audit fees and that good ESG performance of firms can reduce audit fees. Even in robustness tests with implicit explanatory variables and lagged explanatory variables, etc., the results remain significant. Drawing upon the empirical findings, this study proposes several policy recommendations. From an institutional perspective, business entities ought to systematically integrate ESG considerations into their strategic management processes and corporate governance structures. This integration facilitates compliance with international sustainability standards and ecological development models. Concurrently, enhancing the transparency and reliability of ESG reporting mechanisms should be prioritized through standardized disclosure protocols. From the auditor's point of view, more attention should be paid to ESG information when conducting audits to improve the utilization of corporate ESG-related information.

Although this paper has produced some research results, there are still shortcomings. As the ESG assessment in China is still at an early stage, ESG data from some companies may not have been included in the assessment. At the same time, audit fees are affected by a combination of complex factors, and existing studies may have limitations in the selection of control variables. Subsequent related studies can select more comprehensive control variables to enhance the reliability of the findings.

References

1. Simunic, D. A.: The pricing of audit services: Theory and evidence. Journal of Accounting Research **18** (1):161-190 (1980).
2. Zhou, Z.S. & He, C. & Shao, W.: Disclosure of key audit matters and audit fees. Audit Research (06), 68-76 (2020).
3. Liu, X.X. & Li, M.H. & LV, W.: Accounting Firm Size and Audit Pricing: An Empirical Study Based on Local Chinese Firms. Financial Theory and Practice (05), 69-75 (2012).
4. Yuan, Y. H. & Xiong, X. H.: A Study on the Relationship between ESG Performance and Corporate Performance of Listed Companies--Based on the Moderating Role of Media Attention. Jiangxi Social Sciences (10), 68-77 (2021).
5. Maaloul A, Zéghal D, Ben Amar W, Mansour S. The Effect of Environmental, Social, and Governance (ESG) Performance and Disclosure on Cost of Debt: The Mediating Effect of Corporate Reputation. Corporate Reputation Review **26**(1), 1-18 (2023).

6. Ademi Bejtush & Klungseth Nora Johanne: Does it pay to deliver superior ESG performance? Evidence from US S&P 500 companies. Journal of Global Responsibility **13**(4), 421-449 (2022).
7. Qin, J. & Yang, Q. & Sun, Q. et al.: Can vertical integration of supply chains reduce audit costs? Economic Latitude and Longitude (02), 148-160 (2025).
8. Hong, J. M, Lv, X. Z & Lu, S. Z.: Specialized Government Arrears Settlement Actions and Private Enterprise Audit Fees. Audit Research (02), 43-56 (2025).
9. Xiao, F. & Lan, F.Y. & Shi, W. et al.: Do ESG ratings of listed companies affect audit fees? -A quasi-natural experiment based on ESG rating events. Audit Research (03), 41-50 (2021).
10. Xie, H. J. & Lv, X.: Responsible International Investment: ESG and China's OFDI. Economic Research (03), 83-99 (2022).
11. Wang, J. T., Tian, B. A. & Shangguan, X. L.: Does ESG Rating Disagreement Affect Auditor Risk Response Behavior? --Based on the Perspective of Disclosure of Key Audit Matters. Financial Development Studies (09), 13-21(2023).
12. Zhang, L.X. & Zhou, Y.Y.: A Study of the Impact of Corporate ESG Performance on Audit Fees. Business Accounting (05), 80-84 (2025).
13. Xu, S. B., Zhao, Y. R. & Zhang, H.: A Study of the Impact of ESG Rating Discrepancies on Audit Fees. Scientific Decision-making (10), 55-75 (2024).