

Audit quality, ESG disclosure and firm performance: Evidence from nonfinancial listed companies in Vietnam

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Abstract

This study examines how audit quality and ESG disclosure relate to the performance of nonfinancial companies listed on the Ho Chi Minh City and Hanoi stock exchanges between 2020 and 2024. Audit quality is captured by Big 4 auditor engagement, auditor change and the type of audit opinion, ESG disclosure is measured with S&P Global ESG scores, and performance is measured by return on assets, return on equity and Tobin's Q. Using pooled OLS, fixed effects and random effects panel regressions, with firm size, age, leverage and the equity to assets ratio as controls, the study finds that results differ across performance measures. Where the Hausman test favours fixed effects, an unqualified audit opinion is positively and significantly associated with both return on equity and Tobin's Q, while leverage is negatively related to return on equity and positively related to Tobin's Q. Neither audit quality nor ESG disclosure is significantly related to return on assets. The positive associations of Big 4 auditors and ESG disclosure with firm value appear only in pooled or random effects estimates and do not persist in the fixed effects models. Auditor change shows no consistent relationship with performance. The findings suggest that audit

related signals, rather than ESG scores or auditor size, are most closely linked to shareholder returns and market valuation in Vietnam, although the results are associations and may be affected by endogeneity and measurement limits. The study offers implications for audit oversight and ESG reporting standards in emerging markets.

Keywords: Audit Quality, ESG Disclosure, Firm Performance, Tobin's Q, Audit Opinion, Big 4 Auditors, Auditor Rotation, Panel Data, Signaling Theory, Vietnam

JEL Classification: M42, G32, G34

1. Introduction

In the context of deep global economic integration and increasing uncertainty in the post-COVID-19 period, the role of audit and corporate transparency has become increasingly important, especially when businesses face challenges related to liquidity, risk management and sustainable performance. Audit quality, reflected through factors such as the involvement of Big 4 auditing firms, auditor rotation, and audit opinions, together with the level of ESG disclosure, can significantly influence the operational and financial performance of firms. However, in Vietnam, empirical studies examining the combined impact of audit quality and ESG disclosure on corporate performance remain relatively limited, particularly in the context of economic recovery and market adjustments after the pandemic. This study therefore aims to evaluate the impact of audit quality and ESG disclosure on the performance of non-financial enterprises listed on the Ho Chi Minh City Stock Exchange (HOSE) and the Hanoi Stock Exchange (HNX) during the period 2020–2024. The research investigates how audit quality indicators, including Big 4 auditors, auditor rotation, and audit opinions, together with the level of ESG disclosure influence corporate financial performance measured through ROA, ROE and Tobin's Q. In addition, the study provides policy implications to improve audit quality, enhance ESG transparency and strengthen regulatory supervision, thereby promoting financial transparency, restoring investor confidence and supporting the sustainable development of Vietnam's capital market in the post-COVID-19 economic environment.

2. Literature review

A substantial body of international research has examined the relationship between audit quality, ESG disclosure, and corporate performance. This literature generally suggests that both financial assurance mechanisms and non-financial transparency play an important role in reducing information asymmetry, strengthening investor confidence, and ultimately influencing firm performance and market valuation. Early empirical studies primarily focused on the role of audit quality as a governance mechanism that enhances the credibility of financial reporting. Chi et al. (2009), using data from Taiwan, analyzed the impact of mandatory auditor rotation and audit firm reputation on market perception. Their findings indicate that mandatory auditor rotation can improve perceived audit quality and strengthen the credibility of financial statements, thereby

increasing investor confidence in corporate disclosures. Similarly, May Elewa (2019) found that companies audited by Big 4 auditing firms generally demonstrate stronger financial performance, reflected in higher ROA and ROE indicators. The presence of reputable auditors enhances the reliability of financial statements and reduces information asymmetry, which in turn facilitates access to external financing and improves corporate risk management. However, the literature presents mixed views regarding the effectiveness of auditor rotation. Farouk and Hassan (2014) argue that auditor rotation may improve audit quality by introducing fresh professional judgment and reducing the risk of excessive familiarity between auditors and their clients. From this perspective, rotation strengthens auditor independence and contributes to higher quality assurance over financial reporting. Nevertheless, the authors also note that frequent changes in auditors may disrupt the audit process, particularly when new auditors require time to accumulate firm-specific knowledge. As a result, the net impact of auditor rotation on corporate performance may depend on institutional conditions, audit market structure, and the operational characteristics of the audited firm.

Beyond traditional audit quality indicators, recent studies increasingly emphasize the role of ESG disclosure as an important dimension of corporate transparency and governance. Friede et al. (2015) conducted a large-scale meta-analysis and found that the majority of empirical studies report a positive relationship between ESG performance and corporate financial performance. ESG disclosure is often interpreted as a signal of responsible management practices, long-term strategic orientation, and effective risk management. Likewise, Alareeni and Hamdan (2020) demonstrate that companies with higher levels of ESG disclosure tend to achieve stronger financial outcomes and higher market valuation. These findings highlight that non-financial transparency can complement financial reporting by providing stakeholders with a broader understanding of corporate sustainability and governance practices. In the Vietnamese context, empirical research on audit quality and corporate performance has produced broadly consistent results with the international literature. Nguyen Thi Hoa Hong et al. (2020) found that listed firms audited by Big 4 auditing companies often exhibit superior financial performance and higher market valuation compared with firms audited by smaller audit firms. The authors argue that the reputation and professional standards associated with Big 4 auditors contribute to improving the credibility of financial statements and strengthening investor trust. As a result, companies cooperating with reputable auditors may benefit from improved access to capital markets and enhanced corporate governance.

Similarly, Nguyen Thi Ngoc Lan and Nguyen Hong Anh (2020), examining industrial enterprises in the Red River Delta region, emphasize that audit firm size, auditor independence, and professional experience positively influence operational efficiency. Their findings underline the important role of auditing in establishing a transparent financial reporting environment and supporting the development of sustainable corporate governance structures. These results suggest that audit quality is not merely a compliance mechanism but also a strategic factor that can

contribute to improved organizational performance. Despite these contributions, several limitations remain in the existing literature. First, most studies in Vietnam have focused primarily on financial auditing factors such as Big 4 auditors, auditor independence, or audit rotation, while the role of ESG disclosure has received comparatively limited attention. Second, the interaction between audit quality and ESG disclosure in influencing firm performance has rarely been examined, even though both mechanisms are closely related to corporate transparency and accountability.

Furthermore, previous research often analyzes these factors separately and therefore may not fully capture the complementary effects between financial assurance mechanisms and sustainability reporting. In emerging markets such as Vietnam, where institutional frameworks for ESG disclosure are still evolving, the credibility of sustainability information may depend significantly on the overall quality of corporate governance and external auditing. To address these research gaps, this study develops an integrated framework to examine the combined effects of audit quality and ESG disclosure on the performance of non-financial listed companies in Vietnam during the period 2020 - 2024. Audit quality is represented by indicators including Big 4 auditors, auditor rotation, and audit opinions, while ESG disclosure reflects the level of transparency in environmental, social, and governance practices. By analyzing their impacts on financial performance indicators such as ROA, ROE, and Tobin's Q, this study aims to provide more comprehensive empirical evidence on how financial assurance and sustainability transparency jointly shape corporate performance in Vietnam's evolving capital market.

2.1 Theoretical Basis of the Research Problem

2.1.1 Audit quality

According to the International Federation of Accountants (IFAC) and the Law on Independent Audit of Vietnam (2011), auditing is the process by which independent auditors examine and provide opinions on the truthfulness and fairness of financial statements in order to enhance the transparency and reliability of financial information. The Vietnamese Standard on Auditing (VSA) No 220 further emphasizes that audit quality depends on the objectivity and credibility of audit reports, the professional competence and independence of auditors, as well as the extent to which auditing contributes to improving corporate financial management and governance.

From a theoretical perspective, DeAngelo (1981) defined audit quality as the probability that an auditor will both detect and report material misstatements in financial statements. Later studies expanded this definition by emphasizing additional dimensions of audit quality. For example, Anto and Yusran (2023) highlighted the importance of auditor independence and professional expertise, while GAO (1986) argued that audit quality may vary across countries due to differences in institutional, economic and regulatory environments. In empirical research, audit quality is often proxied by observable indicators such as audit firm size, audit opinions and auditor rotation. Salehi and Azary (2008) suggested that audit firm size is closely associated with audit quality, with Big

4 auditing firms being widely recognized for their strict audit procedures, strong professional standards and experienced audit teams. In Vietnam, although the auditing system has undergone significant development alongside the expansion of the capital market, challenges remain in ensuring consistent audit quality and strengthening professional standards. Large international auditing firms, particularly the Big 4, continue to play an important role in maintaining high auditing standards, improving the credibility of financial reporting and reinforcing investor confidence in the financial markets.

2.1.2 ESG disclosure

In recent years, ESG (Environmental, Social, and Governance) disclosure has become an important component of corporate transparency and sustainable development. ESG disclosure refers to the extent to which companies publicly report information related to environmental protection, social responsibility, and corporate governance practices. According to the OECD (2015), ESG disclosure plays a key role in improving corporate transparency and enabling stakeholders to evaluate a firm's long-term sustainability and risk management practices. The environmental dimension (E) focuses on issues such as resource utilization, energy consumption, greenhouse gas emissions, and environmental protection initiatives. The social dimension (S) reflects corporate responsibility toward employees, customers, and the broader community, including labor practices, occupational safety, and community engagement. The governance dimension (G) relates to corporate governance structures, including board composition, shareholder rights, transparency in decision-making, and internal control mechanisms. From a theoretical perspective, ESG disclosure is often interpreted through stakeholder theory and signaling theory. Companies that voluntarily disclose ESG information may signal strong governance practices, responsible management, and long-term strategic orientation, which can enhance corporate reputation and investor confidence. As global investors increasingly incorporate sustainability considerations into their investment decisions, ESG transparency has become a crucial factor influencing firm value and market perception. In emerging markets such as Vietnam, ESG disclosure practices are still evolving and remain relatively inconsistent across firms. However, the growing emphasis on sustainable development and responsible investment has encouraged many listed companies to improve their ESG reporting practices. As a result, ESG disclosure is increasingly viewed as an important factor that can complement financial transparency and contribute to improving corporate performance and long-term competitiveness.

2.1.3 Operational efficiency of non-financial enterprises

The operational performance of a firm reflects how effectively it utilizes its resources to achieve business objectives. In empirical research, corporate performance is commonly measured through financial indicators such as ROA, ROE, and Tobin's Q. These indicators provide complementary perspectives on firm performance, capturing both accounting-based profitability and market-based valuation. Research by Nguyen Thi Ngoc Lan et al. (2019) examining 1,343 listed enterprises in

Vietnam indicates that firm size has a positive impact on ROA but may have a negative relationship with ROE. Financial leverage was found to negatively affect ROE and ROS, while in some cases it may support ROA by allowing firms to expand their investment capacity. The study also highlights that liquidity plays an important role in improving operational efficiency, although its effect may vary depending on the specific performance indicator being considered. Among the commonly used performance measures, Tobin's Q reflects the ratio between a firm's market value and its book value, providing insight into how investors evaluate the firm's growth potential and intangible assets. When Tobin's Q is greater than 1, the market may perceive the firm as having strong growth prospects or valuable intangible assets, whereas a value below 1 may suggest that the firm is undervalued relative to its book value, potentially creating investment opportunities. In practice, corporate performance is influenced not only by internal managerial capabilities but also by external economic conditions and market dynamics. Therefore, evaluating firm performance requires considering both financial indicators (such as ROA, ROE, and Tobin's Q) and broader organizational factors, including strategic management decisions, innovation capability, and competitive positioning in the market.

2.1.4 Fundamental theory

This study is grounded in several theoretical frameworks widely used in corporate governance, auditing and sustainability research, including stakeholder theory, legitimacy theory, institutional theory, resource-based theory, information asymmetry theory and signaling theory. These theories provide a comprehensive foundation for analyzing how audit quality and ESG disclosure influence the operational performance of enterprises.

- Stakeholder theory suggests that enterprises must consider the interests of various stakeholders, including shareholders, employees, customers, and the broader community. In this context, transparent financial reporting and ESG disclosure help strengthen relationships with stakeholders and improve trust. High audit quality contributes to ensuring that financial information is reliable and transparent, thereby supporting better corporate performance.
- Legitimacy theory argues that organizations seek to operate within the norms and expectations of society in order to maintain legitimacy and long-term sustainability. The disclosure of ESG information and the use of credible auditing practices help firms demonstrate responsible behavior and compliance with social expectations, which may enhance corporate reputation and market confidence.
- Institutional theory emphasizes that corporate practices are shaped by institutional pressures, including regulatory frameworks, professional standards and market expectations. In the context of capital markets, firms are increasingly encouraged to adopt high-quality auditing and improve ESG disclosure practices in order to comply with evolving institutional requirements and international standards.

- Resource-based theory highlights that intangible resources such as reputation, transparency and governance quality can provide firms with competitive advantages. Audit quality and ESG disclosure can therefore be viewed as strategic resources that enhance corporate credibility, strengthen stakeholder relationships and contribute to sustainable firm performance.
- Information asymmetry theory and signaling theory explain how transparency mechanisms influence market perception. High-quality auditing and credible ESG disclosure reduce information asymmetry between managers and investors. By signaling strong governance and responsible management practices, firms can improve investor confidence, facilitate capital access and enhance corporate value.

In summary, these theoretical perspectives suggest that audit quality and ESG disclosure play an important role not only in enhancing transparency but also in strengthening corporate governance and improving operational performance, particularly in increasingly complex and evolving capital market environments.

3. Research methodology

3.1 Sample Selection

This study focuses on non-financial enterprises listed on HOSE and HNX with sufficient financial and ESG disclosure data during the period 2020–2024. Companies operating in the financial sector, such as banks, insurance companies, and investment funds, are excluded from the sample due to the specific characteristics of their business models, regulatory frameworks, and financial reporting systems. The sample selection follows a purposive sampling approach, concentrating on firms with audited financial statements and available ESG disclosure information. The analysis considers key audit quality indicators, including whether firms are audited by Big 4 or non-Big 4 auditing firms, the frequency of auditor rotation, and the type of audit opinion issued. This approach allows the study to examine how audit quality and ESG disclosure influence corporate operational performance in the post-COVID-19 economic context.

3.2 Research Models and Hypotheses

Based on the synthesized research literature, audit quality, reflected through indicators such as the presence of Big 4 auditing firms, auditor rotation, and audit opinions, plays an important role in improving the operational performance of non-financial enterprises. Firms audited by Big 4 auditing companies are often associated with higher credibility of financial statements due to stricter audit procedures, stronger professional standards, and greater auditor independence. This contributes to strengthening investor confidence and improving firms' ability to access capital markets, thereby supporting better corporate performance. In addition, previous studies have suggested that appropriate auditor rotation policies may influence audit quality and corporate performance. While auditor rotation can enhance auditor independence and reduce the risk of overly close auditor–client relationships, maintaining a certain level of continuity in the audit

process may also help auditors accumulate deeper knowledge about the firm's operations and financial structure. Such accumulated knowledge can contribute to improving the effectiveness of the audit process and the reliability of financial information. Beyond traditional audit quality indicators, recent studies also emphasize the growing importance of ESG disclosure in shaping corporate transparency and long-term sustainability. Firms with higher levels of ESG disclosure often demonstrate stronger governance practices, improved stakeholder relationships, and greater transparency, which may positively influence both accounting performance and market valuation. In the context of an increasingly complex economic environment following the COVID-19 pandemic, the combination of high audit quality and transparent ESG disclosure can play a critical role in maintaining investor confidence and reducing information risk. From the above analysis, research hypotheses can be proposed as follows:

- *Hypothesis H1: High audit quality has a positive impact on the performance of enterprises.*
- *Hypothesis H2: High level of ESG disclosure has a positive impact on the performance of enterprises.*
- *Hypothesis H3: The impact of ESG disclosure on operational performance is stronger when audit quality is high ($AQ \times ESG > 0$).*

The development of these hypotheses is grounded not only in empirical findings from previous studies but also in theoretical perspectives such as signaling theory and information asymmetry theory, which explain how audit quality and transparency mechanisms influence corporate credibility, investor confidence, and ultimately firm performance.

3.2.1 Research Model

The research model consists of 3 linear regression models, of which each separate model uses dependent variables, namely ROA, ROE, and Tobin's Q. Each model will focus on the independent variables, which is the audit quality and the ESG disclosure. The control variables are the size of the business, the age, the financial leverage, and the equity-to-assets ratio.

$$(1) ROA_{i,t} = \beta_0 + \beta_1 BIG4 + \beta_2 AR + \beta_3 AO + \beta_4 ESG + \beta_5 SIZE + \beta_6 AGE + \beta_7 LEV + \beta_8 EAR + \varepsilon_{i,t}$$

$$(2) ROE_{i,t} = \beta_0 + \beta_1 BIG4 + \beta_2 AR + \beta_3 AO + \beta_4 ESG + \beta_5 SIZE + \beta_6 AGE + \beta_7 LEV + \beta_8 EAR + \varepsilon_{i,t}$$

$$(3) TQ_{i,t} = \beta_0 + \beta_1 BIG4 + \beta_2 AR + \beta_3 AO + \beta_4 ESG + \beta_5 SIZE + \beta_6 AGE + \beta_7 LEV + \beta_8 EAR + \varepsilon_{i,t}$$

In which:

- i, t : Enterprise i in year t .
- β_0 : Constant.
- $\beta_1, \beta_2, \beta_3, \beta_4$: Regression coefficient corresponding to the major independent variable.
- $\beta_5, \beta_6, \beta_7, \beta_8$: Regression coefficients of control variables (SIZE, AGE, LEV, and EAR).

- ε_{it} : Random error.

These models will be applied to the post-COVID-19 period, from 2020 to 2024, to test the impact of audit quality and ESG disclosure on business performance in the context of Vietnam's evolving economic conditions. The explanation of the variables in the model is summarized in Table 1.

Table 1. Explanation of variables and measurements

Variable	Explanation	Source
ROA	Profit after tax / Total assets	Hong et al. (2020, p.92)
ROE	Profit after tax / Equity	Hong et al. (2020, p.92)
TQ	Total Market Value of Capital / Total Book Value of Capital	Sayyar et al. (2023, p.6)
BIG4	BIG4 is equal to 1 if the business is audited by BIG4 companies (PwC, E&Y, Deloitte, KPMG) and 0 if vice versa	Hong et al. (2020, p.92)
AR	AR is equal to 1 if there is an auditor change and is equal to 0 if vice versa	Hong et al. (2020, p.92)
AO	AO is equal to 1 if the audit opinion is unqualified and is equal to 0 if vice versa	Luong Thi Hong Ngan et al. (2024, p.131)
ESG	Average score of all dimensions (E, S, G)	S&P Global ESG Scores Methodology (2025)
SIZE	Total assets of the audited enterprise	Hong et al. (202, p.92)
AGE	Total number of years of operation of the enterprise	Coad et al. (2013, p.4)
LEV	Total Debt / Total Equity	Hong et al. (2020, p.92)
EAR	Total Equity / Total Assets	Vo Minh Long (2020, p.91)

Source: Self-synthesized author group

4. Results and Discussion

The results show a low correlation coefficient between independent variables, which minimizes the risk of severe multicollinearity and ensures the reliability of regression estimates. This is particularly important in financial economics research, where variables often show some degree of interdependence due to the inherent relationships in corporate financial management. Among the measures of business performance, ROE and Tobin's Q show the highest correlation (0.1210), reflecting their shared role in evaluating firm profitability and market performance.

4.1 Correlation Analysis between Variables

The correlation between BIG4 and corporate performance indicators (ROA, ROE, and Tobin's Q) is positive but relatively low. Specifically, BIG4 has a weak negative correlation with ROA (-0.0154) but shows positive correlations with ROE (0.0827) and Tobin's Q (0.1284). These results suggest that firms audited by Big 4 auditors may benefit from improved credibility and investor confidence, although the direct relationship between Big 4 auditing and firm performance remains relatively modest in a simple correlation setting.

Table 2. Correlation matrix between variables in the regression model for the period 2020 – 2024

	ROA	ROE	TQ	BIG4	AR	AO	ESG
ROA	1.0000						
ROE	0.0089	1.0000					
TQ	-0.0081	0.1210	1.0000				
BIG4	-0.0154	0.0827	0.1284	1.0000			
AR	-0.0585	-0.0065	0.0307	-0.0481	1.0000		
AO	0.0071	0.1608	0.0343	0.0544	0.0513	1.0000	
ESG	0.0232	0.0740	0.1022	0.3108	-0.0564	0.0018	1.0000
SIZE	-0.0048	0.0093	0.0739	0.2471	0.0077	0.0265	0.1433
AGE	-0.0263	0.0208	0.0833	-0.0225	0.0519	0.0786	-0.0886
LEV	-0.0037	-0.1490	0.4355	-0.0220	0.0763	-0.1153	0.0012

EAR	-0.0020	0.0428	-0.0115	-0.0235	-0.0231	0.0194	0.0261
	SIZE		AGE		LEV		EAR
SIZE	1.0000						
AGE	0.0393		1.0000				
LEV	0.0140		-0.0287		1.0000		
EAR	-0.0834		-0.0121		-0.1922		1.0000

Source: The authors calculated using Stata.

Regarding firm size (SIZE), the correlation with ROA (-0.0048) and ROE (0.0093) is very weak, indicating that firm size alone does not strongly determine accounting-based performance. However, SIZE shows a stronger positive correlation with Tobin's Q (0.0739) and especially with BIG4 (0.2471), suggesting that larger firms are more likely to hire Big 4 auditors due to their greater demand for high-quality audit services and stronger pressure from investors and stakeholders for financial transparency.

Financial leverage (LEV) exhibits a negative correlation with ROE (-0.1490), which is consistent with financial theory suggesting that higher debt levels may increase financial risk and interest obligations, thereby reducing shareholder profitability. In contrast, LEV has a positive correlation with Tobin's Q (0.4355), implying that firms with higher leverage may also be associated with higher market valuation expectations, possibly reflecting growth opportunities or capital structure strategies.

The correlation between firm age (AGE) and performance indicators is relatively weak. AGE shows a small negative relationship with ROA (-0.0263) but a positive correlation with ROE (0.0208) and Tobin's Q (0.0833). These results suggest that firm age alone does not strongly determine operational performance; instead, factors such as management capability, innovation, and strategic flexibility may play a more decisive role in shaping firm outcomes.

The auditor rotation variable (AR) exhibits minimal correlation with performance indicators, including ROA (-0.0585), ROE (-0.0065), and Tobin's Q (0.0307). This finding indicates that auditor rotation does not appear to have a strong direct relationship with firm performance in the correlation analysis. While auditor rotation may strengthen auditor independence, its immediate influence on firm profitability or market value appears to be limited.

With respect to ESG disclosure, the ESG variable shows positive correlations with ROA (0.0232), ROE (0.0740), and Tobin's Q (0.1022), suggesting that firms with higher levels of ESG disclosure

may experience slightly better financial and market performance. Notably, ESG also shows a relatively stronger correlation with BIG4 (0.3108), implying that firms audited by Big 4 auditors tend to demonstrate higher levels of ESG transparency, possibly due to stronger governance practices and greater pressure from stakeholders.

It is important to note that all correlations between independent variables remain well below the commonly accepted threshold of 0.8, with the highest correlation observed between LEV and Tobin's Q (0.4355). This confirms that none of the variables exhibit strong multicollinearity, which is consistent with the previous VIF test results indicating no serious multicollinearity problems. Therefore, the regression model remains statistically valid for analyzing the effects of audit quality and ESG disclosure on firm performance without significant bias caused by high correlations among explanatory variables.

Overall, the correlation matrix analysis reinforces the robustness of the regression model and provides preliminary insights into the relationships among audit quality indicators, ESG disclosure, and firm performance. Although most correlations are relatively small, they provide initial empirical evidence that audit quality and ESG transparency may contribute to improving corporate performance and market valuation in listed non-financial firms.

4.2 Regression Analysis

The following tables describe the regression results of the dependent variables in the regression model.

Table 3. ROA Dependent Variable Regression Results

Variable (ROA)	Pooled OLS	FEM	REM
BIG4	-88.63258 (-0.85)	-20.19288 (-0.05)	-88.61762 (-0.85)
AR	-62.21158 (-1.91)*	-127.9468 (-0.65)	-62.21529 (-1.91)*
AO	91.14964 (0.44)	7.829623 (0.03)	91.0367 (0.44)
ESG	226.1354	52.0427	226.1114

Variable (ROA)	Pooled OLS	FEM	REM
	(0.84)	(0.00)	(0.84)
SIZE	-4.03e-14 (-0.04)	5.49e-13 (0.14)	-4.03e-14 (-0.04)
AGE	-6.024646 (-0.75)	-12.59132 (-0.39)	-6.025872 (-0.75)
LEV	-0.0021507 (-0.00)	-1.188598 (-0.12)	-0.0022869 (-0.00)
EAR	-21.55816 (-0.17)	48.2377 (0.28)	-21.48531 (-0.17)
Constant	299.2279 (0.83)	927.3567 (0.03)	299.3516 (0.83)
Adjusted R ²	-0.0021	0.0011	0.0005
P-value	0.6816	0.6025	0.3936
Hausman			0.9943

*, **, and *** are statistically significant at 10%, 5%, and 1% respectively. Source: The authors calculated using Stata.

Table 4. ROE Dependent Variable Regression Results

Variable (ROE)	Pooled OLS	FEM	REM
BIG4	1.98768 (1.84)*	0.8617301 (0.23)	1.906671 (1.47)
AR	0.0212501 (0.06)	6.031271 (3.21)***	0.1378416 (0.34)
AO	10.21695 (4.77)***	8.6142 (3.60)***	9.955333 (4.63)***
ESG	5.273069 (1.89)*	-51.67046 (-0.10)	5.33308 (1.56)
SIZE	-4.89e-15 (-0.49)	8.87e-15 (0.24)	-4.45e-15 (-0.37)
AGE	0.0370787 (0.44)	-0.9784249 (-3.19)***	0.0038489 (0.04)
LEV	-0.2754594 (-4.24)***	-0.5908772 (-6.02)***	-0.3456451 (-4.90)***
EAR	0.6141294 (0.47)	-2.300167 (-1.40)	-0.3166244 (-0.23)
Constant	-5.192224 (-1.39)	24.10341 (0.07)	-4.318935 (-1.00)

Variable (ROE)	Pooled OLS	FEM	REM
Adjusted R ²	0.0449	0.0760	0.0558
P-value	0.0000	0.0000	0.0000
Hausman		0.0000	

*, **, and *** are statistically significant at 10%, 5%, and 1% respectively. Source: The authors calculated using Stata.

Table 5. Tobin's Q-Dependent Variable Regression Results

Variable (TQ)	Pooled OLS	FEM	REM
BIG4	0.2794233 (3.84)***	-0.1556937 (-0.75)	0.1985948 (1.87)*
AR	-0.0023223 (-0.10)	0.0315342 (0.30)	0.0044898 (0.13)
AO	0.3872047 (2.69)***	0.3859351 (2.92)***	0.3762898 (2.96)***
ESG	0.4671962 (2.49)**	-0.8885684 (-0.03)	0.6099435 (2.00)**
SIZE	7.74e-16 (1.14)	-5.01e-15 (-2.45)**	-1.84e-16 (-0.18)
AGE	0.0210206 (3.74)***	0.064035 (3.77)***	0.0303905 (3.70)***

Variable (TQ)	Pooled OLS	FEM	REM
LEV	0.0746833 (17.11)***	0.0820559 (15.13)***	0.0777902 (16.70)***
EAR	0.2614357 (3.00)***	-0.0295581 (-0.33)	0.0709515 (0.85)
Constant	-0.2655065 (-1.06)	-0.0744599 (-0.00)	-0.4432957 (-1.27)
Adjusted R ²	0.2299	0.2188	0.2060
P-value	0.0000	0.0000	0.0000
Hausman		0.0023	

*, **, and *** are statistically significant at 10%, 5%, and 1% respectively. Source: The authors calculated using Stata.

The empirical results indicate that the impact of audit quality (AQ) and ESG disclosure on the performance of non-financial listed firms in Vietnam during the period 2020-2024 is neither linear nor consistent across different performance indicators. This heterogeneity reflects the existence of two parallel mechanisms through which firm performance is shaped. The first mechanism relates to the internal operational layer of the firm, where performance is largely determined by cost structures, asset management efficiency, and business strategy. The second mechanism operates through a market signaling layer, where firm value is influenced by transparency, investor confidence, and expectations regarding long-term growth. Distinguishing between these two mechanisms is essential for understanding the true role of audit quality and ESG disclosure in the context of the post-COVID-19 Vietnamese economy, a period characterized by both economic recovery and the restructuring of financial and capital markets. Tables 3, 4, and 5 present the regression results using ROA, ROE, and Tobin's Q as dependent variables, respectively.

For ROA, all model diagnostics, including the OLS F-test, the LM test, the Hausman test, and the cluster-robust standard error adjustment, suggest that the model lacks statistical explanatory

power. The negative adjusted R^2 (-0.0021) does not only indicate a very low explanatory capacity but also implies that the variables representing audit quality (BIG4, AR, AO) and ESG disclosure do not provide meaningful predictive value for asset utilization efficiency. After correcting for heteroskedasticity and within-firm error dependence using cluster-robust standard errors, none of the coefficients become statistically significant, reinforcing the stability of this conclusion.

From an economic perspective, ROA reflects the efficiency of total asset utilization and is closely linked to operational management, supply chain efficiency, and production cost structures. During the period 2020-2021, Vietnamese firms were heavily affected by social distancing policies, supply chain disruptions, and a sharp increase in logistics costs. In 2022, policy interest rates increased significantly in response to inflationary pressures, which led to higher financial costs and widespread liquidity pressures within the corporate sector. Under such macroeconomic conditions, fluctuations in ROA were primarily driven by operational factors and capital costs rather than by transparency mechanisms. In other words, although higher audit quality and stronger ESG disclosure may enhance market confidence, they do not directly improve short-term asset utilization efficiency. Furthermore, descriptive statistics reveal that ROA displays substantial dispersion and contains extreme values, which weakens the statistical power of the linear regression model and makes it more difficult to detect underlying relationships. This suggests that in a highly volatile economic environment, ROA may not be the most appropriate indicator for capturing the signaling effects of transparency mechanisms.

In contrast to the ROA model, the ROE regression results reveal a statistically meaningful panel structure. The Hausman test confirms that the FEM is the appropriate specification, and the rho coefficient of 0.576 indicates that more than half of the variation in ROE originates from firm-specific characteristics rather than common market shocks. This finding implies that return on equity is influenced not only by general economic fluctuations but also by firm-specific financial strategies and managerial capabilities.

After applying cluster-robust standard errors to correct for heteroskedasticity and serial correlation, AO and AGE remain statistically significant. The positive and robust effect of audit opinion (AO) on ROE can be explained through the mechanisms of reducing the cost of capital and strengthening financial discipline. During the period 2022-2023, the Vietnamese capital market experienced a significant decline in investor confidence due to the corporate bond crisis and several accounting irregularity cases. In such an environment, an unqualified audit opinion serves as a credible certification signal for investors and financial institutions. When financial transparency is verified by an independent third party, information risk decreases, the cost of capital tends to decline, and firms may gain better access to credit. As a result, net income allocated to shareholders is strengthened, leading to an increase in ROE.

The AGE variable exhibits a negative coefficient, reflecting a firm life-cycle effect. Older firms typically possess more stable organizational structures but may also exhibit lower flexibility and

slower adaptation to market changes and digital transformation. In the post-pandemic context, where technological innovation and new business models play a critical role, younger firms may exploit growth opportunities more effectively, thereby achieving higher ROE. This result indicates that shareholder profitability depends not only on financial transparency but also on internal growth dynamics. The model using Tobin's Q as the dependent variable provides the clearest evidence of the signaling mechanism. After selecting FEM and applying cluster-robust adjustments, AO, SIZE, AGE, and LEV remain statistically significant. The positive impact of AO on Tobin's Q confirms that the market responds strongly to transparency signals. In emerging markets where information asymmetry remains relatively high, a positive audit opinion helps reduce moral hazard and enhance investor confidence, which in turn increases the market value of the firm.

SIZE shows a negative coefficient, suggesting that large firms tend to have lower expected growth rates. During the period 2021-2024, Vietnam's capital market experienced a shift in investment flows toward firms with stronger growth narratives, particularly in sectors such as technology, retail, and consumer services. Consequently, larger and more mature firms may be relatively undervalued compared to smaller firms with higher growth potential.

AGE has a positive effect on Tobin's Q, indicating that brand reputation and long operating histories create valuation advantages in the market. This highlights the distinction between accounting performance (ROE) and market expectations (Tobin's Q). A firm may have lower accounting returns due to slower growth but still achieve a higher market valuation thanks to its long-term stability and strong governance reputation.

LEV exhibits a strong positive effect on Tobin's Q but a negative relationship with ROE. This divergence reflects the tension between short-term accounting profitability and long-term growth expectations. The market may interpret leverage as a tool for expanding investment during the economic recovery period, particularly as the government promotes public investment and infrastructure development. However, from an accounting perspective, higher interest expenses reduce short-term net profits.

Overall, the results suggest that audit quality, particularly through audit opinions, has a consistent and durable impact on shareholder returns and market valuation but does not directly influence asset utilization efficiency. This finding underscores the distinction between signaling mechanisms and internal operational mechanisms. In emerging markets such as Vietnam, where investor confidence plays a central role, financial transparency tends to affect firm valuation more strongly than short-term operational efficiency.

The use of FEM combined with cluster-robust standard errors ensures that the conclusions are not biased by firm-specific heterogeneity or heteroskedastic error structures. This methodological approach strengthens the reliability of the findings and enhances the academic contribution of the study.

4.3 Discussion of Research Results

This study analyzes the impact of audit quality and ESG disclosure on the performance of listed non-financial enterprises in Vietnam during the period 2020-2024. The focus of the study is on the role of audit quality indicators, including the presence of Big 4 auditing firms, auditor rotation, and audit opinions, together with the level of ESG disclosure in influencing firm performance indicators such as ROA, ROE, and Tobin's Q. At the same time, the study controls for firm-specific characteristics including firm size, firm age, financial leverage, and the equity-to-asset ratio to ensure the robustness and objectivity of the empirical model. The regression results show that the influence of audit quality on firm performance differs across performance indicators. The presence of Big 4 auditors does not show a statistically significant impact on ROA, suggesting that audit quality does not directly affect firms' asset utilization efficiency in the short term. However, the results indicate that audit-related signals, particularly audit opinions, have a positive and statistically significant relationship with ROE, implying that credible financial reporting can enhance shareholder returns through improved investor confidence and lower information risk.

In addition, the study does not find strong statistical evidence that auditor rotation significantly affects firm performance indicators. The weak relationship between auditor rotation and corporate performance suggests that changing auditors does not necessarily lead to substantial improvements in financial reporting quality or operational efficiency in the Vietnamese context. This may reflect the relatively small difference in audit quality among auditing firms or the limited impact of auditor rotation policies on corporate governance practices.

Further analysis using Tobin's Q reveals that transparency-related factors play a more important role in shaping market valuation. Firms receiving favorable audit opinions tend to achieve higher market valuations, indicating that investors respond positively to credible financial reporting. In addition, ESG disclosure shows a generally positive relationship with firm value, suggesting that companies with stronger transparency in environmental, social, and governance practices may gain higher investor confidence and better market perception. Overall, the findings highlight that audit quality and ESG disclosure influence corporate performance mainly through transparency and signaling mechanisms rather than through direct improvements in operational efficiency. The study provides empirical evidence that credible auditing practices and stronger ESG transparency contribute to improving shareholder returns and market valuation in Vietnam's capital market. These results also suggest the need to continue strengthening audit quality supervision, improving ESG disclosure practices, and enhancing financial transparency in order to support the sustainable development of listed companies in an increasingly competitive and evolving economic environment.

5. Conclusion

This study assesses the impact of audit quality and ESG disclosure on the performance of listed non-financial enterprises in Vietnam during the period 2020-2024. Using panel data regression

models, including Pooled OLS, FEM, and REM, the study analyzes the role of audit quality indicators such as Big 4 auditors, auditor rotation, and audit opinions, together with the level of ESG disclosure. The empirical model also controls for firm characteristics including firm size, firm age, financial leverage, and equity-to-asset ratio in order to ensure the robustness of the analysis.

The results indicate that the influence of audit quality varies across different performance measures. In particular, audit opinions show a positive and statistically significant relationship with ROE, suggesting that credible financial reporting can strengthen shareholder profitability through improved transparency and investor confidence. In contrast, the presence of Big 4 auditors does not demonstrate a statistically significant effect on ROA, implying that audit quality does not directly improve asset utilization efficiency in the short term. In addition, the study does not find strong statistical evidence that auditor rotation significantly affects firm performance. The weak relationship between auditor rotation and corporate performance suggests that changing auditors does not necessarily improve financial reporting quality or operational efficiency. This result raises questions regarding the effectiveness of auditor rotation policies, as excessive rotation may reduce audit continuity and limit auditors' understanding of firm-specific characteristics.

Furthermore, the results highlight the positive role of ESG disclosure in influencing firm performance, particularly in terms of market valuation. Firms with higher levels of ESG transparency tend to receive more favorable evaluations from investors, reflecting the growing importance of sustainability and governance practices in modern capital markets. Overall, the research findings provide useful implications for policymakers in improving audit regulations and promoting transparency in financial and non-financial reporting. Strengthening audit quality supervision while encouraging ESG disclosure can contribute to improving corporate governance, enhancing investor confidence, and supporting the sustainable development of listed enterprises in Vietnam's evolving economic environment.

5.1 Recommendations

Based on the research findings, several recommendations can be proposed to improve the operational efficiency and transparency of enterprises listed on the Vietnamese stock market.

Firstly, the regulatory framework on audit quality and financial transparency should be strengthened to enhance the reliability of corporate disclosures. Listed firms should prioritize cooperation with reputable auditing firms and ensure the credibility of audit opinions in order to reduce information asymmetry and strengthen investor confidence. At the same time, regulators should improve supervision mechanisms to ensure compliance with auditing standards and enhance the transparency of financial reporting in the capital market.

Secondly, it is necessary to review and implement auditor rotation policies in a balanced and flexible manner. Although the empirical results do not show a strong relationship between auditor

rotation and firm performance, auditor rotation still plays an important role in maintaining auditor independence and preventing excessively close auditor–client relationships. Therefore, regulatory authorities should design rotation policies that balance independence with audit continuity, ensuring that auditors maintain sufficient knowledge of the firm while preserving objectivity in the auditing process.

Thirdly, the role of auditing in corporate governance should be further strengthened. Auditing should not be viewed merely as a compliance requirement but as an important governance mechanism that enhances financial transparency and reduces information risk. Audit opinions, in particular, play a critical signaling role in the market by confirming the credibility of financial statements. Firms should therefore use audit outcomes as a tool to improve financial discipline, strengthen internal control systems, and enhance investor confidence.

Fourthly, enterprises should place greater emphasis on improving ESG disclosure practices. The research results suggest that ESG transparency contributes positively to market valuation and investor perception. Companies that provide clearer and more comprehensive ESG information are more likely to build stronger reputations, improve stakeholder relationships, and attract long-term investment. Regulators may also consider developing clearer guidelines and reporting frameworks to encourage standardized ESG disclosure among listed companies.

Finally, the application of digital technology in auditing and financial reporting should be promoted to improve efficiency and accuracy. Technologies such as artificial intelligence, big data analytics, and blockchain can support auditors in detecting irregularities, analyzing large volumes of financial data, and improving the overall quality of auditing practices. At the same time, enhancing professional training for auditors in digital tools and data analytics is essential to ensure that auditing practices keep pace with the ongoing digital transformation of financial markets.

By implementing these recommendations, the auditing and disclosure environment in Vietnam can be further strengthened, contributing to improved transparency, greater investor confidence, and the sustainable development of the country's capital market.

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