THE MEDIATION EFFECT OF FINANCIAL DISTRESS ON THE RELATIONSHIP BETWEEN ESG PRACTICES TO FINANCIAL STATEMENT FRAUD

(Study on Manufacturing Firm Listed in IDX between 2022 - 2023)

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ABSTRACT

This study explores the influence of Environmental, Social, and Governance (ESG) practices and financial distress on the recurrence for financial statement fraud among manufacturing firms listed on the Indonesia Stock Exchange (IDX) between 2021 and 2022. From an accounting perspective, this research aims to provide insights into how a firm's sustainability practices and financial health jointly impact corporate misconduct.

The analysis included 21 manufacturing firms, utilizing ESG practices to measure sustainability, the Altman Z-score as a proxy for financial distress, and the Dechow F-score to assess the likelihood of financial statement fraud. Through multiple regression and mediation analyses, the study examined both direct and indirect relationships among these variables.

The results indicate that strong ESG practices is significantly associated with a lower risk of financial statement fraud, underscoring the importance of sustainability initiatives in fostering ethical corporate conduct. Although a negative relationship between ESG practices and financial distress was observed, it was not statistically significant. Conversely, financial distress was found to significantly increase the likelihood of fraudulent reporting, confirming its critical role as a risk factor. However, the study did not find support for financial distress mediating the relationship between ESG practices and financial statement fraud.

Keywords: ESG, financial distress, financial statement fraud, Indonesia, manufacturing firms.

INTRODUCTION

Fraud is a pervasive issue that undermines trust and compromises the integrity of various systems. At its core, fraud involves deceit and manipulation, as individuals or entities intentionally misrepresent information to gain an unfair advantage or cause harm. It leads to diminished economic confidence, causing instability and direct economic consequences for those involved (Reurink, 2018). High-profile allegations of corporate fraud have received significant attention from the public and academia (Chu et al., 2023) The infamous Enron scandal in 2001 demonstrates the devastating impact of fraud. Enron's image of financial stability and innovation collapsed due to its deception.

As one of the largest economies in the world, Indonesia has had its share of well-known fraud cases. For instance, the Garuda Indonesia financial statement fraud case in 2018 illustrates the significant consequences of fraud on both a corporate and national level (Hanjaya & Fetty, 2021). Furthermore, corporate fraud undermines investor confidence, diminishes shareholders' returns, leads to misallocation of capital, increases financial risk, and contributes to instability in the financial market (Chu et al., 2023; Hain et al., 2016; Khanna et al., 2015).

The Association of Certified Fraud Examiners (ACFE) classifies corporate fraud into three main categories: corruption, asset misappropriation, and falsifying financial statements (Omar et al., 2015). Among these, financial statement fraud (FSF) causes the most significant financial losses due to the involvement of high-level management (Shahana et al., 2023; Wilantari & Ariyanto, 2023) FSF includes actions such as inflating asset values or hiding liabilities, aiming to present a misleading financial picture (Repousis, 2016).

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Notable international FSF cases such as Enron, Toshiba, and Parmalat demonstrate how FSF can lead to enormous economic consequences and regulatory reform (CNN, 2015; CFA Institute, 2016). Likewise, in Southeast Asia, scandals involving Garuda Indonesia (Indonesia), 1MDB (Malaysia), and Stark Corporation (Thailand) reflect systemic weaknesses in corporate governance and regulatory oversight (Al Jazeera, 2020; Reuters, 2022, 2024).

While governance mechanisms like internal controls and board oversight play an essential role in mitigating FSF, recent studies highlight the emerging role of Environmental, Social, and Governance (ESG) practices as proactive measures to enhance transparency and reduce fraud risk (Li et al., 2024; Rostami & Rezaei, 2022; Sukmadilaga et al., 2022).

This study builds on these insights by examining the mediating role of financial distress in the relationship between ESG practices and financial statement fraud. While ESG is increasingly recognized for promoting ethical behaviour and governance transparency, financial distress often intensifies agency conflicts, heightening the risk of manipulation(Almubarak et al., 2023). Moreover, firms experiencing financial distress may use ESG practices as a form of impression management, masking their vulnerabilities.

Despite growing interest in ESG's impact on financial performance and risk management, existing literature has not sufficiently addressed how ESG practices influence the likelihood of financial statement fraud, particularly in the context of emerging markets. Furthermore, the potential mediating role of financial distress in this relationship remains underexplored. Most previous studies have examined ESG practices, financial distress, and fraud in isolation, leaving a significant gap in understanding their interconnected dynamics. This study seeks to address that gap by investigating whether ESG practices reduce financial statement fraud directly or through the mediating effect of financial distress, especially within the Indonesian manufacturing sector.

THEORITICAL FRAMEWORK AND HYPOTHESIS DEVELOPMENT

This section will explain the grand theory used in the study, conceptual framework to describe relationship between variables, and the hypothesis development.

Agency Theory

Agency theory provides a framework for understanding the relationship between principals (e.g., shareholders) and agents (e.g., managers), where decision-making authority is delegated from one party to another (Jensen et al., 1976). This dynamic creates the potential for misaligned interests, especially when agents act in their own self-interest rather than for the benefit of the principals. The presence of information asymmetry and incomplete contracts heightens this conflict, resulting in agency costs such as monitoring, bonding, and residual losses (Fama & Jensen, 1983.)

In the context of ESG practices, agency theory explains why some managers may underinvest in sustainability initiatives. If ESG efforts do not directly impact their short-term compensation or career progression, agents may deprioritize them, even if such practices benefit the firm's long-term value. This divergence in priorities reinforces the agency problem, particularly in emerging markets like Indonesia, where regulatory enforcement and stakeholder oversight may be weaker.

Agency theory also highlights how financial distress can exacerbate agency problems. Under financial pressure, managers may manipulate earnings or misrepresent financial health to preserve their position or delay negative consequences (Jensen et al., 1976). This creates an environment conducive to financial statement fraud (FSF), especially when internal controls are weak or governance mechanisms are ineffective.

Thus, ESG practices, especially those related to governance, can play a critical role in reducing agency conflicts. Strong governance such as board independence, audit committee oversight, and transparent reporting helps realign agent incentives with stakeholder interests. Conversely, weak ESG governance can lead to financial instability and increase the risk of FSF (Arum et al., 2023; Mudel & Jhunjhunwala, 2023), emphasizing the importance of integrating ESG as a preventive mechanism within the agency framework.

Conceptual Framework

Conceptual framework describe the relationship between variables in the form of schematic diagram. This study utilized dependent variable, independent variable, and mediating variable.

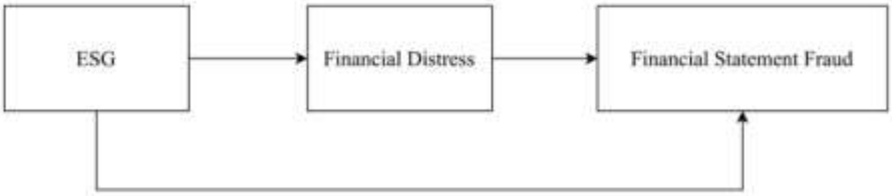

Figure 1 Conceptual Framework

Hypothesis Development

ESG Practices on Financial Statement Fraud

Financial statement fraud often arises from managerial opportunism, where managers prioritize self-interest over shareholders by misrepresenting financial conditions (Almubarak et al., 2023; Jensen et al., 1976). ESG practices, by promoting transparency, accountability, and ethical behavior, serve as mechanisms that deter fraudulent actions. Companies with strong ESG tend to have better internal controls (Sun et al., 2025) and higher stakeholder engagement (Prior et al., 2008), reducing opportunities and motivations for fraud.

From an agency theory perspective, ESG helps mitigate agency costs by reducing information asymmetry and aligning managerial goals with those of shareholders. Components like board diversity (Chu et al., 2023) and whistleblowing systems (Mandal & Amilan, 2023) function as monitoring mechanisms that enhance oversight and reduce the likelihood of fraud (He et al., 2022).

Empirical studies consistently support a negative relationship between ESG and financial statement fraud. Higher ESG practices and corporate governance quality have been associated with reduced fraud risk (Arum et al., 2023; Ebaid, 2023; Magnanelli et al., 2017). Governance features such as board independence, diversity, and whistleblowing mechanisms have been shown to strengthen oversight and lower fraud incidence.

H1: ESG Practices negatively influence the likelihood of financial statement fraud.

ESG Practices on Financial Distress

Financial distress occurs when a firm is unable to meet its financial obligations, threatening its operational continuity (Ferguson et al., 1983.). Strong ESG practices are posited to reduce the likelihood of financial distress by fostering greater stability and resilience. Empirical studies show that ESG serves as a strategic asset during financial downturns, helping firms navigate uncertainty through improved risk mitigation and long-term adaptability (Almubarak et al., 2023; Yadav & Asongu, 2025).

Agency theory explains that misalignment between managers and shareholders can increase financial risk. ESG practices help align these interests by encouraging transparency and shared long-term goals (Postiglione et al., 2025). The improved oversight and regulatory compliance inherent in ESG frameworks reduce short-termism and promote financial health (Arum et al., 2023).

Empirical findings reinforce this relationship. ESG is linked to higher resilience (Yadav & Asongu, 2025), improved ethics and risk management (Almubarak et al., 2023), reduced bankruptcy risk (Habib, 2023), and stronger social capital during crises (Lin & Dong, 2018). (Song et al., 2024) confirm ESG as a key predictor of lower financial distress in sensitive industries.

H2: Environmental, Social and Governance practices negatively affects financial distress.

Financial Distress towards Financial Statement Fraud

Financial distress, defined by a firm's inability to meet financial obligations (Ferguson et al., 1983), often creates conditions for managerial opportunism and unethical behavior, including financial statement fraud. Under severe pressure, management may misrepresent financial performance to meet expectations, avoid bankruptcy, and protect personal interests (Jensen & Meckling, 1976; Aviantara, 2023). These pressures can override ethical boundaries, making fraud a tempting short-term solution.

Agency theory explains how conflicts between principals and agents intensify during financial distress. Managers, fearing job loss and reputational damage, may manipulate financial reports to maintain a positive image (Halteh & Tiwari, 2023) Weak governance structures and information asymmetry further enable fraudulent actions under these conditions.

Empirical findings strongly support this relationship. (Aviantara, 2023) found that financial distress increases internal pressures leading to fraud. (Almubarak et al., 2023) observed distressed firms using earnings management to maintain legitimacy. (Mudel & Jhunjhunwala, 2023) showed managers resorting to unethical accounting under debt strain, and (du Toit, 2024) highlighted asset misrepresentation and revenue overstatements in distressed firms.

H3: Financial distress positively affects the likelihood of financial statement fraud.

Financial Distress towards ESG Practices and Financial Statement Fraud Relationship

While previous studies confirm a direct negative relationship between strong ESG practices and financial statement fraud, the mechanism underlying this relationship warrants deeper examination. This study posits that financial distress serves as a mediating variable. Firms with superior ESG practices tend to exhibit greater financial stability and resilience, reducing the likelihood of distress (Yadav & Asongu, 2025).

Research suggests that financial distress increases managerial pressure to commit fraud, especially as firms attempt to avoid bankruptcy, meet stakeholder expectations, and preserve reputations (Halteh & Tiwari, 2023). Conversely, strong ESG practices enhance ethical conduct and governance, which can reduce the occurrence of financial distress (Arum et al., 2023).

H4: Financial distress mediates the negative relationship between ESG practices and the likelihood financial statement fraud

METHODOLOGY

This section explains the population and sample of the study, the variables used along with their measurements

Population and Sample

The population for this study is all manufacturing companies listed in Indonesia Stock Exchange (IDX) from 2021 through 2022. The sample for this study will be selected using purposive sampling technique that fulfil the following predefined criteria relevant to analysing the connection between ESG practices, financial distress, and financial statement fraud:

1. Companies included in the sample must have publicly available Environmental, Social, and Governance (ESG) practices or scores from reputable data providers for the period under investigation (2021–2022).
2. The sample will be selected to include companies that have experienced different levels of financial distress during the study period (2021–2022),
3. Companies must have sufficient financial data available to calculate the Dechow F-Score, for 2021–2022.

The manufacturing sector was selected to ensure consistency in the analysis, particularly in the calculation of the Dechow F-Score, which depends on financial ratios that may differ significantly across industries. By focusing solely on manufacturing firms, the author aimed to reduce variability in financial reporting structures and create a more uniform basis for detecting financial statement fraud.

The chosen time frame of 2021–2022 reflects the most recent period with accessible and consistent ESG data, particularly from Bloomberg. This period also captures post-pandemic shifts in corporate behavior and reporting practices, during which sustainability and financial transparency received growing attention.

Variables and Measurement

This study uses ESG as the independent variable, Financial Statement Fraud as the dependent variable, and Financial Distress as the mediating variable. The following are the variables used in this study along with their measurements:

Table 1
Variable and Measurement

Variable	Symbol	Proxy
Independent Variable Environment, Social, Governance	ESGit	Bloomberg ESG Score
Mediating Variable Financial Distress	Distressit	Altman Z-Score
Dependent Variable Financial Statement Fraud	FSFit	Dechow F - Score

Research Model

In testing the research hypotheses, panel data regression analysis was used, incorporating three main steps. The coefficient of determination (R^2) indicates how well the independent variable explains variation in the dependent variable. A higher R^2 suggests stronger explanatory power (Ghozali, 2021). Next, the F-test assesses whether the independent variables, as a group, significantly impact the dependent variable, while the t-test evaluates the individual contribution of each independent variable (Ghozali, 2021).

Three regression models were applied to test the proposed hypotheses. For Hypothesis 1, the model tested the relationship between ESG practices (ESGit) and financial statement fraud (FSFit), proxied by the Dechow F-Score. For Hypothesis 2, the model measured the influence of ESG practices (ESGit) on financial distress (Distressit), using the Altman Z-Score. For Hypothesis 3, financial distress (Distressit) was tested as a predictor of financial statement fraud (FSFit), also using panel regression.

For Hypothesis 4, which suggests a mediating role of financial distress, Sobel test analysis was conducted. This included estimating the coefficient of ESG on financial distress and financial distress on fraud, including ESG in the model. Then, the indirect effect ($\beta 1 \times \beta 2$) and its standard error were calculated, followed by computing the Sobel z-statistic. A significant result indicates the mediation effect of financial distress between ESG and financial statement fraud.

RESULT AND DISCUSSION

This section presents the study's results along with details about the sample, covering descriptive statistics, normality testing, autocorrelation test, multicollinearity, heteroscedascity, Multiple Linear Regression Analysis, and the Sobel test.

Description and Research Object

The main focus of this research is on manufacturing companies listed on the Indonesia Stock Exchange (IDX) during the period 2021–2022. The manufacturing sector here covers a wide range of industries, including primary consumer goods, non-primary consumer goods, raw materials, and industrial sectors.

Table 2
Sample

No.	Sample Criteria	Jumlah
1.	Manufacturing companies listed in IDX in 2021-2022	226
2.	Companies excluded due to no ESG reporting	141
3.	Companies excluded due to incomplete ESG or financial data	64
	Sample	21

Descriptive Statistics

The ESG practices scores in this sample range from 27.5 to 74.85, with a mean of 51.5 and a standard deviation of 11.29. Since the scale ranges from 1 to 100, this suggests that the average level of ESG practices is moderate, with noticeable variation across companies. Firms closer to the lower end disclose less, while those at the higher end disclose more. Financial Distress (FD), measured using the Altman Z-Score, ranges from 1.36 to 29.57, with a mean of 6.28 and a standard deviation of 5.95. A score above 2.99 indicates financial health, so the average suggests most companies are financially stable. However, the wide range reveals that a few companies fall within the high-risk distress zone ($Z < 1.81$).

The Dechow F-Score, used to detect potential financial statement fraud, ranges from -2.405 to 2.67, with a mean of 1.41 and a standard deviation of 0.65. A more positive F-Score indicates a higher likelihood of accrual-based earnings management, which may signal fraud. According to Dechow et al. (2011), higher positive scores are linked to increased chances of misreporting. The positive average in this sample suggests that, overall, the companies exhibit characteristics consistent with a higher potential for fraud, although the variation implies differing levels of risk among them.

Table 3
Descriptive Statistics

	N	Minimum	Maximum	Mean	Std. Deviation
ESG	42	27,5	74,85	51,5	11,29
FD	42	1,36	29,57	6,28	5,949
FSF	42	-,405	2,67	1,41	0,65

Normality Test

In this study, normality was tested using the Shapiro-Wilk and Kolmogorov-Smirnov methods. Both tests returned non-significant p-values (K-S = 0.071; Shapiro-Wilk = 0.105), indicating that the residuals are normally distributed. Thus, the assumption of normality in the regression model is met.

Table 4
Normality Test

	Kolmogorov- Smirnov			Shapiro- Wilk		
	Statistics	df	Sig.	Statistic	df	Sig.
Unstandardized Residuals	0,130	42	0,071	0,956	42	0,105

Autocorrelation Test

The assumption of no autocorrelation in the residuals was evaluated using the Durbin-Watson. The computed value of 1.718 lies within the acceptable range of 1.5 to 2.5. This outcome suggests that there is no significant autocorrelation present, indicating that the residuals are independent. Thus, the independence assumption to the classical linear regression model is satisfied.

Table 5
Autocorrelation Test

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Durbin Watson
1	0,461	0,213	0,172	0,600	1,718

Multicollinearity

The results of the multicollinearity test indicate that all independent variables have Variance Inflation Factor (VIF) values below 10, and Tolerance values is above 0.1. Specifically, ESG and Financial Distress both recorded VIF values of 1.020 and tolerance values of 0.981, indicating the absence of multicollinearity.

Table 6
Multicollinearity Test

Model	Collinearity Statistics	
	Tolerance	VIF
ESG	0.981	1.020
FD	0.981	1.020

Heteroscedascity Test

Gjelser test is used to determine the heteroscedasticities of the observed data. The results showed that both ESG (p = 0.782) and Financial Distress (p = 0.315) were not statistically significant, indicating that there is no heteroscedasticity present in the model. Thus, the assumption of constant variance in the residuals (homoscedasticity) is considered to be fulfilled.

Table 7
Hetescedascity Test

Model	Standardized Coefficients	
	t	Sig.
ESG	-0,278	0,060
FD	-1,018	0,782

Coefficient of Determination (R^2)

The model testing the effect of ESG on financial distress (FD) resulted in an adjusted R^2 of -0.005. The negative value suggests the model performs worse than simply using the mean, and nearly 100 percent of the variation in FD is explained by factors outside of this model. In contrast, the model examining the combined influence of ESG and financial distress on financial statement fraud (FSF) produced an adjusted R^2 value of 0.172. The remaining 82.8 percent is attributed to other variables not examined in this research.

Model	R	R Square	Adjusted R Square	Std. Error of Estimate
1. ESG - FD	0.138	0.019	-0.005	5.965
2. FD - FSF	0.461	0.213	0.172	0.600
3. ESG - FSF	0.461	0.213	0.172	0.600

Table 8
Coefficient of Determination

F – Test

The F value is 5.267 with a significance value (p-value) of 0.009. On the other hand, the results of the F-Test for the regression model examining the influence of ESG on Financial Distress. The F value is 0.781, with a significance value (p-value) of 0.382.

Table 9
F - Test

Model	Sum of Squares	df	Mean Square	F	Sig.
ESG - FD	27.798	2	27.798	0.781	0.382
ESG - FSF	3.793	2	1.897	5.267	0.009
FD - FSF	3.793	2	1.897	5.267	0.009

T - Test

Table 10 presents the results of the t-test (partial test), which is used to determine the partial effect of each independent variable on the dependent variable. A p-value less than 0.05 indicates a significant relationship. The first hypothesis (H1) in this study states that the ESG practices negatively influences the likelihood of financial statement fraud. This means that a higher ESG practices score is expected to reduce the occurrence of financial statement fraud. Based on the regression results, the ESG practices has a negative coefficient of -0.018 and a significance value (p-value) of 0.042 (< 0.05), indicating a significant negative relationship.

The second hypothesis (H2) proposes that Environmental, Social, and Governance (ESG) practices negatively affect financial distress. This implies that companies with higher ESG practices are expected to experience lower financial distress. However, the ESG practices in the FD model has a regression coefficient of -0.073 with a significance value of 0.382 (> 0.05), suggesting that the relationship is negative but not statistically significant.

The third hypothesis (H3) suggested that financial distress positively affects the likelihood of financial statement fraud. This suggests that increased financial distress in a company will lead to a higher likelihood of financial statement fraud. The FD variable in the FSF model shows a positive regression coefficient of 0.034 and a significance value of 0.037 (< 0.05), which means the relationship is significant and in the expected direction.

Table 10
T - Test

Model	Variable	Unstandardized Coefficient (B)	Std. Error	Beta	t	Sig.
ESG – FD	ESG	-0.073	0.082	-0.138	-0.884	0.382
ESG – FSF	ESG	-0.018	0.008	-0.301	-2.100	0.042
FD - FSF	FD	0.034	0.016	0.310	2.160	0.037

Mediation Analysis (Sobel Test)

The mediation effect of financial distress (FD) in the relationship between ESG practices and the likelihood of financial statement fraud (FSF) was tested using the Sobel test. The regression analysis showed that ESG had a negative, but not significant, effect on FD (B = -0.073, p = 0.382), while FD had a positive and significant effect on FSF (B = 0.034, p = 0.037) after controlling for ESG. The Sobel test yielded a z-value of -0.82. This indicates that the mediation effect of FD in the relationship between ESG and FSF is not statistically significant.

Table 11
Sobel Test

Path	**Coefficient (B)**	**Std. Error**	**Significance (p)**	**Sobel z-value**
ESG → FD (a)	-0.073	0.082	0.382	
FD → FSF (b)	0.034	0.016	0.037	
ESG → FD → FSF (Mediation)			> 0.05	-0.82

In line with the hypothesis development, the study arrives at the following conclusions:

The first hypothesis (H1) in this study states that the ESG practices negatively influences the likelihood of financial statement fraud. This means that a higher ESG practices score is expected to reduce the occurrence of financial statement fraud. Based on the regression results, the ESG practices has a negative coefficient of -0.018 and a significance value (p-value) of 0.042 (< 0.05), indicating a significant negative relationship. Therefore, **Hypothesis 1 is accepted.**

The findings of this study reveal a significant negative relationship between a firm's ESG (Environmental, Social, and Governance) practices and the likelihood of Financial Statement Fraud (FSF). Put simply, companies that are more committed to ESG practices tend to demonstrate a lower tendency for engaging in Financial Statement Fraud (FSF) (Li et al., 2024; Magnanelli et al., 2017; Razali & Arshad, 2014) The findings points a deeper reality when companies take ESG practices seriously and integrate them into their strategy and daily operations, they create an environment where transparency, accountability and ethical conduct become the norm rather than an expectation. Moreover, ESG practices do more than enhance reputation; it appears to serve as a practical foundation for trust and integrity within organizations (Rostami & Rezaei, 2022).

The second hypothesis (H2) proposes that Environmental, Social, and Governance (ESG) practices negatively affect financial distress. This implies that companies with higher ESG practices are expected to experience lower financial distress. However, the ESG practices in the FD model has a regression coefficient of -0.073 with a significance value of 0.382 (> 0.05), suggesting that the relationship is negative but not statistically significant. Therefore, **Hypothesis 2 is rejected.**

These findings contrast with some prior research that underscores ESG's practices in promoting financial resilience and stability. (Yadav & Asongu, 2025) found that high ESG practices strengthen the resilience of distressed Indian companies, while (Habib, 2023) reported that ESG practices can help mitigate the probability of bankruptcy. The result here, however, counts for other factors such as firm-specific characteristics or broader economic conditions. It's possible that ESG practices among the firms in this study were not yet developed enough to meaningfully impact financial health, or that ESG in this context serves more as compliance than commitment. In line with agency theory, when under pressure, companies may prioritize short-term survival over long-term value, weakening ESG's influence.

The third hypothesis (H3) suggested that financial distress positively affects the likelihood of financial statement fraud. This suggests that increased financial distress in a company will lead to a higher likelihood of financial statement fraud. The FD variable in the FSF model shows a positive regression coefficient of 0.034 and a significance value of 0.037 (< 0.05), which means the relationship is significant and in the expected direction. Therefore, **Hypothesis 3 is accepted.**

From an agency theory perspective, this finding reflects heightened conflict during financial instability. Managers under stress may be tempted to manipulate financial reports to appease stakeholders or meet expectations, as seen in (Aviantara, 2023; Mudel & Jhunjhunwala, 2023; Razali & Arshad, 2014). Financial distress increases information asymmetry and the potential for opportunistic behavior (Fama & Jensen, 1983). Still, effective governance mechanisms like independent boards can weaken this link, as shown by (Magnanelli et al., 2017), providing a check against unethical practices during times of financial strain.

The fourth hypothesis (H4) proposed that financial distress would mediate the relationship between ESG (Environmental, Social, and Governance) practices and the likelihood of financial statement fraud. The regression analysis showed that ESG had a negative, but not significant, effect on FD (B = -0.073, p = 0.382), while FD had a positive and significant effect on FSF (B = 0.034, p = 0.037). The Sobel test yielded a z-value of -0.82, indicating that the mediation effect is not statistically significant. Therefore**, Hypothesis 4 is rejected.**

While ESG was negatively associated with both financial distress and FSF risk individually, the mediation path where ESG would reduce FSF via lowering distress was unsupported. This could be due to ESG practices in these firms lacking the strength or integration needed to meaningfully ease financial pressure. Even firms with high ESG scores may face underlying inefficiencies or external stressors that ESG alone cannot resolve. Some may also use ESG as impression management (Almubarak et al., 2023), masking issues rather than addressing them. As such, ESG may enhance ethical reputation but cannot act as a standalone shield against financial statement fraud unless fully aligned with financial and operational strategy.

CONCLUSION AND LIMITATIONS

This section contains the research conclusions, the study's limitations, and suggestions for future research.

Conclusion

This study was conducted to investigate the influence of ESG (Environmental, Social, and Governance) practices, financial distress, and their effect on the likelihood of financial statement fraud, using manufacturing firms listed on the Indonesia Stock Exchange (IDX) during 2021–2022. The results show that companies with higher ESG scores are significantly less likely to engage in financial statement fraud, suggesting that robust ESG practices reflecting transparency, ethical conduct, and good governance can act as an effective deterrent. While the analysis indicates a negative association between ESG practices and financial distress, the relationship is not statistically significant, implying that ESG alone may not guarantee financial stability in all circumstances.

The findings also reveal that financial distress is a significant risk factor for fraudulent financial reporting, with distressed companies more prone to manipulating financial statements to conceal poor performance or meet expectations. Contrary to expectations, the analysis found no significant mediating effect of financial distress in the relationship between ESG practices and financial statement fraud. While ESG is associated with both lower fraud and, to some extent, reduced distress, the indirect pathway through improved financial health was not supported, suggesting that the anti-fraud benefits of ESG may be more direct.

Limitation

This research, like any empirical study, has several limitations that should be considered when interpreting the findings:

1. This study relies on ESG practices provided by Bloomberg, which are based primarily on public disclosures. While these scores offer consistency and accessibility, they may not fully reflect how deeply or authentically a company applies ESG practices in practice.
2. The ESG practices data was used as an annual aggregate, meaning it doesn’t capture changes that might occur throughout the year, like sudden controversies, shifts in sustainability strategy, or changes in governance quality.
3. The sample consists of only 21 manufacturing companies over two years (2021–2022). This relatively small and specific group may limit how broadly the findings can be applied to other industries or larger populations.
4. The adjusted R^2 values of the regression models ranged between 19% and 21%, which means a significant portion of the variation in fraud likelihood could be influenced by other factors not explored in this study.

Suggestion for Future Research

In light of these limitations, several recommendations can be made for future research:

1. Future studies could compare Bloomberg ESG scores with other providers like MSCI or Refinitiv. This helps reduce bias and captures a more well-rounded view of ESG performance.
2. Using case studies or actual ESG related controversies may reveal how companies implement ESG in practice. This adds context that raw numbers alone may miss.
3. Increasing the number of companies and extending the study period could improve the generalizability of the results. It may also reveal patterns or effects that aren’t visible in short-term data.
4. Future research could test different measures, such as interest coverage or whistle-blower activity, to deepen the understanding of financial health and fraud. This helps validate results and avoids over-relying on one method.
5. Incorporating factors like firm size, board independence, or industry regulations may clarify when ESG is more or less effective. This would give a more complete picture of ESG’s real impact

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