

Auditor's Adaptive Approach in Explaining the Effects of ESG Risk Ratings and Audit Quality

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Abstract

This research aims to present new empirical evidence regarding the role of auditors from public accounting firms in building public trust, specifically by adaptively introducing a novel approach to formulating audit opinions using extended external reporting information from audited companies. The alignment between corporate reporting information, namely financial statements and non-financial reports, must be consistent and reliable. It is also the auditor's duty in the financial statement audit process to read, understand, and analyze the disclosures and presentation of information from various types of corporate reports to avoid bias in concluding the audit results. Information on Environmental, Social, and Governance (ESG Risk Ratings) risk ratings of issuers from a credible international institution such as Morningstar Sustainability represents a new approach in considering important areas for auditors to analyze issuer risks, as also stipulated in ISA 315 (Revised) "Identifying and Assessing the Risks of Material Misstatement." The authors used data from a sample of 543 companies in four Asian countries, namely China, Singapore, Malaysia, and Indonesia, during the year 2023. The cross-sectional data were collected from the Morningstar Sustainability ESG Risk Ratings and the capital market databases of the four countries and were subsequently analyzed using STATA 14. The results of this study indicate that Company characteristics, namely ESG Performance proxied by the ESG Risk Ratings dataset, and Auditor characteristics such as Auditor Gender, Audit Tenure, and KAP Size, significantly affect Audit Quality. Conversely, other company characteristics, such as size and Age do not affect audit quality. These results prove that the adaptive patterns of auditors in the audit process can maintain high-quality audits and enhance public trust in the role of this profession both now and in the future.

Keywords: *ESG Risk Ratings, Sustainability Reporting, Gender, Audit Quality, Morningstar Sustainability Dataset.*

I. Introduction

DeFond & Zhang (2014) in their research explain that the quality of an audit can be proxied by the communication of the audit process results, which includes the provision of types of audit opinions such as unmodified opinion (unmodified opinion), qualified opinion, adverse opinion, and disclaimer of opinion. (disclaimer). Generally, audit opinions are related to the assurance services provided by auditors from Public Accounting Firms (KAP) to business entities and/or nonprofit-oriented entities that request assignments from KAP auditors to examine the fairness of the presentation and disclosure of the company's financial statements, which are prepared and are the responsibility of the company's management, to determine whether they comply with the criteria of financial accounting standards that serve as the basis for their preparation. The audited financial statements are used by the Company to meet the requirements of good corporate governance, namely the aspects of transparency and accountability, and are published for the purpose of strategic decision-making by all stakeholders of the Company. The oversight mechanism through the audit process by external auditors from public accounting firms (KAP) is known as agency costs within the context of agency theory, aimed at minimizing the asymmetry issues regarding the quality of information disclosed and presented by the agents or management of the Company to other parties interested in the Company's information. Rustam et al., (2023), also revealed in their research that in the last decade, there has been an increase in corporate publications that are non-financial/non-financial in nature, such as corporate social responsibility (CSR) reporting, sustainability reporting, and other corporate reports. (other corporate reporting). This phenomenon prompted the International Auditing and Assurance Standards Board (IAASB) in March 2022 to develop guidelines on Extended External Reporting (EER), namely the Revised ISAE 3000, intended for competent public accounting auditors to apply the standards in providing assurance services with the type of sustainable reporting engagements. The readiness of public accounting firm auditors, as demonstrated by their knowledge and understanding of the standards in this study, is adequate, even though regulations have not yet mandated assurance on reports in Indonesia. Current regulations in Indonesia are still directed towards the management of the Company as the preparers of sustainability reports, as indicated by POJK 51/POJK.03/2017; POJK 60/POJK.04/2017, and SEOJK 16/SEOJK.04/2021.

Audit quality (DeAngelo, 1981) is defined as "the probability that an auditor will detect material misstatements in financial statements and will report those findings." The execution of an audit by an auditor must be conducted in accordance with the Code of Ethics for Public Accountants (KEPAP) and the Professional Standards for Public Accountants (SPAP), as well as other regulations relevant to their audit assignment. A competent and integrity-driven auditor will produce audit quality that can be relied upon by users of the audit report. Extended External Reporting (EER) is used to describe assignments aimed at providing assurance on various forms of non-financial reporting, including integrated reporting, sustainability reporting, and non-financial reporting such as environmental, social, and governance. (IAASB, 2019). Both annual reports and EER reports require information verification (Lu, Simnett & Zhou, 2023a) Environmental, Social, and Governance (ESG) reports, Corporate Social Responsibility (CSR) reports, Sustainability (Lu, Simnett & Zhou, 2023b) to drive the economy and strategic decisions. The broader stakeholder need for reliable and high-quality information will surpass historical financial information and will increase the demand for assurance assignments. EER includes management commentary reports, social responsibility reporting, and integrated reporting. (IAASB, 2019). Agency conflicts always arise from asymmetric information on the provider's side, which is the corporate report preparer (Company management), while the users or stakeholders of corporate reporting information are the business community such as investors, creditors, and others. Additionally, regulators such as the government, represented by the Financial Services Authority, and standard-setting boards from professional associations like IFAC, IAASB, IAI, and IAPI, all collaborate to support the objectives of corporate reporting itself. The availability of datasets such as ESG risk ratings from Morningstar Sustainability and gender equality issues in audit opinions by public accounting firms (KAP) are still rarely researched, creating opportunities for new or further studies to provide empirical contributions on the relationship between ESG Risk Ratings, Gender Diversity, and Audit Quality, which is proxied by various types of audit opinions produced by KAP auditors. The novelty of this research's new variable, ESG Risk Ratings, is its ability to positively impact how the risk related to the assessment of environmental, social, and governance aspects of issuers, as evaluated by international rating agencies like Morningstar Sustainability, can influence auditors' analysis of the potential risk of company management failing to address going concern issues. Additionally, the characteristics of auditors, where the engagement partner from the audit firm is responsible for the highest level of supervision during the audit process and is authorized to provide audit opinions on the company's financial statements, are not separate from the full application of audit standard 315, which mandates auditors to analyze the potential risk of material misstatement through an understanding of the entity and its environment. The difference in gender between men and women appointed by the public accounting firm (KAP) as engagement partners is suspected to introduce variations in risk-taking behavior regarding the conclusions of their audit results. As also explained in the research conducted by Khunkaew et al., (2023), it is believed that women serving on the board of directors' committee are capable of enhancing the decision-making process, including sustainability reporting strategies, by providing different approaches in board discussions. Therefore, having more female board committee members can help generate positive impacts on company outcomes such as company performance and company value.

ESG Risk Ratings Affect Audit Quality

Sustainability conducts ESG risk assessments using the risk decomposition concept where companies are faced with two dimensions of ESG issues: exposure and management. Exposure refers to the material ESG risks faced by the company and affects the ESG risk assessment. Management refers to the company's commitment and concrete actions in addressing ESG issues through various company policies and work programs. The company's ESG score assessment is grouped into five categories: Negligible, Low, Medium, High, and Severe. The lower the ESG score of the company, the higher the risk value the company possesses, which will affect audit quality. Previous studies have shown that ESG rankings positively impact audit quality (Zhang et al., 2023; Ling et al., n.d.), but on the other hand, ESG ratings negatively affect audit quality as found by (H. Hou et al., 2022; Zou, 2023). (Song et al., 2023). Therefore, based on the existing research gap, this study will propose the following hypothesis:

H1: ESG Risk Ratings have an impact on audit quality.

The Gender Disaggregation Test of KAP Auditors Affects Audit Quality

Several previous related studies have shown that gender diversity has a positive impact on sustainability reporting (Gulzar et al., 2019; Orazalin, 2019) as well as on company performance and value (Agyemang-Mintah & Schadewitz, 2019). This is because gender diversity can enhance decision-making and help align the company with its external environment and resources (Agyemang-Mintah & Schadewitz, 2019). Furthermore, greater gender diversity helps increase the diversity of opinions and the quality of discussions related to the decision-making process, which is believed to enhance the quality and quantity of information reporting and potentially have a positive impact on company outcomes. (Husted & Suasa-Filho, 2018). For example, Ben-Amar et al. (2017) found that the increase in voluntary reporting is influenced by the percentage of female diversity. This is because, in the boardroom, gender diversity places more emphasis on social agendas to enhance the company's environmental and social image. (Al-Shaer & Zaman, 2016; Anazonwu et al., 2018; Jizi, 2017). Therefore, gender diversity can enhance company performance as well as sustainability reporting. However, to the best of our knowledge, this is the first study to consider the factor of women's diversity in the relationship between sustainability reporting and company performance among listed companies in Indonesia. Based on the above literature, we can conclude that the participation of women on the board of directors contributes to the disclosure of the company's sustainability information. Furthermore, evidence from Arayssi et al. (2016) shows that ESG disclosure leads to improved company performance at a high percentage of women on the board of directors. Therefore, this study aims to clarify and expand the research by investigating the relationship between gender diversity on the board of directors and company performance, as well as the impact of gender diversity on the board of directors on the relationship between sustainability reporting and company performance in ASEAN.

Research Methodology

The quantitative approach is the method used in this research, utilizing secondary data sourced from public information on the Stock Exchange / Capital Market websites in developing countries such as Indonesia and Malaysia, as well as developed countries like Singapore and China. In addition, information related to ESG risk ratings from issuers who prepare their sustainability reports can be accessed through Morningstar Sustainalytics. The multiple regression analysis technique using STATA 14 was chosen for data processing for further analysis. This research will examine the impact of a company's ESG rating on audit quality. The type of data used in this analysis is cross-sectional data with an observation period in 2023. The reason for selecting the 2023 observation period is due to the implementation of ESG ratings in Indonesia in 2022, which will be available in 2023. In recent years, there has been an improvement in environmental, social, and governance (ESG) performance. (Ragunandan & Rajgopal, 2022). Inadequate ESG information disclosure, companies with higher ESG disclosure scores face higher audit risks. Public accounting firms, when auditing companies with high ESG disclosure scores, exert additional efforts in reviewing, assessing, and verifying information to meet their ethical obligations and apply professional skepticism. (Ragunandan & Rajgopal, 2022). This approach is in line with the principle of decision usefulness, which should reflect the deployment of comprehensive audit efforts and resource allocation. Companies with high ratings might increase pollution to meet profitability expectations, thereby enhancing their good reputation to mitigate negative impacts. (Thomas et al., 2022). This behavior may result from autonomous choices made by the company, reflecting effective communication and interaction with stakeholders or potentially covering up the company's mistakes. (Verrecchia, 1990). ESG Risk Ratings published by this credible international rating agency, whether they have a significant impact on audit output.

The analysis model used in this study is as follows:

Where:

$$AQ = \alpha + \beta_1 ESGRiskRank + \beta_2 GD + \beta_3 CompSizeP + \beta_4 CompAge + \beta_5 AuditFirmSize + \beta_6 AuditTenure + \dots + e$$

Where:

AQ = Audit Quality proxied by the Type of Audit Opinion (1=Unqualified; 2=Qualified; 3=Adverse; 4=Disclaimer) on the audit results of the Issuer's Financial Statements that also report ESG,

Primary Variabel Independen:

ESGRiskRank = Environmental, Social and Governance disclosure, Risk Rating dari Morningstar Dataset

GD = Gender Diversity, Male Public Accountants are rated 0; Female 1

Secondary Variabel Independen:

CompSize = Company Size, based on the Logit of the Number of Employees

CompAge = Company Age, the period from when the company was listed on the stock exchange until the year 2023

AuditFirmSize = Firm size / KAP, based on categorization (1=Local KAP; 2=Non-BIG20; 3=BIG20 and 4=BIG4), the higher the value, the more it indicates the KAP's reputation in maintaining audit quality in the eyes of the public.

AT = Audit Tenure

e = standar error

Research Model Testing Results

The results of the descriptive statistics are shown in Table 1 below. The number of data observed in this study was obtained as many as 543 for the observation period of 2023 on companies listed on the stock exchanges of four countries, namely Indonesia, Malaysia, Singapore, and China, and have ESG Risk Ratings publications on the Morningstar Sustainalytics website.

Table 1. Descriptive Statistics

Variable	Obs	Mean	Std. Dev.	Min	Max
quality_audit	543	1.081031	.4389576	1	4
esg_risk	543	2.313076	1.002559	0	4
comp_size	543	34530.36	76908.09	24	451830
comp_age	543	23.67035	12.43492	1	75
gender_au	543	.801105	.3995369	0	1
auditfirm_size	543	1.35175	.7584893	1	4
audit_tenur	543	1.762431	.9646459	1	5

The descriptive statistics in Table 1 above illustrate the ESG performance for a combination of four countries (Indonesia, Malaysia, Singapore, and China), which the researchers intend as a representation of both developing and developed economies. This is examined in relation to the effect on the type of audit opinion given by auditors from public accounting firms, as part of the audit process to comply with Audit Standard

315 and the conceptual framework of non-financial information used in strategic decision-making mechanisms. A total of 543 data points are cross-sectional, consisting of many listed companies and the number of years during the 2023 period. The quality of the audit is proxied by the audit opinion, which is the final product of an audit process. The average value for the opinion shows a value of 1.08, which means the type of opinion produced in the audit process is an unmodified opinion (unmodified opinion). The lowest value for the opinion here is 1 and the maximum value is 4. This indicates a value of one for an unmodified opinion; 2 for a modified opinion with exceptions; 3 for an adverse opinion; and 4 for a disclaimer of opinion. ESG Risk Ratings are assessments conducted by the credible international institution Morningstar Sustainability in collaboration with the stock exchange authorities in the four countries to provide information to investors and the public regarding risk ratings based on environmental, social, and corporate governance aspects as part of their sustainability reporting. The average score is 2.31 on the ESG Risk Ratings scale, indicating that the companies listed on the stock exchanges of the four countries are categorized as "Medium," meaning they have a moderate ESG risk. The minimum ESG risk value is 0, indicating no risk; 1 for Low ESG risk; 2 for Medium ESG risk; 3 for High ESG risk; and 4 for Severe ESG risk. Company Size or Ukuran Perusahaan is measured by the number of employees, where a larger number of employees can categorize the Company as a larger entity. The average value obtained from the descriptive statistical analysis is 76,908 employees owned by the observed companies, with the company having the smallest number of employees being 24 and the largest being 451,830 employees. The characteristics of the business sector and industry are one of the factors influencing the number of employees. Company Age or the age of the Company, measured through the duration of its listing on the stock exchange, is an indicator of the Company's maturity level and its ability to withstand various risks. Based on the average value obtained, which shows a figure of 12 years, this means the company's presence in the capital market exceeds one decade with a relatively good reputation for investor trust regarding the sustainability of the company becoming a public company. The smallest number is 1 year and the highest is 75 years. The gender of the auditor refers to the sex of the audit team personnel who are assigned as partners in sign (signatories of the audit opinion) for the audit assurance services on the entity's financial statements. The average value of 0.8 obtained indicates that the male gender dominates in signing audit opinions and is, of course, responsible for formulating those opinions, while the remaining opinions are formulated by female partner in sign auditors. The minimum value represents the gender of female partner-level auditors, while the maximum value represents the gender of male partner-level auditors. The gender diversity of male and female auditors in their roles of formulating and being responsible for audit opinions reflects the implementation of the SDGs in the four observed countries, which has shown progress, although it is still relatively perceived as not meeting the equality principles intended in the SDGs.

The size of a Public Accounting Firm (audit firm) describes the reputation status of the firm as perceived by the business community, based on the dominance of the firm's resources (number of employees, number of partners, and number of branch offices in various countries) it possesses, including the number and size of the businesses of the audit clients it handles. The average score is 1.3, which means that the size of the KAP observed from the four countries is owned by the BIG4 KAP. Audit tenure, also known as KAP auditor rotation, indicates the frequency of a KAP being assigned to conduct an audit on an entity's financial statements. The average score obtained is 1, which shows that the frequency or how many times a KAP conducts an audit assignment for the observed Company entities in this study is 1 audit or 1 financial year period for the audited financial statements. Each stock exchange authority in a country has policies or regulations regarding how many times an audit firm is allowed to audit a public company. Generally, it is three audit periods, to maintain the independence and quality of the audit produced. The minimum audit tenure is set at 1 year, and the maximum value of five indicates a commitment period of 5 years.

Correlation Matrix Between Variables

In this section, the correlation between variables from the proposed research model is presented. Table 2. illustrating the correlation between variables for the audit quality model proxied by Audit Opinion, which is a characteristic of Public Accounting Firms, is illustrated as follows:

Table 2. Correlation Matrix with the dependent variable audit quality opinion

	quality_audit	esg_risk	comp_size	comp_age	gender_au	auditfirm_size	audit_tenur
quality_audit	1.0000						
esg_risk	-0.1164***	1.0000					
comp_size	-0.0645*	0.1387***	1.0000				
comp_age	0.0069	0.0605	0.2491***	1.0000			
gender_au	0.0710	0.0682	0.0914**	0.1635***	1.0000		
auditfirm_size	0.2024***	0.1218***	-0.1118***	-0.0849**	-0.0366	1.0000	
audit_tenur	-0.1375***	0.0370	-0.0412	-0.0435	-0.0367	-0.0167	1.0000

*** p-value <0.01; ** p-value <0.05; * p-value <0.10

Based on testing using STATA 14, it was found that the average ESG Risk has a negative correlation with the audit opinion given by public accountants. This indicates that the higher the risk at the ESG level, the better the opinion given by the auditor. The results support the hypothesis that companies with ESG Risk Ratings published by Morningstar Sustainability are more focused on maintaining the quality of their financial reporting compared to sustainability reporting. Under these conditions, there is a tendency for these companies to assign audit assurance services for their financial statements to Public Accounting Firms categorized as BIG4 and BIG20 compared to others. Thus, there is a lower likelihood of receiving audit opinions that fall into the modified categories such as Qualified Opinion; Adverse Opinion; and Disclaimer of Opinion. The findings are consistent with previous research (Diab & Eissa, 2024; Wang et al., 2023), where the correlation matrix shows that the independent variables are correlated below 5%, indicating that multicollinearity issues do not occur.

Company Size (Comp_Size) has a positive correlation with ESG risk, indicating that the larger the company, the higher the ESG risk it possesses because larger companies will have product diversification and a greater number of factories. The age of the company has a positive correlation with size, indicating that the longer a company is listed on the capital market, the better its competitive advantage compared to newly listed companies. Companies that have been listed for a longer period have better strategies in terms of price leadership, a more diverse range of products, and a wider market segment. The gender of public accountants has a positive correlation with size, indicating that when the gender of public accountants is male, they are more likely to provide assurance services to larger companies compared to female public accountants. The gender of public accountants also has a positive correlation with the age of the company, indicating that when male public accountants are involved, they are more likely to provide assurance services to companies with a longer age compared to female public accountants.

Model Test with Gender Disaggregation of KAP Auditor Partners

In this section, the binary logistic test for the proposed research model is presented. Table 3 displays the results of the KAP and Company characteristic tests with auditor gender disaggregation, where 1 indicates male auditors and 0 indicates female auditors. This test results in a condition where the characteristics of the Public Accounting Firm and the Company consistently affect audit quality as indicated by the audit opinion, although consistent results were also found for some of its variables that do not have an impact. ESG Risk Ratings have a negative impact on the formulation of audit opinions when male auditors are the ones formulating the audit opinion. This means that if the ESG Risk

Rating shows an increasing score or if companies with sustainability reporting are assessed to have moderate to high ESG risks, it will be a consideration in the audit process by the auditor. This is because it is a main part of the audit procedure to obtain evidence and supporting information from the auditor's assessment activities regarding the company's business risks and the industry environment the company operates in (IAPI, 2022). The aspects of exposure and management of the company's ESG risks are important parts that the auditor assesses to determine whether it will affect the company's ability to address these issues.

Table 3. Model Characteristics of Public Accounting Firms with Auditor Gender Disaggregation

Independen Variabel	Audit Quality Opini		
	All Data	Gender Auditor (Laki-Laki)	Gender Auditor (Perempuan)
esg_risk	-0.0613*** (0.0185)	-0.0717*** (0.0218)	0.00227 (0.0219)
comp_size	-2.26e-07 (2.47e-07)	-2.75e-07 (2.84e-07)	-1.51e-07 (3.79e-07)
comp_age	0.000871 (0.00152)	0.00165 (0.00187)	-0.00165 (0.00153)
gender_au	0.0918** (0.0461)	ommitted	ommitted
auditfirm_size	0.126*** (0.0244)	0.157*** (0.0290)	-0.0177 (0.0268)
audit_tenur	-0.0574*** (0.0188)	-0.0737*** (0.0228)	0.00135 (0.0197)
ommitted.gender_au		-	-
Constanta	1.067*** (0.0784)	1.153*** (0.0881)	1.071*** (0.0736)
Observations	543	435	108
R-squared	0.086	0.107	0.016

Standard errors in parentheses
 *** p<0.01, ** p<0.05, * p<0.1

The issue of ESG Risk Ratings is considered significant and material, leading engagement partner-level auditors to provide modified audit opinions (qualified, adverse, and disclaimer) compared to unmodified opinions. This result supports the study by Wang et al. (2023). On the contrary, the results of this disaggregation test do not align with the hypothesis proposed by the researchers that the gender diversity of engagement partner auditors, particularly those from the female perspective, would provide a balanced perspective in considering the effects of ESG Risk Ratings in the resulting audit opinion. As explained in previous research by Khunkaew et al., 2023, the earlier study highlighted that the inclusion of female gender in decision-making serves as a mediator when there are differences in opinion and the quality of team discussions. In addition, the involvement of women can enhance the quality and quantity of reporting information, which has the potential to positively impact the Company's reputation. It is even emphasized in several previous related studies that the diversity of women has a positive impact on sustainability reporting (Gulzar et al., 2019; Orazalin, 2019) as well as on company performance and value. (Agyenmang-Mintah & Schadewitz, 2019). These results indicate that ESG Risk Ratings have a significant impact on audit opinions by engagement partner auditors, whether tested on all data or by gender disaggregation of engagement partner auditors, where categorization 1 indicates male engagement partner auditors and value 0 indicates female auditors. The significant influence is negative when the audit opinion is formulated by male engagement partner auditors compared to female auditors. This condition occurs because the proportion of male auditors dominates the engagement partner auditor position compared to female auditors, with a proportion based on data tabulation sources showing that out of 543 auditors, 435 or 80% are male and the remaining 108 or 20% are female. The relative tendency of male engagement partner auditors to issue unmodified audit opinions is higher without being intimidated by the publication of the Company's ESG Risk Ratings. This may be due to professional considerations that the scope of the assigned audit leans more towards financial audit aspects compared to others, with compliance to financial accounting standards criteria. Although audit standards also require auditors to analyze the assessment of the entity's business risks and its environment, including the internal control system, which is also an indicator of a Company's governance. In addition to ESG Risk Ratings, which have an impact on audit quality, it is consistently observed that when the gender of the engagement partner auditor is disaggregated, the Size of the Public Accounting Firm (KAP) indicated by Big4 and Big20 KAPs, which statistically dominate a total of 499 data or 92% of audits on company financial statements, will issue unmodified audit opinions when the gender of the engagement partner auditor is male. This is because the preference for assessing non-financial risks is still considered relatively less significant compared to financial misstatement risks by male audit partners compared to female partners. Similarly, the results of the audit tenure or KAP rotation test negatively affect audit quality when the gender of the partner auditor issuing the audit opinion is male compared to female.

Test the Model with Audit Tenure Disaggregation

In this section, the correlation between variables from the proposed research model is presented. Table 4, which illustrates the correlation between variables for the audit quality model proxied by Audit Opinion, a characteristic of Public Accounting Firms, is illustrated as follows:

Table 4. Model Characteristics of Public Accountant Offices with Audit Tenure Disaggregation

Independen Variabel	Audit Quality Opini		
	All Data	Audit Tenur <2 Thn	Audit Tenur >2 Thn
esg_risk	-0.0613*** (0.0185)	0.142 (0.229)	0.0271* (0.0141)
comp_size	-2.26e-07 (2.47e-07)	-1.95e-07 (1.24e-06)	-9.38e-08 (7.88e-08)
comp_age	0.000871 (0.00152)	0.000155 (0.00523)	0.000404 (0.000576)
gender_au	0.0918** (0.0461)	0.200 (0.136)	0.00905 (0.0180)
auditfirm_size	0.126*** (0.0244)	0.176 (0.118)	0.00571 (0.00784)
audit_tenur	-0.0574*** (0.0188)	-0.135** (0.0622)	-0.00822 (0.00681)
Constant	1.067*** (0.0784)	0.865*** (0.323)	0.911*** (0.0530)
Observations	543	120	217
R-squared	0.086	0.076	0.034

Standard errors in parentheses
 *** p<0.01, ** p<0.05, * p<0.1

The table above displays the results of the characteristics test of KAP and Companies with disaggregation of audit tenure or KAP turnover with categories < 2 years and > 2 years, where KAP turnover occurs for those assigned to audit the company's financial statements. The duration of the assignment is set at 2 years as the normal assignment period in the four countries observed in this study, considering that the characteristics of audit tenure regulations in these four countries have different time spans, thus 2 years is the midpoint assignment period of this research. This test yields differences from the tests on models 1 and 2, where ESG Risk Ratings positively influence audit quality, as proxied by the acceptance of audit opinions aligned with ESG risk levels. An increasing ESG risk score will also impact the acceptance of modified audit opinions (unqualified with an emphasis of matter, qualified, and adverse) when the audit tenure or the change of the public accounting firm (KAP) auditing the company's financial statements exceeds 2 years. The experience of the KAP auditor in conducting the Company's audit process will enhance the auditor's understanding of all aspects of both financial and non-financial risks, and the ability to analyze risks that can lead to the selection of a modified audit opinion type will be higher. Therefore, it is possible that there will be a change in the opinion given to a level that more accurately reflects ESG risks in line with the financial risks of the Company audited by the KAP auditor. These results are also in line with previous research by Yao et al. (2020), which states that Measurement not only increases the importance of environmental information but also encourages auditors to pay more attention to environmental information during decision-making about audit cost pricing and the formation of audit opinions. After the issuance of Measurement, more environmental disclosures can reduce the risk of auditor involvement with information effects and signaling effects. First, environmental disclosures affect the auditor's assessment of the client's inherent risk. Environmental disclosure, to some extent, can reduce information asymmetry between the company and the auditor. Measurement exerts tremendous public pressure on company managers, and to maintain legitimacy, managers tend to increase the level of environmental disclosure in response to this pressure. If highly polluting companies or environmentally sensitive companies disclose less environmental information after the publication of the Measurement than before, there may be potential client business risks in these companies for auditors. Second, higher-quality environmental disclosures indicate lower control risks and demonstrate the honesty, credibility, and trustworthiness of managers. Several studies have found that large companies and state-controlled companies tend to disclose more environmental information. It is well known that large companies and state-controlled companies usually have good internal controls, so environmental disclosures can be considered an indicator of good internal controls in client companies. At the same time, the honesty, credibility, and trust of managers enhance the auditor's assessment of the credibility of financial disclosures and reduce audit efforts.

Discussion

The characteristics of companies identified as ESG Risk Ratings, which also constitute the uniqueness of this research, compared to previous studies that addressed the topic of sustainability and its correlation with audit quality, according to the researcher's knowledge, none have used the dataset from Morningstar Sustainalytics and empirically tested it through the setting of four (4) countries, namely Indonesia and Malaysia representing emerging economies, and Singapore and China representing developed economies. The four countries in 2023 have published ESG Risk Ratings from various publicly listed companies with a range of business types and industries. Of course, besides ESG Risk Ratings, which negatively affect the acceptance of audit opinions from KAP auditors, other characteristics of the Company, namely Company Size (Company_Size) and Company Age (Company_Age), have also been tested, and neither shows a significant influence on the acceptance of audit opinions. This may occur because KAP auditors have a preference for the main areas that are most at risk in an audit process of the Company's financial statements, which they consider professionally for in-depth analysis based on the acquisition of sufficient and appropriate audit evidence to formulate an audit opinion relevant to those conditions. ESG Risk Ratings are part of the Company's characteristics that can most significantly indicate the influence of KAP auditors' considerations, also through additional testing conducted with the disaggregation of auditor gender, male (1) and female (0), where the results consistently show that ESG Risk Ratings will affect the formulation of an unmodified or unqualified audit opinion when the auditor is male. Several previous studies have confirmed the same results as this research, although the direction of the relationship is not always the same.

Characteristics originating from Public Accounting Firms identified as Gender Auditor Level Engagement Partner Auditor, which is also a unique aspect of this research, compared to previous studies where Gender Diversity is a research issue referring to the SDGs and will make a tangible contribution to the world currently addressing the issue of gender equality for men and women to be involved in decision-making from all aspects of life, including Politics, Culture, Environment, Economy, and Social. The role of women has become the focus of global attention to create a more balanced perspective, especially in this study which uses the role of women in the final decision-making of an audit process related to the performance of the audited company. This is to confirm previous research that looks from the perspective of the Company, namely that the presence of female directors has an influence on business, as well as research that shows that the increase in voluntary disclosure about climate change is consistent with the percentage of women on the board of directors. (Khunkaew et al., 2023). This research confirms previous studies that gender influences the auditor's decision-making in formulating audit opinions. Furthermore, after disaggregation to obtain a detailed picture of the results, it is known that the gender of the engagement partner auditor who predominantly influences is male compared to female. This indicates a dominant proportion of males in the role of decision-makers for audit opinions in Public Accounting Firms (KAP), compared to females.

Other characteristics of Public Accounting Firms also have a positive influence on audit quality as indicated by the formulation of audit opinions, namely the size of the firm, which is generally measured by the status of BIG Audit firm size. The size of the Public Accounting Firm is indicated by whether the Public Accounting Firm is affiliated with foreign entities, with the BIG 4, BIG 20, outside the BIG 20, or local CPA firms. When the CPA firm is affiliated with the BIG 4, it will show more than sufficient resources compared to CPA firms outside the BIG 4. Research by Chen et al. (2017) concluded that using an audit sample conducted in 33 countries from 1994 to 2012, it was shown that auditors are more likely to issue modified audit opinions to clients residing in countries with a strong culture of confidentiality, confirming the confidentiality hypothesis proposed by Gray. (1988). Further analysis shows that the relationship is less clear in countries with strong investor protection compared to countries with weak investor protection, indicating that the risk of misstatement in a culture of confidentiality is mitigated by formal institutions related to investor protection. Previous studies have revealed that companies in a culture of secrecy tend not to hire more competent auditors such as Big4 or Big20 auditors. This perspective suggests that auditors tend to issue modified opinions to mitigate potential audit risks driven by culture. Previous studies have also found that auditors consider formal institutions such as weak investor protection as risk factors.

Another characteristic of KAP that affects audit quality_opinion is also determined by audit tenure, also known as KAP rotation. The four observed countries have regulations by stock exchange authorities or governments regarding publicly listed companies on their respective stock exchanges, which have different regulations on the periodicity of audit assignments by KAP. Generally, the duration of a KAP receiving an audit assignment for a company is no more than 2-3 years, depending on the regulations of the stock exchange authorities in that country. Generally, auditors with extensive experience are highly capable of detecting material misstatements in the financial statements of the audited entity, reducing the likelihood of misstatements in the financial statements, and promoting efficient

company investment and audit efficiency. Audit quality is higher when auditors possess more relevant expertise and audit experience. Additionally, auditors who audit companies consecutively demonstrate better financial reporting quality. The audit risk of auditors with long tenures and extensive experience is lower than the audit risk observed after changing auditors due to sufficient knowledge about the client. However, for companies of clients whose auditors pay extraordinarily high audit fees, the tenure of the public accounting firm (KAP) will be longer and potentially reduce audit quality. (Wang et al., 2023).

Conclusion

Non-financial information such as sustainability reporting and ESG risk ratings from Morningstar Sustainalytics is part of extended external reporting that attracts the attention of capital market investors and the public. Therefore, for KAP auditors who are auditing the Company's financial statements, this non-financial information becomes an important consideration that will influence the decision in determining the type of auditor's opinion. Generally, companies listed on the stock exchange always strive to obtain an unmodified audit opinion due to the detrimental economic consequences of receiving such an opinion. As far as I know, previous studies have relatively provided insufficient empirical evidence regarding how ESG performance, demonstrated through the acquisition and publication of the Morningstar Sustainalytics dataset in the form of ESG risk scores of public companies from four countries (Indonesia, Malaysia, Singapore, and China), can subsequently enhance audit opinion output. This study empirically examines the correlation between the ESG performance of sustainability-reporting companies, indicated by the acquisition of ESG Risk Ratings and Gender Equality of KAP Auditors, and Audit Quality, proxied by audit opinion, using a sample of companies listed on the stock exchanges in Indonesia, Malaysia, Singapore, and China in 2023, based on the availability of complete accessible data and employing cross-sectional data analysis to address the limitations of data availability. The results found that the company's ESG performance is significantly and negatively correlated with the acceptance of unmodified audit opinions, verifying H1, while other company characteristics such as company size and company age are not significant. The discussion is that male KAP auditors are more critical in relying on professional judgment for non-financial information, while inexperienced auditors tend to rely solely on non-financial information such as ESG ranking scores when performing their work and concluding the audit results. Therefore, male auditors weaken the ESG effect on audit opinions, verifying the gender disaggregation test.

This study also explores other mechanisms of KAP characteristics, such as KAP Size with measurements of Big4, Big 20, and others, where it was found that KAP levels of Big4 and Big 20 dominate the audit assignments of Companies in the four countries. This is significantly and positively correlated with the acceptance of unmodified audit opinions, verifying H2. We found that the reputation of KAP in the Big4 and Big20 categories gives investors confidence to tend to accept the audit reports of Companies audited by reputable KAPs compared to local KAPs. In this study, it was found that audit tenure or the duration of the audit assignment by the public accounting firm (KAP) can significantly and negatively impact the quality of financial reporting, which in turn affects the auditor's decision, verifying H2. The results remain strong after disaggregating based on assignment duration of < 2 years and >2 years, where longer assignment periods decrease the auditor's skepticism during the audit process.

This study provides several contributions to the literature. First, it expands research on the consequences of decision-making by external users of auditors regarding ESG performance. Second, it enriches the literature on auditor gender by providing empirical evidence on the impact of auditor gender in the decision-making of auditor opinions. Third, it contributes to the literature on new factors such as ESG Risk Ratings from the Morningstar Sustainalytics Dataset that influence auditor decision-making. This research has several practical implications. First, the research on the consequences of decision-making by external users, KAP auditors, regarding non-financial information on ESG Risk Ratings, provides empirical evidence that can be used to draw the attention of company management to consciously improve their information disclosure and reporting. To obtain better auditor feedback, companies should implement the ESG concept in all aspects of their operations and management and focus on the synergy of environmental, social, and governance factors. Second, the factors influencing the audit opinion are studied to provide a reference for auditors intending to issue a relevant opinion by including all important information that can significantly increase the company's audit risk. At the same time, auditors must enhance their professional competence in analyzing the risk impact of ESG information to avoid misjudgments in their audit opinions. Fourth, investors should focus on the company's financial performance and ESG rating scores before making investment decisions. Companies with better ESG performance are more likely to receive an unqualified opinion, which can build a good social reputation for the company, thereby expected to generate better sustainable returns.

Data Availability Statement

The data used in this study were obtained from publicly available sources, including the Morningstar Sustainalytics ESG Risk Ratings and capital market databases from the respective countries. Additional details on data access and use can be provided upon request.

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The authors declare no conflict of interest in relation to this study.

Ethics Approval Statement

This research did not involve human participants, animal subjects, or sensitive data requiring ethical approval.

Consent Statement

The study did not involve human subjects requiring informed consent.

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All authors contributed equally to the conceptualization, data collection, analysis, and writing of this manuscript

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