Pak. j. life soc. Sci. (2024), 22(2):13068-13088 E-ISSN: 2221-7630;P-ISSN: 1727-4915

Pakistan Journal of Life and Social Sciences
www.pjlss.edu.pk

https://doi.org/10.57239/PJLSS-2024-22.2.00935

RESEARCH ARTICLE

ESG and Corporate Financial Performance: The Moderating Role of Audit Quality in Emerging Markets

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ARTICLE INFO

Received: Sep 17, 2024

Accepted: Nov 10, 2024

Keywords

ESG

Corporate Financial Performance

Audit quality

Big4

Asia

Emerging market

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ABSTRACT

The present study examines how audit quality affects the relationship between environmental, social, and governance (ESG) factors and financial performance in emerging Asian markets. It analyzes data from 205 nonfinancial listed companies across 2050 firm-year observations from 2014 to 2023, utilizing the Thomson Eikon database for financial and ESG information. Research findings indicate that ESG and its components negatively impact financial performance, particularly return on assets, aligning with the trade-off theory that suggests ESG practices increase costs and reduce profitability. However, ESG initiatives positively affect sales revenue as consumers prefer companies with strong ESG practices. The study also investigates how audit quality, particularly from Big Four auditors, moderates the ESG-financial performance relationship. Results show that both ESG and higher audit quality adversely affect financial outcomes, consistent across various financial performance measures. These findings enhance the understanding of ESG and financial performance links in emerging Asian countries and highlight the influence of external auditor quality.

INTRODUCTION

The growing global interest in Environmental, Social and Governance (ESG) disclosure has emphasized their significance in corporate operations. In developed countries, international policies such as the United Nation's 2030 Agenda and the European Green Deal have established mandatory requirements for all societal components to take responsibility in advancing these goals (Misso et al., 2018). Companies across the world are incorporating ESG principles more and more into their strategies and decision-making procedures in reaction to the growing worries around sustainability and societal impact (Alsayegh et al. 2020). This shift has not only transformed the corporate landscape but has also attracted the attention of various stakeholders, including investors, customers, regulators, and the public. A third of all assets under management globally, or $50 trillion, are expected to be in ESG assets by 2025, according to Bloomberg Intelligence calculations. This indicates that ESG is becoming a major trend in global investment. This fervor is rooted in the recognition that sustainable practices are not only necessary for environmental and social well-being but are also indispensable for sustained financial prosperity.

However, companies also face a series of challenges, especially in the context of increasing global risks due to phenomena such as economic volatility, climate change and the COVID-19 pandemic.

Despite having lower per capita emissions compared to the US and the EU, Asia, with its large population, is currently a significant source of carbon emissions. In 2021, the region produced 17.2 billion metric tons of carbon dioxide through energy production, accounting for 51.2% of the global total, compared to 4.5 billion metric tons from the US (13.6%) and 3.7 billion metric tons from Europe (11.1%), as reported by the International Energy Agency. Asia is gradually becoming an essential player in addressing the climate crisis and has the necessary resources to do so. Developing Asian countries represent not just prospective economic powerhouses, but also the region's cultural, political, and economic variety. As a result, concentrating on research on rising Asian markets allows us to better grasp the region's trends and issues, and provide relevant solutions and growth plans.

A fundamental challenge is understanding the link between ESG-financial performance, despite the increasing emphasis on ESG. Examining how ESG policies impact financial performance is made more difficult by the fact that most businesses produce sustainability reports apart from their financial reports. Thus, the current study objective is to empirically examine how ESG performance and financial outcomes relate to one another in Asia, particularly in emerging markets, to foster informed decision-making and advance the discourse on ESG investing.

Additionally, independent auditing firms have an essential role in verifying the accuracy and truthfulness of a company's sustainability reporting. According to Zahid and Simga-Mugan (2022), the auditor's impartiality and professional competence instill trust in corporate reporting procedures, which in turn impacts financial choices, risk mitigation tactics, moral behavior, and adherence to regulations. High audit quality ensures the reliability and accuracy of financial reporting, particularly concerning ESG-related disclosures. Since Asian corporations usually provide these disclosures voluntarily, robust audit practices enhance transparency and accountability, providing stakeholders with confidence in reported ESG metrics. This study also explores the moderating role of external auditor quality within the ESG and CFP relationship, examining its impact on investors' perceptions and decisions, and consequently on firms' access to capital and overall market valuation. Understanding this relationship is crucial for managers and policymakers aiming to promote sustainable business practices while maintaining financial integrity and investor trust. Hence, this research aims to bridge this knowledge gap by posing two pertinent questions:

Research Question 1: How do ESG and its components influence corporate financial performance in Asian emerging markets?

Research Question 2: Does audit quality influence the link between ESG scores and corporate financial performance in Asian emerging markets?

In examining firms with public listings in Asian emerging countries, this work contributes to the ESG disclosure literature in both theoretical and practical dimensions by expanding upon the extensive body of research on sustainability development, financial performance, and positive corporate environmental investment behavior. It diverges from previous studies in several key aspects. Firstly, unlike most ESG research that predominantly focuses on the overall ESG score, the study comprehensively includes all elements of sustainability, containing the environmental, social, and governance factors, providing a holistic understanding of these dimensions. By examining each component individually, we gain deeper insights into how different aspects of ESG contribute to corporate performance and sustainability goals. Secondly, this research explores the intersection of ESG, financial performance, and auditing. This combination has not been investigated in earlier studies, particularly in emerging Asian countries. Audit quality, recognized as a crucial governance feature, is believed to mitigate managerial opportunism, and is positively associated with enhanced financial outcomes alongside ESG performance (Alareeni & Hamdan, 2020). Thus, the study addresses a crucial question: Does audit quality moderate the association between ESG and business financial success? This emphasis on the external auditor quality as moderator closes a gap in the previous research and provides an important understanding of how robust auditing practices can

amplify the benefits of ESG initiatives. Thirdly, this study provides a more comprehensive analysis by investigating the impact of individual ESG elements, alternative measures of financial performance, important control factors, moderating variable, and the robustness of estimating methodologies across the timeframe of 2014 – 2023. This detailed approach ensures that the findings are not only robust but also applicable across various contexts and time frames, thereby enhancing their reliability and relevance for policymakers and practitioners. Lastly, the empirical investigation is conducted in Asian emerging markets, recognized as some of Asia's most rapidly rising economies, thereby enriching the scholarly discourse within the context of Asia's developing economies. These markets' potential to promote sustainable practices and influence regional and international cooperation makes them an important case study for other emerging and developing countries around the world.

LITERATURE REVIEW

ESG and Corporate Financial Performance

The term "ESG" was initially introduced by the UN Global Compact's "Who Cares Wins" program, which aimed to educate analysts and investors on the interplay and materiality of environmental, social, and governance issues. However, the concept of ESG was mentioned quite early, expressed by the term Corporate Social Responsibility, which escribes the societal obligation of enterprises, excerpted from economist Howard Bowen's book "Social Responsibilities of the Businessman" in 1953. ESG is a collection of environmental, social, and governance criteria for corporate operations that quantify elements linked to sustainable development and the influence of enterprises on society. It is a component of Sustainable Reporting. As stated in the Global Reporting Initiative's ESG terminology, it acts as a roadmap for stakeholders to comprehend how an organization manages opportunities and risks across the three criteria. The ESG score comprises the individual scores of these three criteria, allowing for an evaluation of a company's sustainability and identifying which companies are less risky compared to their industry peers.

An organization's financial performance encompasses its ability to generate income, manage its resources and obligations, and protect the investors' and stakeholders' money. Measuring corporate financial performance (CFP) involves assessing a firm’s financial status over a specific duration to gauge its effectiveness and profitability in generating revenue (Karami et al., 2020; Kusumawardani et al., 2021). Company financial performance encompasses several variables, including sales growth, profitability as demonstrated by ratios like ROE, ROS, and ROI, as well as share price and profits per share (Kanakriyah, 2020; Kusumawardani et al., 2021).

This study draws insights primarily from trade-off theory and agency theory, managerial myopia theory, and resource-based view theory. Trade-off theory from neoclassical researchers Vance (1975); Wright and Ferris (1997) emphasize that maximizing financial gains for a company's shareholders is its main social responsibility, and allocating resources to ESG initiatives raises operating costs, leading to diminished profitability. In the interaction between managers and shareholders, agency theory serves as a framework for understanding and resolving conflicts of interest, agency issues, and information asymmetry (Raimo et al., 2021). Through agency theory, participation in ESG may be seen as a matter of agency between shareholders and management. This point of view contends that since ESG expenditure directly lowers profitability, it is not advantageous to shareholders. Managerial myopia theory, which developed from social psychology's time orientation theory, suggests that managers have a short-term perspective in their time cognition. They tend to prioritize and highly value immediate outcomes over future development of the enterprise (Stein, 1988). Rather than considering the growth of company in the long run, myopic managers are more interested in immediate gratification and benefits. Socially conscious investments have immediate expenses, making the long-term rewards less predictable and alluring to investors with short-term investment horizons. The Resource-Based View (RBV) theory, proposed

by Barney in 1991, is a paradigm for strategic management that emphasizes the importance of internal resources and capabilities—such as technology, financial resources, brand reputation, and organizational culture—in determining a firm's performance and market position (Nguyen & Le, 2023). In the context of ESG initiatives and financial performance, RBV provides a robust framework for understanding the impact of these internal resources and capabilities on the success of ESG practices. Implementing ESG initiatives requires significant financial, human, and technological resources. Firms with abundant and strategically valuable resources are better positioned to integrate ESG practices without compromising financial performance, while those with limited resources may face financial and operational strains. Additionally, maintaining high audit quality demands substantial resources for compliance and reporting, potentially constraining a firm's ability to invest in ESG initiatives.

Potential relationships between ESG and firm financial performance may differ throughout sectors, nations, and time periods, according to research findings from earlier studies. The trade-off theory indicates that ESG initiatives have an adverse effect on CFP due to the associated rise in expenses, reduction in cash flow, and undermine the competitive benefit of firms. Khan et al., (2021) discovered that the adoption of green invention has an adverse effect on returns on assets (ROA). This adverse association arises due to the substantial investment required for transitioning processes and services. Similarly, Ruan and Liu (2021) observed a negative impact of corporate ESG activities on China’s firm success. El Khoury et al.'s (2021) research of the link between the three ESG elements and CFP within the banking sector found a U-shaped association between the two.

Dakhli (2021), on the other hand, examines 200 French companies that were public between 2007 and 2018, and discovers a strong positive relationship between ESG and financial outcom. Dakhli further points out that French companies that Big Four auditors assess have a stronger positive impact from CSR. The association between environmental sensitive industries' operational efficiency and their ESG ratings was studied by Naeem et al. (2022). Using a dynamic regression method with a one-year lag for the operational efficiency data of 383 environmentally sensitive companies from 2010 to 2019, the study found the following results: (1) ESG index has no significant correlation with ROA; (2) ESG positively influences Tobin's Q and ROE, contributing to increasing the market value of companies. A 12-year panel dataset comprising 180 European listed businesses from 2008 to 2020 was used in research by Tahmid et al. (2022). Their results show that a company's performance and worth are greatly increased by ESG ratings. To be more precise, the social (S) and environmental (E) pillars have a positive significance when assessing company value, however the governance (G) pillar is statistically inconsequential.

The effect of ESG on several company performance measures in developing countries has also been studied by researchers. Garcia and Orsato (2020) determined that the ESG score exhibits an adverse correlation with financial performance when comparing emerging markets to developed ones. Duque & Aguilera (2021) examined the ESG and financial success among multinational corporations in Latin America's emerging markets. Their findings indicate that ESG initiatives and each of the pillars incur additional costs for companies, negatively affecting CFP. Fahad and Busru (2021) examined how CSR impacts the performance of firms listed in India's BSE 500 index, which mainly comprises emerging markets. Their findings indicated that CSR disclosure had a detrimental impact on both the profitability and firm value in India. This adverse impact was primarily driven by the scores related to environmental and social disclosures.

In summary, there is insufficient proof in the body of current literature that links ESG initiatives to company financial performance. The direction of this relationship appears to vary based on the market studied and the specific profitability metrics utilized. The absence of a conclusive relationship and the predominant focus on Western developed countries create opportunities for research in the future, and the study fills this gap, especially considering the emerging markets in Asia. Most Asian

economies fall under the emerging category and are in varying states of economic development. Given Asia's increasing prominence in the global economy, investigating ESG practices among Asian companies is both relevant and timely.

Hypothesis 1 (H1). ESG and its constituents have a detrimental influence on corporate financial performance.

Audit Quality, ESG and Corporate Financial Performance

Agency theory defines that auditing is essential for reducing the asymmetry of knowledge, deterring opportunistic behavior, and improving ESG performance. Audit quality is mentioned as the capacity of auditors to recognize and reveal material mistakes. High audit quality is indicated by a lower likelihood of misinterpreting financial statements, which includes errors or misconduct. The auditor's ability to deliver a suitable audit opinion determines the quality of the audit. The effectiveness of ESG performance and transparency in corporate activities correlates with the higher quality of audits, leading to enhanced creditability and fame for firms (Hammami and Zadeh, 2020). A thorough risk assessment of a company's many aspects that could affect the accuracy of financial information is part of an external financial audit. These aspects include financing ESG incentives, company reputational danger, resource allocation within the company, and firm profitability. This is especially important if a company's ESG scores have a significant impact on its financial results or if there are potential reputational damage risks that could affect financial reporting. As such, ESG principles and strategies are implicitly taught to financial auditors, discouraging corporate wrongdoing, and helping businesses enhance their procedures while reducing reputational danger (Asante-Appiah & Lambert, 2022). ESG practices and business financial performance can be improved by the supervision and remedial role of excellent audits. It may also stop financial manipulation and wrongdoing, which hurt financial measures like reporting profitability.

Recent research suggests that clients of the Big4 auditing firms tend to exhibit stronger financial performance, exceptional CSR performance and high transparency (Phan et al., 2020), attributing this to the rigorous auditing standards upheld by accredited audit firms, which ensure the reliability, transparency, and value of financial statements, while promoting sound corporate governance and internal controls. Dakhli (2021) investigates the role of external auditor quality as a moderator and finds that French companies audited by Big4 firms have a more positive impact from CSR. The metrics were Tobin's Q, ROE, and ROA. Because of this, businesses that prioritize social and environmental responsibility frequently work with Big 4 auditing firms and uphold strict reporting guidelines to demonstrate their dedication to honesty and openness in corporate dealings. Zahid et al., (2022) investigated the correlation between ESG, CFP, and audit quality in Western European nations. Their results suggest that the negative impact of ESG on financial results is especially obvious in enterprises accredited by the Big Four accounting firms. However, recent research often oversimplifies the connection between ESG and financial success in developing countries, disregarding potential moderating factors like audit quality. Thus, it's crucial to explore neglected areas, such as audit quality, to enhance understanding of the ESG-CFP relationship. This study focuses on the correlation between ESG and company financial performance in Asia's emerging countries, and the external auditor quality as moderator.

Previous studies reveal that quality of auditing has a moderating consequence on the association between ESG and CFP. This is because audit quality affects both financial and nonrevenue audits. By illuminating the financial ramifications of ESG practices, it improves the caliber of ESG activities from the standpoint of reporting and promotes confidence in business choices. As a result, it is expected that audit quality will positively moderate the ESG and CFP correlation in Asia's emerging markets. This is because improved audit quality strengthens ESG practices, assuring regulatory compliance in developing markets and preventing opportunistic behaviors. Hence, the hypothesis is developed as follows.

Hypothesis 2 (H2). The association between ESG and corporate financial performance is positively moderated by audit quality.

RESEARCH METHODOLOGY

Research Design

Quantitative technique is used to examine the association between business financial outcome, ESG practices, and audit quality. The selection of a quantitative method aligns with prior research endeavors in this domain by facilitating the assessment of connections (Hernandez et al., 2020; Singh et al., 2020). Consistent with other study findings (Li et al., 2019; Franceschelli et al., 2019), secondary data from the Eikon database is utilized to examine these interactions and identify businesses involved in ESG reporting. The comprehensive data catalogue provided by the Eikon database includes corporate financial information and ESG disclosure for public listed firms in Asia's emerging economies.

Variable Measurement

Dependent Variables

In this study, corporate financial performance (CFP) is the dependent variable. In line with earlier studies, Sales Revenue, Return on Assets and Return on Equity were chosen as the accounting measures to explore ESG-CFP relationship. The natural logarithm of net sales over a given year is Sales Revenue. According to several studies (Alareeni & Hamdan, 2020; Chakroun & Amar, 2021), these are some of the most often utilized metrics. The economic metric known as Return on Assets (ROA) quantifies how well a business uses its assets to produce income. One of the broadest indicators of a business's operational performance is return on assets (ROA). This research used ROA as the dependent variable in the study, carrying on the work of other studies (Bhaskaran et al., 2020). The ratio of net income to total assets is used to calculate return on assets. As per earlier studies (De Lucia et al., 2020; Naeem et al., 2022), Return on Equity (ROE) is a metric that gauges a company's success by comparing its net income to the average shareholder's equity. This ratio, which expresses profitability per common shareholder dollar of capital, is the most significant for firm shareholders.

Independent Variables

The environmental, social, and governance aspects of the ESG score are utilized as independent variables. All ESG indicators are collected from the Eikon database. With data from 2002, this is a source of data on ESG indicators widely used in the research literature by other researchers (Naeem et al., 2022; Giannopoulos et al., 2022; Chairani & Siregar, 2021; Zahid et al., 2023). It generates from both quantitative data sources like business annual reports and CSR reports, as well as qualitative references like worldwide media headlines and other surveys. The ESG score scale ranges from 0 to 100. Newly created pillar category weights and category scores are multiplied to get the E, S, and G pillar score. Innovation, Resource Use, and Emissions are all included in the E pillar. Community, Product Responsibility, Human Rights, and Workforce comprise the S pillar. Company management, shareholder relations, and CSR strategy are all included in the G pillar. Additionally, individual categories are further divided into sub-themes. Having separate data available for each component is advantageous to prevent potential interferences among dimensions, which could diminish the overall influence. This classification allows us to identify the main motivator of Corporate Financial Performance (CFP) and ascertain which variable exerts the most significant influence on CFP.

Moderating Variables

In this study, audit quality serves as a moderating factor. Previous study indicates that the Big Four accounting firms—Deloitte, Ernst & Young, KPMG, and PriceWaterhouseCoopers—are used to operationalize audit quality. Due to their well-established reputation, these companies are highly

motivated to provide top-notch auditing work. It is shown as a dummy variable, and if the value of 1 indicates that a Big4 firm audits the financial accounts of the company, then the value of 0 indicates otherwise.

Control Variables

The study incorporates key control factors that can isolate the precise influence of ESG on Corporate Financial Performance (CFP). To examine the impacts of scale, adaptability, profitability, and company development, respectively, four control variables—firm size, financial leverage, dividend payment, and price-to-book value—are frequently used from earlier research (Aouadi & Marsat, 2016; Zahid et al., 2022).

Firm size is the study's first control variable. Large-cap firms are better equipped to support ESG activities due to their larger resources and capacities, which may have a favorable impact on their profitability. Total assets, which include both tangible and intangible assets, are used as a calculable and thorough indicator of firm size (Gibson, 2018). This study uses total assets' natural logarithm, a widely used mathematical transformation in econometric and financial analysis, to change the scale and distribution of the data. This approach helps address skewness and heteroscedasticity, ultimately generating smaller values that stabilize variance and normalize the data.

The second control factor is financial leverage, which is applied in previous research (Alsayegh et al., 2020). Financial leverage is known to negatively affect financial performance (Naseem et al., 2020). This control variable was chosen because rising interest costs and the financial risks that come with increasing debt levels have a substantial impact on the company's capital structure and profitability (Lim et al., 2020). In general, it estimates the impact of ESG issues while isolating the consequences of financial risk and capital structure connected to leverage levels. Total liabilities divided by total assets is the ratio used to calculate financial leverage.

Furthermore, the dividend-to-total-income ratio was used to measure dividend payout since companies that pay out high dividends are typically seen as having performed well financially (Benlemlih, 2019). Divide the market value of stock by the book value of shares to get the price-to-book ratio, which shows a company's growth potential.

Data Collection and Analysis

Initially, the researchers collected secondary data from 288 non-financial listed and active companies headquartered in Asia's emerging countries (China, India, Indonesia, Malaysia, Thailand, Philippines) in the 10-year period from 2014 to 2023. To ensure consistency in the study analysis, the study excludes financial firms due to variations in accounting standards, which would have hindered meaningful comparisons of financial statements of the company (Doni et al., 2019). Financial companies adhere to different reporting regulations, necessitating their exclusion from the study. Additionally, the researchers eliminated companies lacking available financial performance indicators or ESG data, as ESG disclosure is typically voluntary, resulting in limited reporting among firms. Subsequently, the sample underwent further filtering based on independent, dependent, control, and moderating variables. After excluding participants with missing data, the study's final sample consisted of 200 enterprises with 2050 firm-year observations. This study conducted all data analyses in Stata 17.

A reliable statistical technique for analyzing large, complicated data sets is panel data regression. Hence, balanced panel data regression was employed in the investigation. The three most used methods in panel data analysis, which include Pooled Ordinary Least Squares (Pooled OLS), the Fixed Effects Model (FEM), and the Random Effects Model (REM), were all implemented to ensure that the model selection does not bias the findings. After running the models, quantitative tests were used to choose the appropriate model. The F-test was conducted to compare Pooled OLS and FEM models,

indicating that the FEM is the best model for the study. The FEM was chosen over the REM using the Hausman test, with the assumption being that the FEM is more efficient than the REM.

The proposed association between ESG and CFP is tested using the calculated multivariate regression model as follows:

$$CFP_{i,t} = \beta_0 + \beta_1 ESG_{i,t} + \beta_2 Size_{i,t} + \beta_3 FL_{i,t} + \beta_4 Div\_payout_{i,t} + \beta_5 PTB_{i,t} + \sum_{i=1}^{n} \beta_n Country\_Dummies_{i,t} + \sum_{i=1}^{n} \beta_n Industry\_Dummies_{i,t} + \sum_{i=1}^{n} \beta_n Year\_Dummies_{i,t} + \varepsilon_{i,t}$$

(1)

"t" stands for the years of time, and "i" for the firm in Equation (1). The term "CFP" denotes the financial performance as determined by indicators like Sales Revenue, Return on Equity, and Return on Assets. The acronym "ESG" stands for environmental, social, and governance scores. The term "size" refers to the natural logarithm of the company's total assets. "Financial leverage (FL)" may be expressed as the ratio of total assets to total debt. The term "PTB" refers to the price-to-book ratio, while "Dividend payout (Div)" is the dividend paid divided by total assets. In order to address frequent endogeneity problems that emerge over time across different industries, we also include year, industry, and country dummies. "Ɛ" is the error term.

An interaction term, "Big4×ESG," was introduced to investigate the audit quality in the ESG and CFP correlation:

$$CFP_{i,t} = \alpha + \beta_1 ESG_{it} + \beta_2 Big4_{i,t} \times ESG_{i,t} + \beta_3 Size_{i,t} + \beta_4 FL_{i,t} + \beta_5 Div\_payout_{i,t} + \beta_6 PTB_{i,t} + \sum_{i=1}^{n} \beta_n Country\_Dummies_{i,t} + \sum_{i=1}^{n} \beta_n Industry\_dummies_{i,t} + \sum_{i=1}^{n} \beta_n Year\_Dummies_{i,t} + \varepsilon_{i,t}$$

(2)

The model is explained in detail in Equation (2), where all variables are consistent with Equation (1) except for the interaction Big4 × ESG, which attempts to represent the moderating effect.

RESULTS

Descriptive Statistics

For six Asian emerging markets, Table 1 provides descriptive information on the research model's variables. Twelve distinct variables and 2,050 observations are used in this data to reflect the financial and environmental sustainability information of the companies. For ROA, ROE, and Rev(ln), the mean value is 0.0592, the standard deviations are 0.0824, 2.4238, and 1.9853, respectively. The ESG score has a mean value of 50.8756, with the governance component having the highest score (52.838). The standard deviation of the ESG score is 19.3436, with the environmental component having a larger standard deviation (25.1390). With a standard deviation of 0.4454, the Big 4 firms audit around 27% of the sampled organizations, as shown by the mean value of 0.27 for Big 4. Financial leverage is quite stable on average, as indicated by its mean value of 0.5893 and standard deviation of 0.2321. Compared to size (1.3171) and dividend payout (1.9166), price-to-book ratios had greater standard deviations (36.0239), indicating a diversity of profitability characteristics among the businesses.

Table 1: Descriptive Statistics

Variable	Obs.	Mean	Std.Dev.	Min	Max

ROA	2050	.0592191	.0824446	-.8939275	.7307
ROE	2050	.1257949	2.423808	-104.516	21.64808
Rev(ln)	2050	21.58698	1.985282	8.012637	26.89932
ESG	2050	50.87558	19.34362	1.618192	92.74825
Environment	2050	46.47873	25.13897	0	98.34447
Social	2050	51.74189	24.13328	1.226775	96.95265
Governance	2050	52.83808	22.32167	.8994709	97.35361
Big4	2050	.2726829	.4454478	0	1
Size	2050	22.80054	1.317108	19.34272	26.69954
FL	2050	.5892904	.2320606	.0762076	3.036853
Div_ payout	2050	.4906724	1.916614	-54.86058	25.16956
Price-to-Book	2050	3.766423	36.02393	-858.7096	1284.987

Notes: ROA refers to return on assets, ROE denotes return on equity, Rev(ln) represents the natural logarithm of net sales, ESG stands for Environmental, Social, and Governance score, Big4 indicates an audit conducted by a Big Four firm, Size is the natural logarithm of total assets, and FL is the ratio of debt to assets.

Correlation Analysis

The primary independent and dependent variables' correlation analysis is shown in Table 2.

Table 2: Correlation of the Variables

Variables	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)
ROA (1)	1											
ROE (2)	0.1344*	1										
Rev(ln) (3)	-0.1475*	-0.0046	1									
ESG (4)	0.1220*	0.0296	0.0683*	1								
Environment (5)	0.0617*	0.0339	0.1922*	0.8351*	1							
Social (6)	0.1552*	0.0190	-0.0566*	0.8875*	0.6685*	1						
Governance (7)	0.0462*	0.0143	0.0816*	0.6239*	0.3177*	0.3287*	1					
Big4 (8)	-0.0533*	-0.0319	0.2326*	0.0015	0.0128	0.0152	-0.0001	1				
Size (9)	-0.3314*	-0.0351	0.6421*	0.1021*	0.2483*	-0.0135	0.0408*	0.1068*	1			

FL (10)	-0.4483*	-0.0103	0.1614*	-0.0517*	-0.0367*	-0.0788*	0.0049	0.0199	0.2850*	1		
Div_payout (11)	0.0118	0.0102	0.0700*	-0.0246	-0.0046	-0.0554*	0.0160	0.0028	0.0267	-0.0036	1	
Price-to-Book (12)	0.1227*	0.1539*	-0.0443*	0.0186	0.0055	0.0179	0.0153	-0.0007	-0.0930*	-0.0108	0.0229	1

Notes: ***p < 0.01, **p < 0.05, *p < 0.1

The preceding table demonstrates a detrimental association between the dividend payout and the ESG score and its constituent parts. There exists an unfavorable correlation between Big Four audit and ROA, and a beneficial correlation with Rev(ln). Size, Rev(ln), and ROA all have positive correlations with the ESG score; FL has a detrimental correlation. The governance component of the ESG score exhibits a somewhat favorable association with the overall ESG score, whereas the environmental and social components exhibit a high positive link. The correlation coefficients show that, although there is no significant link with the governance component score, organizations audited by Big4 auditing companies tend to be larger and have somewhat higher ESG ratings.

ESG and Corporate Financial Performance

Table 3 presents the findings of the link between ESG and CFP. In addition to FEM, which has fixed effects for the year, firm, and country, the researchers also utilize a Pooled OLS regression and REM, which is suggested to be preferred by the Hausman tests. ESG components and their impact on ROA and Rev(ln) are also shown in the table, Panels A and B. The effect of the Environmental, Social, Governance, and ESG ratings on CFP is shown in Models 1, 2, 3, and 4, accordingly.

Table 3: Baseline Regression Results

Variables	Panel A: ROA				Panel B: Rev(ln)			
	1	2	3	4	1	2	3	4
ESG	−0.000232** (0.0001)				0.0117*** (0.002)			
Environment		−0.000187** (0.00007)				0.0084*** (0.0014)		
Governance			−0.000018 (0.00008)				0.0036** (0.0016)	
Social				−0.000221** (0.00009)				0.0096*** (0.0018)
Size	−0.0131*** (0.0044)	−0.0129*** (0.0043)	−0.0177*** (0.004)	−0.0133*** (0.0043)	1.1244*** (0.0856)	1.1405*** (0.0841)	1.3244*** (0.0771)	1.1668*** (0.0832)

FL	−0.1772*** (0.0111)	−0.1774*** (0.0111)	−0.1778*** (0.0111)	−0.1772*** (0.0111)	−0.4706** (0.2126)	−0.4607** (0.2125)	−0.4443** (0.2141)	−0.4689** (0.212)
Div_payout	−0.0012** (0.0006)	−0.0012** (0.0006)	−0.0012* (0.0006)	−0.0012* (0.0006)	0.0008 (0.0115)	6.62e-06 (0.0115)	.00018 (.0116)	0.0011 (0.0115)
Price-to-Book	−0.00003 (0.00003)	−0.00003 (0.00003)	−0.00003 (0.00003)	−0.00003 (0.00003)	−0.00011 (0.0006)	−0.00011 (0.0006)	−0.00004 (0.0006)	−0.00001 (0.0006)
Constant	0.4768*** (0.0995)	0.4681*** (0.0987)	0.5708*** (0.0904)	0.4807*** (0.0971)	−4.3739** (1.9042)	−4.5388** (1.8897)	−8.5428*** (1.741)	−5.2428*** (1.861)
Country FE	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Industry FE	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Year FE	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Observations	2050	2050	2050	2050	2050	2050	2050	2050
Number of Firms	205	205	205	205	205	205	205	205

Notes: The estimation is based on Equation (1). ***p < 0.01, **p < 0.05, *p < 0.1

According to the results, there is a statistically significant negative impact of the ESG score and its constituent parts on ROA. Specifically, the environment and social scores negatively impact ROA, demonstrating that ESG practices can incur costs that limit investment opportunities and overall performance, consistent with the trade-off theory. Thus, the results align with H1. Investing resources in environmental and social objectives (such as pollution mitigation, increased employee compensation, and community contributions) elevates costs, reduces profitability, and erodes competitive edge (Galant & Cadez, 2017).

On the other hand, revenue is positively impacted by the social and governance ratings, and revenue is beneficially correlated with ESG and environmental components. According to this, funding social and governance projects improves a company's reputation and image, drawing in a wide variety of lenders and stakeholders. Better ESG performance makes a company seem less hazardous to investors, which makes them more preferred (Bacha et al., 2020). This result is consistent with research by Okafor et al. (2021) and Shahzad et al. (2022) demonstrating the improved performance of businesses with a strong social mission.

The study findings demonstrate that consumers are satisfied when they buy goods or services from businesses that engage in social activities, which boosts corporate sales. Nonetheless, excessive management expenditure on ESG initiatives might be motivated by self-interest, which could result in agency issues that raise expenses for the company, reduce shareholder value, and have a detrimental effect on financial outcome. The notion of managerial myopia states that managers frequently place a higher priority on short-term earnings, which causes investors who are more concerned with short-term gains to undervalue long-term advantages. Corporate size has a negative effect on ROA, although financial leverage and dividend distribution have a favorable one. These

findings support earlier research that demonstrates how greater rivalry enables bigger companies to achieve economies of scale and maintain their competitive position.

ESG, CFP and Audit Quality

The results of examining the effect of audit quality on the relationship between ESG and CFP are shown in the below table.

Table 4: Audit Quality's Influence as a Moderator in the ESG-CFP Relationship

Variable	Panel A: ROA				Panel B: Rev(ln)			
	1	2	3	4	1	2	3	4
ESGScore	−0.000167 (0.00012)				0.0178*** (0.0023)			
Environment		−0.000131 (0.00008)				0.0126*** (0.0016)		
Governance			0.000113 (0.0001)				0.0063*** (0.0019)	
Social				−0.000233** (0.0001)				0.0143*** (0.00205)
Big4_Auditor	0.0166 (0.0109)	0.0155* (0.0083)	0.0318 (0.0113)	0.0049 (0.009)	1.1946*** (0.208)	0.8722*** (0.158)	0.6627*** (0.218)	0.9044*** (0.172)
Big4 × ESG	−0.00016 (0.00018)				−0.018*** (0.0034)			
Big4 × Environment		−0.00015 (0.00013)				−0.0129*** (0.0025)		
Big4 × Governance			−0.0003 (0.0001)				−0.0077*** (0.0033)	
Big4 × Social				0.00005 (0.0001)				−0.0135*** (0.0028)
Size	−0.0132*** (0.0044)	−0.0127*** (0.0044)	−0.0179*** (0.004)	−0.0134*** (0.0043)	1.1294*** (0.084)	1.1626*** (0.083)	1.321*** (0.077)	1.171*** (0.082)

FL	−0.1758*** (0.0111)	−0.1759*** (0.0111)	−0.1761*** (0.0111)	−0.1764*** (0.0111)	−0.392** (0.2113)	−0.3916 (0.211)	−0.4062** (0.214)	−0.4043** (0.211)
Div_payout	−0.0012** (0.0006)	−0.0012** (0.0006)	−0.0012 (0.0006)	−0.0012** (0.0006)	0.00011 (0.011)	0.00034 (0.011)	−0.00004 (0.011)	0.00019 (0.011)
Price-to-Book	−0.00002 (0.00003)	−0.00002 (0.00003)	−0.00002*** (0.00003)	−0.00003 (0.00003)	0.00001 (0.0006)	0.00002 (0.0006)	0.00004 (0.0006)	0.00006 (0.0006)
Constant	0.4713*** (0.0996)	0.4575*** (.099)	0.5633*** (0.0903)	0.4795*** (0.097)	−4.9201* (1.891)	-5.351** (1.881)	−8.709*** (1.738)	−5.6755*** (1.849)
Observations	2050	2050	2050	2050	2050	2050	2050	2050
R-squared	0.2265	0.2285	0.2377	0.2220	0.4110	0.4181	0.4281	0.3960
Number of Firms	205	205	205	205	205	205	205	205

Notes: The estimation is based on Equation (2). ***p < 0.01, **p < 0.05, *p < 0.1

As can be seen in Table 4, ROA is positively related to financial statement audit quality, as demonstrated by the involvement of a Big Four auditor. On the link between ESG and ROA, however, Big4×ESG and its elements shows a markedly detrimental result. This suggests that there is a drop in historical financial performance when ESG regulations are coupled with enhanced Big4 auditing quality. The ecological, social, and governance subcomponents are all affected in the same way. Furthermore, there is a considerable moderating role in the association between corporate performance measures and ESG when a Big Four auditor is present.

It is clear from comparing Table 3 and Table 4 data that the Big4 auditor raises the detrimental impact of ESG on financial performance (ROA) from −0.388 to −0.404. ESG practices and past financial performance in Asian emerging nations during the studied period are therefore adversely impacted by enhanced Big4 auditing quality.

On the other hand, panel B shows that auditing quality and revenue have a substantially favorable relationship. This suggests that organizations' overall income tends to grow when they are audited by the Big Four firms. These findings are consistent with previous study (Phan et al., 2020), indicating that Big4 firm clients frequently have better performance. These results recommend that thorough auditing can improve internal control and corporate governance, which in turn can lead to better financial performance. Moreover, stakeholders perceive organizations audited by the Big Four as having fewer significant misstatements, which fosters and reinforces trust in these firms, potentially leading to increased investment.

In summary, while the presence of a Big Four auditor positively influences revenue and overall financial performance, the adverse impact of ESG on financial success appears more pronounced among enterprises audited by **the** Big 4 companies. This relationship suggests that although high-quality audits can improve certain aspects of financial outcomes and stakeholder trust, they may also

highlight or exacerbate the short-term costs associated with implementing ESG initiatives in emerging Asian markets. Therefore, the study findings are not consistent with H2.

Robustness Analysis

To ensure the robustness of the main and moderating models, we used ROE to substitute for the key dependent variables. A thorough summary of the results is given in Table 5. Models 1 through 4 demonstrate that the signals and significant values of the major variable remain valid after replacement.

Table 5: Alternative Performance Measure (Return on Equity)

Variables	ROE							
	1	2	3	4	5	6	7	8
ESGScore	−0.00968* (0.0053)				−0.00648 (0.006)			
Environment		−0.00294 (0 .0037)				−0.00222 (0.0043)		
Governance			−0.00632 (0.0042)				−0.00281 (0.005)	
Social				−0.01026** (0.0046)				−0.00747 (0.0052)
Big4_Auditor					0.5281 (0.535)	0.1221 (0.408)	0.6712 (0.554)	0.4275 (0.4411)
Big4 × ESG					−0.0101 (0.0089)			
Big4 × Environment						−0.0023 (0.0066)		
Big4 × Governance							−0.0113 (0.0084)	
Big4 × Social								−0.0084 (0.0072)
Size	0.4274** (0.218)	0.3068 (0.214)	0.3026 (0.195)	0.4409** (0.212)	0.4323** (0.218)	0.3112 (0.215)	0.2973 (0.195)	0.444** (0.2121)

FL	−01.0801** (0.542)	−1.097 (0.542)	−1.098** (0.542)	−1.074* (0.541)	−1.052 (0.543)	−1.089* (0.543)	−1.079** (0.543)	−1.051** (0.543)
Dividend Paid (ln)	0.00024 (0.029)	0.00103 (0.029)	0.00049 (0.029)	−0.00029 (0.029)	−0.0004 (0.029)	0.00104 (0.029)	−0.00033 (0.029)	−0.0011 (0.029)
Price-to-Book	0.0092*** (0.0015)	0.0091*** (0.0015)	0.0092*** (0.0015)	0.0091*** (0.0015)	0.0092*** (0.0015)	0.0091*** (0.0015)	0.0092*** (0.0015)	0.0091*** (0.0015)
Constant	−08.525* (4.856)	−6.122 (4.822)	−5.827 (4.408)	−8.798 (4.738)	−8.819 (4.864)	−6.264 (4.841)	−5.921 (4.411)	−9.021 (4.744)
Observations	2050	2050	2050	2050	2050	2050	2050	2050
Number of Firms	205	205	205	205	205	205	205	205

The findings of the moderating variable, audit quality, are shown in Models 5 to 8. These models show that the ESG–CFP connection is strongly and negatively influenced by the coefficient of the Big4 auditor interaction term. Overall, the fundamental model's key conclusions are validated by these robustness tests.

This illustrates that the fundamental findings remain same when ROE is included as a metric of business financial performance. The primary explanatory factors continue to be significant, and audit quality continues to have a moderating influence on the link between ESG and CFP. Therefore, the study results are robust across different measures of financial performance, reinforcing the credibility of the results.

DISCUSSION

Summary of the result for testing hypothesis is presented in the following table 6.

Table 6: Hypothesis Testing Results

Hypothesis	Relationship	Result
H1	ESG and its constituents have a detrimental influence on corporate financial performance.	Supported
H2	The association between ESG and corporate financial performance is positively moderated by audit quality.	Not Supported

According to the trade-off theory put forward by Zahid et al. (2022) and Galant and Cadez (2017), CFP may suffer because of higher costs and lower cash flow from ESG activities. This viewpoint is supported by the research, which showed that Return on Assets (ROA) was negatively impacted statistically by the whole ESG score, with the environment and social components having the most influence. This indicates that investments in environmental and social objectives, such as pollution mitigation and increased employee compensation, may incur costs that limit investment opportunities and overall performance. The present research offers insights unique to developing Asia and by showing that the negative impact of ESG on financial performance is especially noticeable in companies that hold Big Four accounting firm certification. Moreover, the study findings imply that income is considerably positively impacted by the social and governance aspects of ESG. This is in line with other research by Okafor et al. (2021) and Shahzad et al. (2022), which shows that funding social and governance efforts improves investor preference, brand image, and reputation. However, the research results are familiar with the findings of Zahid et al. (2022) that Big4 auditing has a negative impact on ESG and company financial performance in Western European nations over the

study period. Despite these perspectives, the study findings suggest a more complex relationship. While high-quality audits do enhance the credibility and reliability of ESG disclosures, they also impose stricter compliance requirements and heightened scrutiny. This increased scrutiny can reveal the significant costs and operational challenges associated with ESG practices, thereby negatively impacting short-term financial metrics such as ROA and ROE. This observation is supported by similar findings in the studies by Huang and Watson (2015) and Grewatsch and Kleindienst (2017), who also reported that high-quality audits can highlight the financial burdens of ESG initiatives, negatively affecting short-term performance.

The study results are also supported by the Resource-Based View theory. RBV emphasizes identifying and utilizing resources and capacities to gain competitive benefit. In the context of ESG and corporate financial performance, RBV suggests that companies can use their unique resources and capabilities to effectively promote and implement ESG initiatives. However, resource allocation for these initiatives may create financial and operational strains, especially for companies with limited resources. Therefore, RBV offers a helpful theoretical framework to comprehend how the capabilities and resources of an organization affect the execution and success of ESG initiatives. This is especially relevant given our research on the effect of audit quality on the connection between ESG and corporate financial performance.

CONCLUSIONS

The current study discovers the relationship between ESG performance and financial outcomes as well as the moderating effect of audit quality on this relationship in Asian emerging markets, The research results reveal that ESG practices typically have a detrimental impact on financial metrics for a company, such as return on equity and return on assets. This finding is consistent with the trade-off theory, which holds that investing in ESG practices can result in higher expenses and lower profitability. This is possibly due to the additional financial burdens associated with socially responsible actions, leading to diminished operational and financial performance. However, ESG efforts positively influence firm revenue as consumers often reward companies with strong ESG strategies, bolstering short-term performance. Such strategies can enhance a company's brand image, product value, and appeal to buyers and investors, consequently increasing revenue. The study produced results that are consistent with some previous studies. The study further examines how audit quality, particularly the involvement of Big4 auditors, negatively moderates the relationship between ESG and financial performance. High-quality audits may highlight the financial burdens of ESG initiatives, negatively impacting short-term financial metrics like ROA and ROE. Additionally, theoretical perspectives such as the Resource-Based View (RBV) theory provide further understanding of how organizations leverage resources to implement ESG initiatives and navigate the interplay between audit quality and financial performance. In addition, ESG disclosure should also be audited to improve efficiency when combined with financial reporting. Authorities, including central banks and stock market regulators, are urged to consider ESG as a reliable source of financial data and find effective strategies to improve ESG disclosure. Investors should also deepen their understanding of ESG to make informed investment decisions, considering the potential short-term trade-offs for long-term sustainability.

The study findings have significant theoretical implications for integrating ESG principles into business strategy, particularly in emerging Asian markets. Firstly, the negative effect of ESG practices on financial metrics supports the trade-off theory, which posits that investments in sustainability and social responsibility may initially increase costs and reduce profitability. This is in line with the concept that, while socially acceptable acts may incur greater financial costs, they are necessary for long-term viability. Secondly, the favorable impact of ESG activities on revenue demonstrates the shifting consumer and investor preferences for firms with strong ESG commitments. The study strengthens the idea that incorporating ESG into corporate strategy is not only a moral necessity, but

also a realistic business strategy for generating revenue development. Thirdly, the study investigation of audit quality, notably the involvement of Big4 auditors, sheds light on its significance in the link between ESG and financial success. This study calls into question the premise that high audit quality helps all elements of financial performance consistently, emphasizing the importance of complex theoretical models that account for differential audit consequences.

From a practical perspective, companies need to assess the importance of Environmental, Social, and Governance (ESG) factors by surveying stakeholders, including shareholders, customers, and employees. Once priorities are identified, companies should develop specific plans to effectively promote ESG practices. For environmental goals, businesses should set targets to reduce carbon emissions and resource exploitation. Socially, they should ensure strong employee contracts, a healthy work environment, and good welfare. In governance, diverse and secure boards are essential. Companies should invest in energy-saving technologies that benefit the community, listen to feedback from consumers and local residents, and address issues promptly to enhance their reputation. Governments should mandate transparent disclosure of ESG practices, initiate programs to promote ESG adoption, and raise public and corporate awareness of sustainable development. Providing technical support and promoting Foreign Direct Investment (FDI) for ESG investments is crucial.

However, the study has certain limitations. First, all data comes from Refinitiv, relying on their methodology for both independent elements and additional data, potentially causing slight discrepancies compared to other sources. Second, the study's focus on "still-alive" public companies in Asian emerging markets from 2014 to 2023 may introduce temporal and geographical biases, and excluding financial firms limits applicability to non-financial sectors. Future research should incorporate diverse data sources, broader time frames, and regions to enhance validity. A larger sample size and qualitative methods, such as interviews, could deepen the understanding of ESG, audit quality, and financial performance. Comparative studies across different regulatory and cultural contexts would also help identify factors affecting ESG policies and audit quality.

AUTHORS' CONTRIBUTION

Nguyen Duong Thao Han contributed to the design and implementation of the study, to the analysis of the results and to the writing of the draft.

Nguyen Thi Le Ha critically commented on the manuscript and improved the manuscript.

Both authors discussed the results and analysis and contributed to the final manuscript

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