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Article

THIS IS WHY WE LEAD: EXPLORING ESG, GENDER DYNAMICS AND MARKET PERFORMANCE IN INDONESIA

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ABSTRACT

This paper examines the impact of gender diversity on corporate boards and its effects on ESG performance in Indonesian companies. It highlights the potential benefits of increased diversity in enhancing corporate governance and financial outcomes. The study addresses an increasingly recognized issue: the influence of gender diversity on corporate boards, particularly in emerging markets. In these contexts, diversity can lead to more balanced perspectives, improved risk management, and better alignment with ESG standards. The central question explored in this research is how gender diversity on corporate boards affects ESG risk and financial performance. Unlike existing studies that often generalize findings from developed markets, this paper focuses on Indonesia, providing unique insights relevant to emerging market literature. Using statistical analysis of ESG risk data, gender diversity metrics, and financial performance indicators across various industries in Indonesia, this study takes a sector-specific approach to understanding ESG impacts. The analysis demonstrates a significant negative relationship between board gender diversity and ESG risk, indicating that a higher proportion of women on boards is associated with lower ESG risk. This outcome reflects enhanced decision-making and ethical oversight. Moreover, the analysis reveals that industry classification significantly influences ESG risk. Sectors such as energy and materials show heightened risks due to their inherent environmental challenges, while lower-risk sectors like technology tend to perform better on ESG measures. Although ESG risk does not appear to impact overall financial performance significantly, it does show a positive association with stock performance. This suggests that investors may favor companies with higher ESG ratings, anticipating future improvements in their ESG metrics. These findings imply that board gender diversity can positively impact corporate ESG outcomes in emerging markets. However, this effect does not directly translate to improved financial performance, possibly due to the high initial costs and delayed benefits of implementing ESG initiatives. The study concludes that board gender diversity can enhance corporate governance and attract socially responsible investors, particularly in high-risk sectors, and emphasizes the need for regulatory support to promote diversity, offering valuable insights for policymakers and investors in emerging markets.

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1. INTRODUCTION

Gender diversity in corporate boards is increasingly recognized for its potential to enhance decision-making, foster innovation, and improve overall performance. Beyond regulatory compliance, Diversity, Equity, and Inclusion (DEI) initiatives are often driven by moral arguments that emphasize the importance of corporate diversity as a fundamental value and business cases that highlight how a wealth of perspectives brought by diverse teams leads to better decision-making and better business outcomes. Additionally, the theoretical argument drawn from stakeholder theory suggests that board gender diversity may positively influence ESG reporting since it aligns with the core principle of sustainable business practices. Diverse boards foster a more comprehensive range of perspectives and more inclusive decision-making, potentially enhancing a company's responsiveness to ESG issues.

Gender diversity in corporate boards is particularly relevant in ESG reporting and emerging markets like Indonesia for several reasons. Firstly, companies may face unique socio-economic and regulatory challenges in emerging markets. Gender-diverse boards can provide a broader perspective, improve risk management, and help companies navigate these complexities more effectively, which is critical for addressing ESG-related risks. This

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diverse approach can foster innovation, particularly in sustainability practices and stakeholder engagement. Secondly, gender diversity directly supports the social and governance aspects of ESG. Diverse boards often bring various perspectives, promoting transparency, ethical decision-making, and social responsibility, which are highly valued in ESG reporting. Thus, companies with gender diversity are frequently seen as more committed to inclusive practices and better positioned to meet stakeholder expectations for responsible governance and social impact. Moreover, diverse boards can play an essential role in signaling a company's commitment to sustainable practices and responsible governance in emerging markets, where there are many concerns about governance standards and shareholder rights. Lastly, many emerging markets, including Indonesia, are adopting or tightening around ESG and gender diversity on boards to comply with global regulations like the Sustainable Finance Disclosure Regulation in the EU and local regulations such as OJK Regulation No. 51/POJK.03/2017 (POJK 51). Those regulations are pushing companies to meet global sustainability expectations. So, companies with gender-diverse boards are often better prepared to comply with these regulations, making gender diversity not only a strategic advantage but also a compliance necessity.

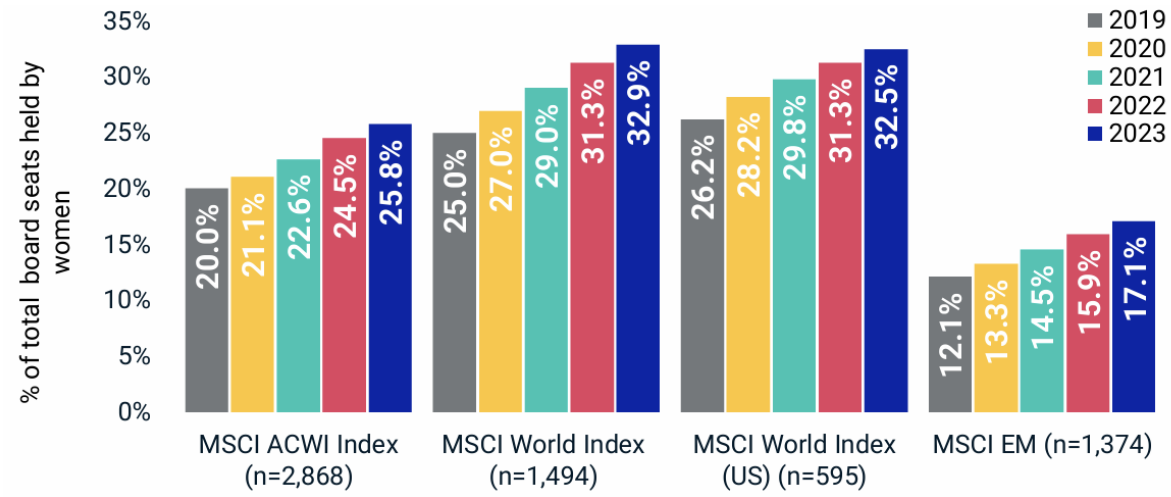

Figure 1. Overall percentage of Total Board Seats Held by Women by Index Constituents
Source: MSCI ACWI Progress Report, 2024

Based on MSCI's progress report published in 2024, which annually reports global data on the state of women's representation on corporate boards and other aspects of diversity, some of their key findings show female representation on boards was geographically skewed, where women continued to hold far more directorship in the developed markets (32,9%) than the emerging markets (17,1%). This geographical skew provides crucial motivation to examine the critical gender diversity disparities in emerging markets, especially in its relationship to corporate governance and ESG outcomes. Emerging markets are attracting more attention from global investors who prioritize ESG metrics, which makes studies on board diversity and ESG performance especially relevant to investment and risk management literature.

Moreover, the findings from MSCI's progress report also highlight a positive trend in women on board globally, where the percentage of women on boards was trending upward, and the number of all-male boards decreased (Csonka & Milhomem, 2023). This report is relevant to the Indonesian market as an emerging market, where women on board should be given more directorship opportunities and encouraged to improve the ESG reporting initiatives in this country. ESG risk ratings also become essential in assessing a company's commitment to sustainability and governance (PWC, 2021). The recent trend of women on boards is also supported by recent regulatory developments such as the EU's Sustainable Finance Disclosure Regulation (SFDR), the UK's Financial Conduct Authority (FCA), and the Prudential Regulation Authority (PRA).

Some research proves that companies with gender-diverse boards are often more committed to transparency, accountability, and social responsibility, which are critical factors in high ESG ratings. Board gender diversity has become a marker of corporate inclusivity and a strategic asset in meeting stakeholder expectations for responsible governance and sustainability reporting. However, empirical evidence remains inconclusive in measuring the impact of board gender diversity on financial performance context, with some studies suggesting a positive impact while others finding no significant improvement in financial metrics.

With the increasing trend that drives women's progress on boards, there is also urgency to explore how women on board affect ESG performance and how ESG performance mediates the relationship between board

gender diversity and the company's performance. This research emphasizes the need for evidence on the impact of women on boards, driven by investor demand and global trends toward diversity and sustainability. While intuitive arguments support the influence of women on board towards ESG performance, research results are nuanced. For example, Chebbi & Ammer (2022), Rao & Tilt (2015) and Cucari et al. (2018) Suggests that the presence of more female board members does not significantly improve or worsen ESG performance. However, several studies found a positive impact of women on boards on ESG performance. (Arayssi et al., 2020; Ben-Amar et al., 2017; Ramon-Llorens et al., 2021; Wasiuzzaman & Wan Mohammad, 2020).

Despite growing interest in board gender diversity, there remains a lack of consensus regarding ESG performance's impact on the company's performance. Researchers have produced conflicting findings suggesting various results. On the one hand, some previous studies found a positive association between gender-diverse boards and financial outcomes (Alodat et al., 2023; Flabbi et al., 2019; Kılıç & Kuzey, 2016; Zeng & Jiang, 2023). On the other hand, there are findings of no significant improvement in performance when more women serve on boards (Tarigan & Semuel, 2015). The debate centers on whether gender diversity directly influences financial metrics such as profitability, stock returns, and market performance (Jin, 2023; Wahyudyatmika & Astuti, 2024). The impact of ESG performance also extends to market performance. Some research provides evidence for the positive influence of women on boards in market-based performance and price-to-earnings ratios (Ben-Amar et al., 2017; Cucari et al., 2018; Liao et al., 2015; Wasiuzzaman & Wan Mohammad, 2020).

Previous academic investigations have explored the various impacts of ESG initiatives on company performance in numerous contexts, including based on countries and economic classification. In the global context, Almeyda and Darmansya (2019) found that an ESG performance index positively influences companies' financial performance. Research in the limited scope of emerging countries, such as Malaysia and Indonesia, found that ESG significantly positively affects financial performance (Rasyad et al., 2024). However, several studies in developed countries found that ESG performance impacts financial performance positively (Arayssi & Jizi, 2019; C. Zhao et al., 2018) and negatively (Liang et al., 2023)Considering these previous findings, we delve deeper into the mediating role of ESG risk ratings, aiming to understand how gender diversity interacts with ESG ratings to shape company performance. By examining empirical data and theoretical frameworks, we contribute to the continuing dialogue on this critical issue.

This study aims to contribute to the knowledge gap in clarifying and understanding the relationship between women on board, ESG performance, and company performance, particularly in accounting. By analyzing rigorous, peer-reviewed studies, we seek to shed light on whether board gender diversity truly drives financial success. This will enrich the limited number of research exploring gender diversity's impact on ESG performance and company performance in Indonesia as an emerging market. Further, this research also tries to explore how ESG performance mediates the relationship between board gender diversity and company performance and tries to provide some evidence on the relevancy of multi-theoretical frameworks in sustainable business practices. The previous findings reveal that board gender diversity and industry classification negatively affect ESG Risk Rating, while ESG Risk Rating positively impacts stock performance. However, no compelling evidence exists that ESG Risk Rating significantly impacts financial performance. The study offers valuable insights for investors and policymakers, contributing to understanding gender diversity requirements, ESG regulation, and the implementation of corporate governance in Indonesia.

2. LITEATURE REVIEW AND HYPOTHESIS DEVELOPMENT

2.1. Literary Studies

Numerous theories, including agency, upper echelon, and critical mass theories, have been used to understand the implications of board gender diversity and ESG performance on a company's performance. The Upper Echelon Theory suggests that top executives and decision-makers characteristics, values, and experiences influence organizational outcomes. This theory indicates that top management teams' demographic composition, background, skills, and personality traits significantly shape strategic decisions and organizational performance outcomes. By examining top leaders' cognitive and demographic attributes, including gender diversity, the Upper Echelon Theory offers insights into how the composition of the executive team affects decision-making processes, strategic choices, and overall organizational outcomes.

Critical mass theory is a concept used in various fields, including sociology, economics, and technology, and it refers to a sufficient number or threshold within statistical modeling. When a committed minority reaches critical mass, it can trigger a cascade of behavioral change, rapidly increasing acceptance of a minority view. This helps explain how new norms, practices, or innovations become widespread and informs strategies for policy change, advocacy, and social movements. Critical Mass Theory suggests that a certain threshold of gender diversity is needed for its positive effects to manifest. Boards with a critical mass of women may perform better.

The increasing demand for Corporate Social Responsibility (CSR) reports in Indonesia and ASEAN countries has captured the attention of the public and shareholders. This trend represents a significant stride toward

enhancing governance quality, responsibility, and accountability within the business sphere. Across ASEAN nations, deliberate steps have been taken to amplify the disclosure of CSR activities. In Indonesia, reporting on CSR activities is seen as a mitigation strategy and a means of value creation. However, it is essential to recognize that while CSR and environmental, social, and governance (ESG) practices contribute positively, they also introduce complexities and risks. ESG considerations broaden companies' scope, encompassing social and performance-related aspects. Transparency in financial reporting becomes crucial, aligning with the principles of responsible business conduct. Nevertheless, this expanded focus also exposes organizations—both in the market and industry—to heightened risk. (Ben-Amar et al., 2017).

2.2. Hypothesis Development

Board of diversity refers to the variety of individual characteristics within a board of directors. These characteristics span gender, ethnicity, nationality, education, abilities, etc. Specifically, board gender diversity pertains to the representation of different genders within an organization's board. Recent studies have explored the impact of gender diversity on organizational ESG disclosure (Arayssi & Jizi, 2019; Orazalin, 2020; Suttipun, 2021). Female directors often champion ESG initiatives, as women bring unique perspectives to the boardroom due to distinct leadership roles, educational backgrounds, experiences, communication styles, and risk preferences. Research suggests that women are more risk-averse and ambiguity-averse than their male counterparts in decision-making. In summary, having women on boards not only promotes diversity but also contributes to reducing ESG risks. Their presence fosters a holistic approach to responsible business practices, benefiting the organization and its stakeholders.

H1: Board gender diversity will lower ESG risk.

The Indonesia Stock Exchange (IDX) categorizes companies into similar industry sectors in the capital market. Different industries exhibit varying environmental, social, and governance risks due to sector-specific characteristics, regulations, and business practices. Firstly, companies in specific industries (e.g., extractive industries, heavy manufacturing, or energy) are more exposed to ESG risks compared to others (e.g., technology, healthcare, or services) since there are industry-specific factors, such as resource usage, emissions, labor practices, and supply chain complexities, contribute to varying ESG risk profiles. Secondly, industry norms and practices influence a company's ESG performance and risk exposure; for example, industries with established sustainability practices may exhibit lower ESG risks, while those lagging may face higher risks. Thirdly, the regulatory environment within specific industries also affects ESG risk levels, where the government sets stringent regulations in specific sectors (e.g., financial services or pharmaceuticals), which may lead to better ESG practices and lower risks. Thus, companies within the same industry tend to exhibit similar ESG risk profiles because industry peers often adopt similar practices, leading to shared ESG risks.

Research studies have been conducted to explore the influence of industry classification on Environmental, Social, and Governance (ESG) performance. Zhao et al. (2023) found a positive influence on corporate ESG performance within the same industry and region, while Jin (2023) found a positive correlation between ESG performance and major mining companies. In summary, these studies collectively imply that industry classification significantly shapes corporate ESG performance. The characteristics of industries, such as manufacturing, services production, and medical devices, along with elements like digital transformation and peer influences, all contribute to the varying levels of ESG performance observed across different sectors.

H2: The classification of industries has a negative impact on ESG risk.

Companies with better ESG risk ratings may exhibit more robust financial performance due to improved operational efficiency, reduced risks, and enhanced stakeholder trust. Better ESG Risk Rating represented by a lower ESG risk score, which will result in improved operational efficiency and higher profitability (Cho et al., 2019)Further, a higher ESG risk rating negatively impacts profitability since companies with high ESG risk may incur additional costs that reduce profitability, such as added costs in handling environmental compliance and the cost to repair management reputation. From an investor perspective, companies with better ESG risk ratings experience a lower cost of capital and lower financial risk, which leads to favorable financing terms and ESG issues. Further, lower ESG risk ratings positively impact long-term value creation so that companies will have a better position for sustained success and stakeholder trust.

Numerous research studies have investigated the relationship between Environmental, Social, and Governance (ESG) performance and companies' financial performance. Almeyda and Darmansya (2019) highlighted a significant positive relationship between ESG and firms' valuations within listed real estate companies in G7 countries from 2014 to 2018, indicating better financial performance for companies with higher ESG scores. Rasyad et al. (2024) found that ESG positively affects financial performance in Indonesian and Malaysian listed companies. On the contrary, Liang et al. (2023), who analyzed 1.468 listed companies from Shanghai and Shenzhen from 2012 to 2021, found a significant negative correlation between ESG performance and financial performance

for environmentally sensitive enterprises, which indicates that companies with better ESG performance might have lower financial performance.
H3: ESG risk negatively affects company's financial performance.

Companies facing higher ESG risks may experience lower stock prices, reduced investor confidence, and weaker market performance. High ESG risk companies will be perceived as riskier investments by the market. Thus, investors may discount stock prices for companies with poor ESG practices due to concerns about long-term sustainability and potential legal or reputational risks. Higher ESG risk negatively impacts a company's reputation and stakeholder trust, as adverse ESG events can erode investor confidence and lead to stock price declines. Further, inefficient resource use can represent higher ESG risk, and poor supply chain management will negatively impact operational efficiency, affecting stock performance. Therefore, ESG-conscious investors may actively choose companies with strong ESG practices, leading to better stock performance.

The reviewed studies collectively suggest that companies with strong Environmental, Social, and Governance (ESG) performance tend to have positive effects on their stock performance. Previous research also indicates that good ESG performance can help reduce stock price volatility, particularly in 283 listed companies from various industries during 2018-2022 (Wahyudyatmika & Astuti, 2024). Moreover, Jin (2023) found a positive correlation between ESG performance and their stock returns, particularly in listed mining companies in the US stock market from 2013 to 2022. Kulal et al. (2023) also found a significant positive relationship between the ESG factor and both stock prices, where more robust ESG performance has been found to have better investment returns than those with weaker ESG performance. Overall, the evidence supports that integrating ESG factors into business operations can positively influence companies' stock performance.
H4: ESG risk negatively affect a company's stock performance

The hypothesis testing will evaluate four research hypotheses, as illustrated in Graph 3.1 below:

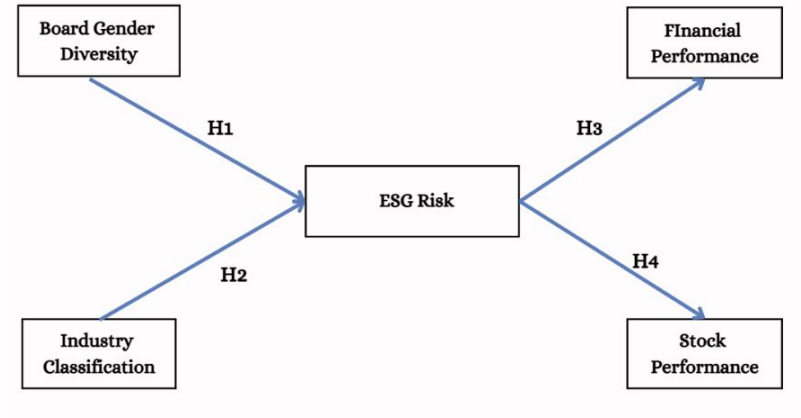

Figure 2. Research Model

3. RESEARCH METHOD

This study aims to analyse factors that influence crypto application acceptance for investment by Generation Z in Indonesia. This study uses constructs in the TAM model, namely perceived ease of use, perceived usefulness, attitude towards using, behaviour intention, and actual use, by adding two external variables, namely self-efficacy and perceived risk. Measurement for each construct uses a five-point Likert scale. The perceived usefulness variable consists of 6 questions, perceived ease of use consists of 6 questions, attitude towards using consists of 3 questions, the perceived risk variable consists of 5 questions, self-efficacy consists of 6 questions, behaviour intention consists of 5 questions, and actual usage consists of 3 questions.

Questionnaires were distributed via online by sharing questionnaire links with various respondents in several major cities in Indonesia such as Jakarta, Yogyakarta, Medan, Bandung, and Samarinda. The population of this study is all investors who are interested in crypto investment, with the criteria of investor samples being in the age range of less than 31 years, according to the Generation Z age group, both those who have used and those who are interested in using crypto applications for investment purposes. This study distributed 150 questionnaires in the period from January 10, 2024 to March 2024, with 23 respondents aged 31–40 years and 15 respondents aged over 40 years, which means they cannot be included as samples, while another 8 respondents answered but were incomplete, so they could not be processed further. The questionnaires that could be further processed were 100 questionnaires, which became the research samples. The qualified questionnaires were then processed using

Structural Equation Modelling (SEM) and analysis using Partial Least Squares (PLS) through the SmartPLS 3 statistical application.

This study aims to analyze the influence of board gender diversity on ESG reporting and company performance in Indonesia. It uses a quantitative approach to measure the variables included in the research model. The focus is to develop hypotheses grounded in existing theories. The scope of this study is the accounting area, especially financial accounting practices. This research examines the relationship between gender diversity, sustainability reporting, and company performance financially and in the market.

This study examined the population of listed companies in the Indonesia Stock Exchange (IDX). To determine the relevant sample, we employed purposive sampling to select precisely the companies that have embraced ESG practices and established a positive reputation in ESG performance. The IDX has already categorized these companies into the IDX ESG Indices.

Our data collection process utilized multiple sources. Firstly, we obtained relevant information about the sample companies directly from the IDX website, which includes data on financial ratios, stock performance, board composition, and industry classification. Additionally, we access the Sustainalytics website to gather the ESG risk ratings. Sustainalytics provides comprehensive assessments of companies' ESG practices, allowing the readers to evaluate each company's risk exposure. Table 3.1 below summarizes the information about the Rating System from Sustainalytics:

Table 1. ESG Rating System from Sustainalytics

Risk Decomposition	**Definition**	**Formula**	**ESG Rating**
Company Exposure	A company's sensitivity or vulnerability to ESG risks	Subindustry X Issue Beta	ESG Risk ratings measure the Unmanaged Risk.
Manageable Risk	Manageable Risk assesses how well a company manages its risks that are outside the boundaries of its management control, based on the assumption that the company will continue its inherent business.	Company Exposure X Manageable Risk Factor	There are five categories of ESG Risk Rating: 1) Neglible Risk (overall score of 0-9,99) 2) Low Risk (overall score of 10-19,99) 3) Medium Risk (overall score of 20-29,99) 4) High Risk (overall score of 30-39,99) 5) Severe Risk (overall score of 40 and above)
Managed Risk	Company initiatives can address risk through policies and programs.	Manageable Risk X Management score	
Unmanaged Risk	The evaluation of a unique set of sector-specific material ESG issues and a Corporate Governance Baseline, based on the company's exposure to and management of those issues.	Company Exposure X Managed Risk	

This research examines two dependent variables: corporate financial performance and stock performance. Corporate financial performance is assessed using Gross Profit Margin (GPM), Net Profit Margin (NPM), Operating Profit Margin (OPM), and Return on Equity (ROE). Stock performance is assessed using Earnings per Share (EPS), Relative Price Strength (RPS), and Price Book Value per Share (BVPS). The mediating variable used in this research is ESG risk, measured by the ESG Risk Rating from Sustainalytics, which evaluates environmental, social, and governance criteria. This ESG risk rating helps investors understand the financial materiality of ESG risks and their impact on company performance.

The independent variables used in this study are board gender diversity (BGD) and industry classification. BGD refers to the proportion of female members on corporate boards, measured as the percentage of women on the board of directors. This proxy is adopted from Ben-Amar et al. (2017) and is also referred to as women on board (WoB). It highlights the gender composition of corporate boards, encompassing the inclusion and representation of both genders, thereby emphasizing diversity within the highest decision-making body of organizations.

Industry classification categorizes companies into 12 groups based on the Indonesia Stock Exchange (IDX) classification, using numerical dummy variables from 0 to 11. The 12 classifications are a) energy, b) primary material, c) industrial, d) consumer non-cyclical, e) consumer cyclical, f) healthcare, g) financial, h) property

and real estate, i) technology, j) infrastructure, k) transportation & logistics, and l) listed investments product. Table 3.2 provides a detail explanation of the variables and their measurements:

Table 2. Operational Variables and Measurement

Variable Type	Variable	Description	Measurement
Dependent Variable	Financial Performance	Company financial performance provides insight into how effectively a company generates profit relative to its revenue. This study uses several key profitability ratios to measure company financial performance.	Gross Profit Margin (GPM), Net Profit Margin (NPM), Operating Profit Margin (OPM), and Return on Equity (ROE)
	Stock Performance	Company stock performance refers to how well a company's stock is doing in the market. It is typically measured by the change in the stock's price over a specific period, reflecting the company's ability to increase or decrease the wealth of its shareholders.	Earnings per Share (EPS), Relative Price Strength (RPS), and Price Book Value per Share (BVPS)
Mediating Variable	ESG Risk	The proxy measure reflects the level of ESG risk rating, which is typically assessed by independent rating agencies based on various ESG criteria, such as environmental impact, social responsibility, and corporate governance practices. The company's ESG risk rating is obtained from the Sustainalytics website.	The ESG Risk Rating score is converted into a dummy number. For example, Negligible Risk (0,00-9,99) is converted into zero, while Low Risk (10,00-19,9) is converted into 1, and so on.
Independent Variable	Board Gender Diversity (BGD)	BGD refers to the gender composition of corporate boards, explicitly focusing on the representation of women. It highlights the importance of diversity within the highest decision-making bodies of organizations, particularly among boards of directors and commissioners. To assess BGD, three proxies are used to measure the proportion of women, as adapted from the work of Ben-Amar et al. (2017)	Scoring based on three proxies: a) Proportion of women on BOD b) Proportion of women on the commissioner board c) Proportion of women in BOD & commissioner board.
	Industry Classification	The category of industry type is based on the grouping used in the IDX, which consists of 12 industry categories. Each sample company already has a particular classification of industry.	The sample companies will use a dummy variable of 0-11 to indicate their industry classification.

3.1. Data Analysis Techniques

This study employs several analysis methods, including descriptive statistics, classical assumption tests, and hypothesis testing. All statistical analyses will be conducted using SmartPLS, following a two-step test as follows:

1. Outer Model Assessment: This step evaluates the reliability and validity of the constructs, ensuring indicator loadings exceed the recommended threshold of 0.7.
2. Inner Model Assessment: This step analyzes the path coefficients to understand the strength and direction of relationships between constructs. It also asses the model's explanatory power through R-squared values and conducts significance testing using bootstrapping to determine whether the relationships are statistically significant based on p-values.

4. RESULTS AND DISCUSSIONS

RESULTS

This research examines the impact of board gender diversity on financial reporting and stock performance with the mediation of ESG implementation in Indonesia. The study focuses on companies listed on the Indonesia Stock Exchange (IDX) that practice ESG principles. As of 2024, the IDX has four ESG-specific indices: IDX ESG Leader, IDX ESG Sector Leaders, ESG Quality 45 IDX, and ESG Srikehati. These indices evaluate the performance of companies based on ESG criteria, with periodic evaluations. The study also incorporates ESG risk ratings and analyses from Sustainalytics, an independent institution that assesses ESG risks on a global scale. Sustainalytics evaluates companies based on their exposure to material ESG risks and how effectively they manage them through policies and programs. Based on these criteria, a detailed list of selected companies for the sample is provided below:

Table 3. Research Sample Selection Criteria

No	Indices	Number of Companies
1	IDX ESG Leaders 2024	30
2	IDX ESG Sector Leaders 2024	57
3	ESG Quality 45 IDX 2024	45
4	ESG Srikehati 2024	25
	Less: Companies that are included more than one time in the indices will be counted as one sample	(87)
5	Less: Companies whose ESG scores are not found on the Sustainalytics website	(9)
	Total Sample used in data processing	61

The sample companies consist of various industries to represent various characteristics of the industry, which are illustrated in Figure 4.1 and Table 4 below:

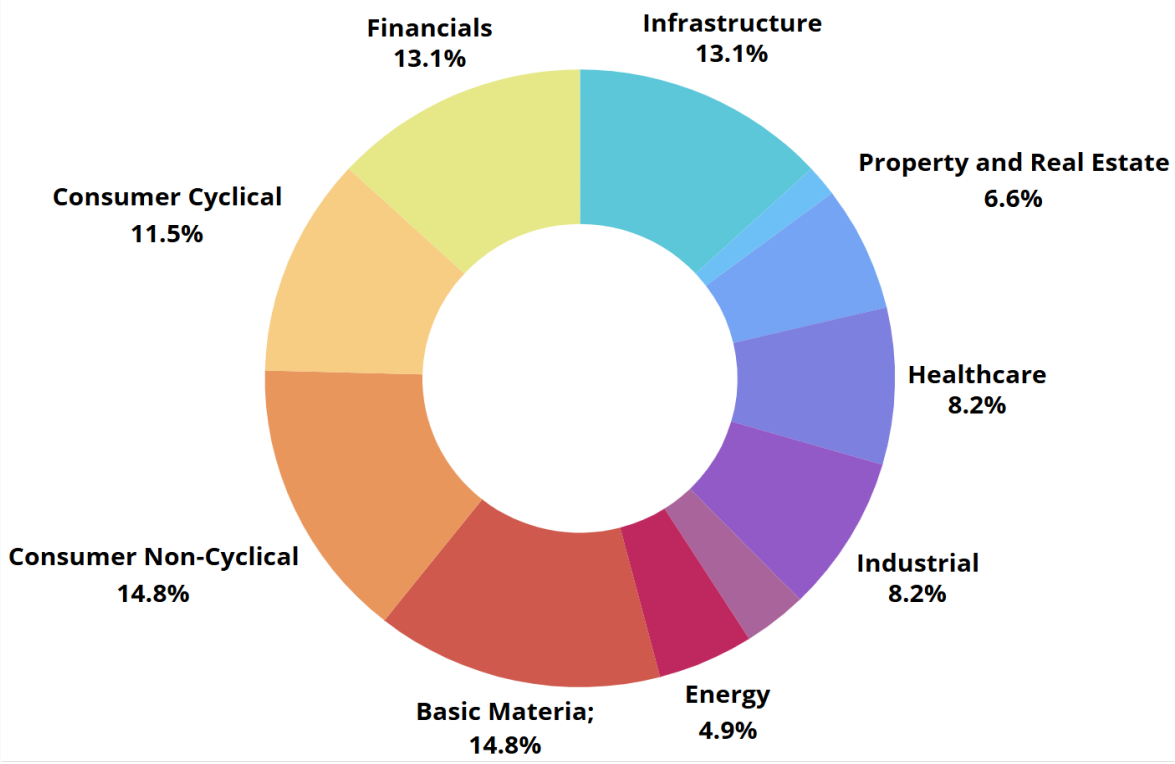

Figure 3. Proportion of Sample Companies based on Industries

Table 4. Statistic Descriptive of Variables

No	Variable	Proxy	Min	Max	Mean	Std. Dev
1	Financial Performance	Return on Equity	-98,13	358,22	17,18	48,97
		Gross Profit Margin	0	72,75	31,27	18,55
		Net Profit Margin	-32,07	144,22	14,08	20,87
		Operating Profit Margin	-23,09	63,18	18,33	16,92
2	Stock Performance	Relative Price Strength	0,04	8689,32	612,21	1220,65
		Earnings per Share	-28,4	1219,05	70,62	165,29
		Price Book Value per Share	0,29	22848,32	1920,67	3397,30
3	ESG Risk	ESG Risk Rating	0	4	1,98	0,98
4	Board Gender Diversity	Women on Director Boards	0	0,6667	0,19	0,146622
		Women on Commissioner Boards	0	0,75	0,15	0,17
		Women on BOD	0	0,5	0,17	0,12
5	Industry Classification	Industry	0	10	4,5	2,87

4.1. Outer Model Assessment

The outer model assessment evaluates the relationships between latent variables (constructs) and their observed indicators (measured variables). This step involves checking the reliability and validity of the constructs, ensuring that the indicator loadings exceed the recommended threshold. To assess reliability, we calculate three statistical tests: Composite Reliability (CR), Cronbach's Alpha, and Average Variance Extracted (AVE).

Composite Reliability (CR) evaluates the composite reliability of each construct. CR values should be above 0.7, indicating good internal consistency among the indicators. Although less preferred than CR, Cronbach's Alpha can also assess internal consistency, where values above 0,7 are considered acceptably reliable. Additionally, we calculate the AVE for each construct. AVE values should be above 0,5, indicating that the construct explains more than 50% of the variance in its indicators, representing that all the indicators are convergent and valid. Using SmartPLS, the results of Composite Reliability, Cronbach Alpha, and AVE are displayed in Table 5 below:

Table 5. Construct Reliability and Validity Test

	Cronbach Alpha	Composite Reliability	Composite Reliability	AVE
Financial Performance	0.781	1,143	0,845	0,580
Stock Performance	0,965	0,971	0,977	0,935
WoB	0,785	0,854	0,873	0,701

Based on Table 4.4 above, the Cronbach Alpha indicates that the research instrument is highly reliable. Hence, the items can be used as a reliable measuring tool. The AVE value in Table 5 indicates that all indicators are valid.

Tabel 6. Discriminant Validity HTMT Matrix

	ESG Risk	Financial Performance	Industry	Stock Performance	BDG
ESG Risk					
Financial Performance	0,141				
Industry	0,305	0,213			
Stock Performance	0,411	0.093	0,171		
Board Gender Diversity	0,370	0.253	0,073	0,218	

Discriminant validity is measured to ensure that the square root of the AVE for each construct is greater than the correlations between the construct and other constructs. This indicates that the construct is more closely related to its indicators than other constructs, as presented in Table 6. HTMT ratio is used to assess discriminant validity, which should be below 0.85 (or 0.90 in some cases), indicating good discriminant validity.

Table 7. Model Fit

	Saturated Model
SRMR	0,110

The Goodness of Fit test measures how well a Partial Least Squares Structural Equation Modelling (PLS-SEM) model fits the observed data. A commonly used indicator for determining a good fit is Standardized Root Mean Square Residual (SRMR), as shown in Table 7. SRMR measures the discrepancy between observed and predicted values, and a lower SRMR indicates a better fit. In this case, the SRMR's model value is 0,110, which suggests that the model is unlikely fit to test the independent variable.

4.2. Inner Model Assessment

The Inner Model Assessment evaluates the relationships between latent variables (constructs) and their observed indicators (measured variables). This process involves examining the path coefficients to understand the strength and direction of relationships between constructs. Additionally, R-squared values are analyzed to assess the model's explanatory power, and significance testing using bootstrapping is used to determine whether the relationships are statistically significant based on p-values.

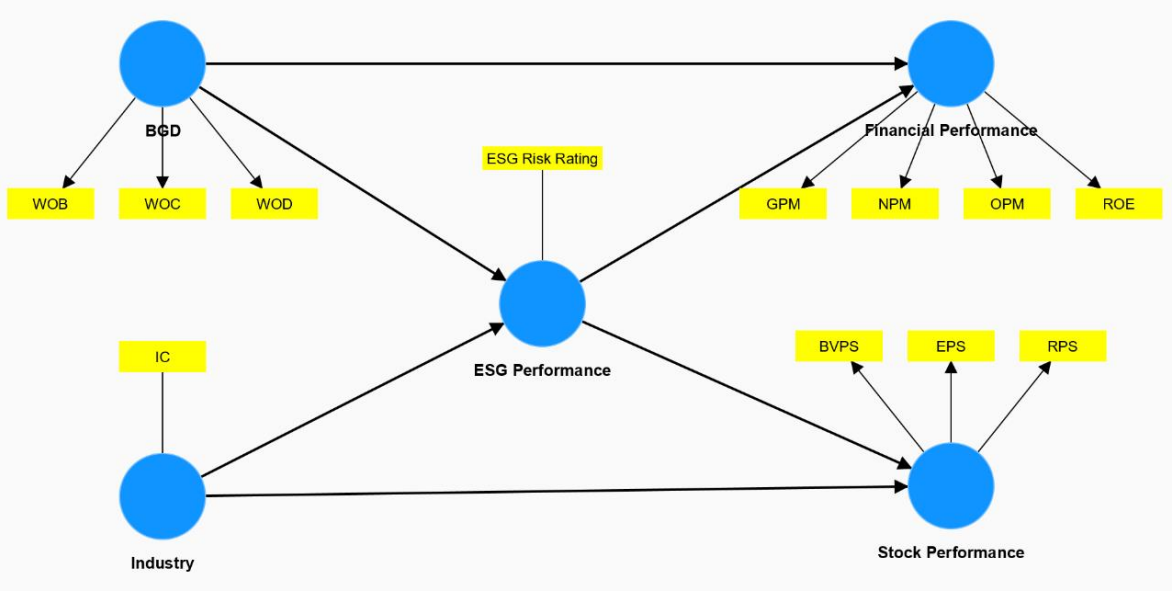

Figure 4. PLS Algorithm Test Result

Structural Model Assessment involves several steps, including assessing collinearity issues, evaluating path coefficients, explanatory power, effect size, predictive relevance, and model fit.

Table 8. Path Coefficient

	Original sample	Sample mean	Standard deviation	T statistics	P values
ESG Risk -> Financial Performance	-0.071	-0.083	0.190	0.374	0.709
ESG Risk -> Stock Performance	0.390	0.403	0.095	4.083	0.000
Industry Classification -> ESG Risk	-0.286	-0.284	0.096	2.987	0.003
Industry Classification -> Stock Performance	-0.050	-0.053	0.073	0.679	0.497
BGD -> ESG Risk	-0.312	-0.317	0.120	2.602	0.009
BGD -> Financial Performance	0.219	0.196	0.236	0,929	0.353

Path coefficient indicates both significance and relevance, which is assessed using bootstrapping. For path coefficients to be considered statistically significant, p-values must be less than 0.05 and align with the theoretical model. The result shows strong statistical significance for the path from ESG Risk -> Stock Performance, Industry Classification -> ESG Risk, and BGD -> ESG Risk. Conversely, there is weak evidence against the null hypothesis for the path from ESG Risk -> Financial Performance, from Industry -> Stock Performance, and from BDG -> Financial Performance. The key takeaways highlight that both the industry and the presence of women on boards significantly impact ESG Risk, which ESG Risk significantly affects Stock Performance.

Table 9. R^2 Test Result

	R^2	Adjusted R^2
ESG Risk	0,190	0,162
Financial Performance	0,063	0,031
Stock Performance	0,166	0,137

As shown in Table 9, the result of the R^2 test indicates that the model can explain 19% of the changes in the company's ESG performance. Furthermore, the R^2 test reveals that the model accounts for approximately 6,3% of the changes in profitability. Lastly, the model explains approximately 16.6% of the variations in company stock performance.

Table 1. F^2 Test Result

	ESG Risk	Financial Performance	Stock Performance
ESG Risk		0,005	0,165
Financial Performance			
Industry Classification	0,101		0,003
Stock Performance			
BGD	0,120	0,046	

The F-squared values from the F^2 Square test presented in Table 10 indicate that the industry explains 10.1% of the variance in ESG performance. In comparison, board gender diversity accounts for 12% of the variance in ESG Risk. Additionally, ESG performance explains 0.5% of the variance in financial performance, and board gender diversity contributes to 4.6% of the variance in financial performance. Regarding stock performance, ESG risk accounts for 16.5% of the variance, while industry explains 3% of the variance in stock performance.

Table 11. Model Fit

	Saturated Model
SRMR	0,110

The Goodness of Fit test assesses how well a Partial Least Squares Structural Equation Modelling (PLS-SEM) model fits the observed data. SRMR, as shown in Table 11, measures the discrepancy between observed and predicted values, indicating that the model is less likely fit to test the independent variable.

4.3. Hypothesis Testing Results

The results of hypothesis testing in this study are elaborated as follows:

Table 12. Hypothesis Testing Results

Hypothesis	Relationships	Original sample	T stat	P-values	Decision
H1	BGD -> ESG Risk	-0.312	2.585	0.009	Supported
H2	Industry Classification -> ESG Risk	-0.286	2.994	0.003	Supported
H3	ESG Risk -> Financial Performance	-0.071	0.368	0.709	Not Supported
H4	ESG Risk -> Stock Performance	0.390	4.295	0.000	Not Supported

Board Gender Diversity and ESG Risk

Based on the statistical analysis conducted, the path coefficient is -0,312, indicating a negative relationship between Board Gender Diversity and ESG Risk with a p-value of 0,009. This result provides statistically significant evidence to support the hypothesis that Board Gender Diversity negatively affects ESG Risk at the significance level.

a) Industry Classification and ESG Risk

The statistical analysis shows a path coefficient of -0,286, suggesting a negative relationship between Industry Classification and ESG Risk Rating, with a p-value of 0,003. The result indicates statistically significant evidence supporting the hypothesis that Industry Classification negatively affects ESG Risk at the significance level.

b) ESG Risk and Financial Performances

The statistical analysis reveals a path coefficient of -0.071, indicating a negative relationship between ESG Risk Rating and Financial Performance, with a p-value of 0,713. This result means no statistically significant evidence supports the hypothesis that ESG Risk negatively affects Financial Performance.

c) ESG Risk and Stock Performance

According to the statistical analysis, the path coefficient shows a value of 0,390, indicating a positive relationship between ESG Risk Rating and Corporate Stock Performance, with a p-value of 0,000. This result provides statistically significant evidence that does not support the hypothesis that ESG negatively affects stock performance at the significance level.

4.4. The Impact of Board Gender Diversity on ESG Risk

Statistical analysis reveals a significant negative relationship between board gender diversity and ESG risk. Specifically, a higher percentage of women on boards is linked with substantially reducing ESG risk. This finding aligns with previous studies that indicate women's inclusion enhances decision-making, fosters innovation, and improves overall performance, particularly in relation to ESG initiatives. (Ben-Amar et al., 2017; Cucari et al., 2018; Liao et al., 2015; Wasiuzzaman & Wan Mohammad, 2020).

Women typically excel in monitoring roles, tend to make more ethical decisions (Oradi & Izadi, 2020), and are more risk-averse (Zalata et al., 2019). This approach leads to comprehensive strategies for addressing ESG issues. Increased diversity in leadership help balances financial goals with social responsibilities, aligns with global movement towards gender equality, and can enhance a company's reputation and attract socially conscious investors.

4.5. The Impact of Industry Classification on ESG Risk

The analysis reveals a significant negative relationship between industry classification and ESG risk. This indicates that industries such as energy and basic materials tend to have higher ESG risks due to their environmental and social impacts. In contrast, industries like technology and infrastructure generally face lower ESG risks. These findings align with those of previous studies, which found a positive influence on corporate ESG performance within companies from the same industry. (Jin, 2023; H. Zhao et al., 2023).

These findings are consistent with previous studies that have identified a positive influence on corporate ESG performance among companies within the same industry. This highlights the importance of companies in high-risk industries adopting sustainable practices and improving their governance in order to mitigate ESG risks. By doing so, they can enhance their ESG performance, improve their reputation, and attract socially conscious investors, ultimately contributing to a more sustainable future.

4.6. The Impact of ESG Risk on Financial Performance

The statistical analysis reveals a negative relationship between ESG risk and financial performance. However, this relationship is statistically insignificant. This result suggests that ESG risk does not significantly impact financial performance. This finding is consistent with Husada & Handayani (2021), but contradicts Almeyda & Darmansya (2019) and Liang et al. (2023). The lack of significant impact may be attributed to the high initial costs of ESG initiatives, the long-term nature of ESG benefits derived from these initiatives, and the inconsistent methods of measuring ESG performance.

4.7. The Impact of ESG Risk on Stock Performance

The analysis shows a significant positive relationship between ESG Risk Rating and Corporate Stock Performance. This result indicates that higher ESG risk ratings are associated with better market performance, suggesting that investors may favor higher ESG risks for potential future returns. This finding contrasts with previous studies, indicating that strong ESG performance reduces stock price volatility or correlates positively with stock returns. (Jin, 2023; Kulal et al., 2023; Wahyudyatmika & Astuti, 2024).

The positive impact of ESG risk on market performance may be due to several factors. Companies with poor ESG ratings may avoid costs associated with sustainable practices, temporarily inflating book values, Earnings Per Share (EPS), and Revenue Per Share (RPS). As a result, investors might prioritize short-term financial results, leading to higher book values despite poor ESG performance. Additionally, sector-specific dynamics, particularly in industries like energy or mining, can yield higher potential returns and increased book values despite higher ESG risks. Speculative investors may drive stock prices up in anticipation of future improvements. Additionally, regulatory and market lags in the Indonesian Stock Market can delay the recognition of ESG risks, temporarily allowing book values to remain high.

5. CONCLUSION

This study confirms the hypothesis that gender diversity on corporate boards positively impacts ESG risk. The findings indicate a significant negative relationship between the presence of women on boards and ESG risk. This correlation aligns with previous research that highlights women's unique contributions, which improve decision-making, enhance ethical oversight, and increase risk aversion—factors that collectively strengthen a company's ability to manage ESG issues effectively. Additionally, the study reveals that industry classification significantly influences ESG risk. Sectors such as energy and basic materials exhibit higher risks due to their inherent environmental and social challenges. This suggests that tailored strategies for ESG management are crucial, especially in high-risk industries.

Furthermore, while ESG risk does not statistically impact financial performance, it positively affects stock performance. This finding implies that contrary to some earlier studies, investors may be drawn to companies with heightened ESG risks, viewing them as opportunities for future gains or benefiting from sector-specific trends, particularly in Indonesia's stock market. This underlines the importance of differentiating between various financial performance metrics and market contexts when assessing the impact of ESG risk on corporate outcomes.

6. LIMITATION AND SUGESTIONS

This research has several limitations. First, ESG risk ratings and financial performance metrics can differ significantly across various industries, indicating a need for further analysis of sector-specific dynamics. Second, the inconclusive findings regarding financial performance might stem from the diverse methods employed in measuring ESG factors and the long-term nature of ESG impacts, which may not be immediately reflected in financial results. Finally, because this research is focused on the Indonesian market, caution should be exercised when generalizing the findings to other emerging markets, as there may be differences in regulatory environments and socio-economic conditions.

Future research could expand on these findings by exploring industry-specific practices related to Environmental, Social, and Governance (ESG) criteria. This approach would help develop tailored strategies for mitigating ESG risks in high-risk sectors. Additionally, conducting longitudinal studies on the long-term effects of gender diversity on financial performance and ESG reporting would clarify the benefits and costs associated with these initiatives. Investigating alternative methods for measuring ESG performance could also yield valuable insights, particularly in emerging markets where regulatory and market conditions may differ significantly. Furthermore, this study suggests examining how cultural and regulatory factors influence investor preferences in emerging markets, especially regarding ESG considerations and gender diversity on corporate boards.

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