

The Effect of ESG Score and Foreign Ownership on Financial Reporting Delay, with Financial Distress Measured Using the Merton Model as A Mediating Variable: A Study of Manufacturing Companies on The IDX from 2020 to 2024

Steven Liong Winoto*, Oktavia, Soegeng Wahyoedi

Universitas Kristen Krida Wacana, Indonesia

Email: steven.winoto29@gmail.com*, oktavia@ukrida.ac.id, swahyoedi@ukrida.ac.id

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Abstract

This study aims to examine the effect of ESG score and foreign ownership on financial reporting delay with financial distress as a mediation variable in manufacturing companies listed on the Indonesia Stock Exchange for the 2020–2024 period. The population comprises all manufacturing companies listed on the IDX. Purposive sampling method resulted in 23 companies with 115 annual observations. Data analysis employed panel data regression using the Two-Stage Least Squares (TSLS) method to address endogeneity issues. Model selection was conducted through the Chow Test, Hausman Test, and Lagrange Multiplier Test. The results indicate that Equation 1 uses the Common Effect Model (CEM), while Equations 2 and 3 use the Fixed Effect Model (FEM). The findings reveal that ESG score has no significant effect on financial distress ($p = 0.293 > 0.05$) nor on financial reporting delay ($p = 0.747 > 0.05$). Foreign ownership has no significant effect on financial distress ($p = 0.280 > 0.05$). Financial distress has no significant effect on financial reporting delay ($p = 0.348 > 0.05$). Furthermore, financial distress does not mediate the effect of ESG score nor foreign ownership on financial reporting delay. Consequently, all five hypotheses are rejected. The implication is that ESG has not yet become a sufficiently strong factor in influencing corporate financial health in Indonesia. The novelty of this study lies in the use of the Merton Model to measure financial distress and the TSLS method to address endogeneity in the mediation model within the context of Indonesian manufacturing companies.

INTRODUCTION

The manufacturing sector is often referred to as the engine of Indonesia's economy. Its contribution is not only as a contributor to GDP, but also as a job creator and supplier of essential products for various derivative industries. Unfortunately, these drive engines have recently shown signs of fatigue (Putranto, 2023).

The latest evidence comes from a CNBC Indonesia report which raises data on the (Revo, 2024) Indonesian Manufacturing Purchasing Managers' Index (PMI). PMI below 50 indicates that our manufacturing sector is contracting. Worryingly, Indonesia's position in August 2024 turned out to be the worst among ASEAN countries, with PMI continuing to decline for five consecutive months. The S&P Global report highlights the main cause, namely a sharp weakening of domestic and foreign market demand, which ultimately has an impact on slow production and even triggers layoffs in some production lines.

Macroeconomic phenomena such as energy price fluctuations, weakening of the Rupiah exchange rate, and global demand pressures are not only visible in aggregate data. The impact was immediately felt on the production floor of the manufacturing company. Inflated operating costs, at a time when purchasing power and demand are eroded, systematically suppress profitability. This condition is clearly reflected in the financial performance of five

manufacturing issuers on the Indonesia Stock Exchange. Table 1 presents their net profit (loss) trends in the 2020–2024 period.

Table 1. Net Profit (Loss) Trends of Manufacturing Companies (in IDR Billion)

Company Code	2020	2021	2022	2023	2024
TPIA	727	2,169	(2,350)	(486)	(926)
SMGR	2,674	2,082	2,499	2,296	772
INKP	4,147	7,520	13,489	6,342	6,857
HMSP	8,581	7,137	6,324	8,097	6,646
GGRM	7,648	5,605	2,780	5,325	981

Source: Data processed (2026)

PT. Chandra Asri Petrochemical Tbk (TPIA) recorded two consecutive years of profit in 2020 and 2021, but then entered the loss zone starting in 2022. Losses had shrunk drastically from IDR 2.35 trillion (2022) to IDR 486 billion (2023), but widened again to IDR 926 billion in 2024. This pattern indicates that the company's recovery is still fragile to market shocks.

PT. Semen Indonesia Tbk (SMGR) showed a relatively stable performance in 2020–2023 with profits in the range of IDR 2–2.6 trillion. However, in 2024 there was a big surprise: profit fell sharply to only IDR 771 billion, or a drop of more than 69 percent compared to the previous year. This is a serious signal for the property and infrastructure sectors.

PT. Indah Kiat Pulp and Paper Tbk (INKP) had shot up its profit from IDR 4.1 trillion (2020) to IDR 13.4 trillion (2022), the peak of performance for five years. Unfortunately, profit then corrected by more than half in 2023 to IDR 6.3 trillion, and only slightly increased in 2024 to IDR 6.8 trillion. This means that the company has still not returned to its glory level.

The two cigarette issuers show an almost opposite pattern. PT. HM Sampoerna Tbk (HMSP) its profit tends to decline from 2020 to 2022, having risen in 2023, but falling again in 2024. Meanwhile, PT. Gudang Garam Tbk (GGRM) has actually experienced a resurgence: after its profit fell to a low of IDR 2.7 trillion in 2022, the company managed to jump its profit to IDR 9.8 trillion in 2024, making it the only issuer in the sample to record sustainable profit growth in the last two years.

Overall, the 2020–2024 period shows that external pressures have an uneven impact. Some have fallen and fallen (TPIA), some have suddenly fallen (SMGR), some are stagnant (INKP and HMSP), and some have actually risen (GGRM). But the most worrying is the trend of deteriorating profitability in 2024 for most companies, which could be an early proxy for the increased risk of financial distress in the manufacturing sector.

The financial pressures experienced by manufacturing companies in recent years show that financial distress is not just an incidental event, but reflects the sector's structural vulnerability to changing economic conditions. A number of studies show that the proportion of manufacturing companies that are in financial distress is relatively large, even when the sector's aggregate performance is still recording growth. This indicates that macro indicators that look stable do not always reflect the financial health of the individual company, so the risk of financial distress is often hidden behind sectoral growth (Felicia and Ulpah, 2022).

In this context, financial distress is an increasingly important issue to be studied in more depth, not only as an indicator of financial difficulties, but also as a condition that has the potential to affect corporate governance and transparency. Financial pressure can limit management's capacity to manage internal processes, including in the preparation and submission of financial statements. Therefore, the quality and timeliness of financial reporting is one of the relevant consequences to be considered in financial distress conditions.

Depressed financial conditions can eventually spread to various aspects of the company, one of which is the delay in submitting annual financial reports (financial reporting delay). Companies that experience financial distress tend to take longer to complete the reporting process, both due to the complexity of audits and management's prudence in delivering

financial information. However, the relationship between financial distress and financial reporting delays has not shown consistent results in previous studies. The research from Nurquran and Ardianto (2023) found that higher levels of financial distress increase the likelihood of reporting delays. On the contrary, Sihombing and Hing (2021) and Yani (2021) showed that financial distress does not always have a significant effect on audit delays. Lukason and Camacho-Miñano (2021) added that the influence is highly dependent on the characteristics of the company and managerial behaviour. The inconsistency of these findings shows that the relationship between financial distress and financial reporting delays is still open to further study, especially in the manufacturing sector which is facing economic pressure.

The inconsistency of research results regarding financial distress and its implications for financial reporting delays is not only influenced by differences in industry context or research period, but also has the potential to stem from different approaches in measuring financial distress itself. Most previous studies still rely on accounting financial ratio-based prediction models that are retrospective and less sensitive to market dynamics, so they have limitations in detecting financial risks early, especially in periods of economic uncertainty.

Alternatively, the Merton Model (1974) offers a market-based approach through the concept of distance to default that takes into account stock price volatility and the capital structure of a company. This approach is forward-looking because it reflects market expectations of a company's ability to meet its financial obligations in the future. A number of previous studies have shown that the Merton Model has a higher level of accuracy as an early warning system in predicting bankruptcy risk than the accounting ratio-based model (Dinh et al., 2021; Kang et al., 2022).

In the Indonesian context, the relevance of the Merton Model has also been empirically proven. Winoto and Colline (2024) compared several financial distress prediction models based on financial ratios with the Merton Model using data from companies in Indonesia and found that the Merton Model has better predictive power in identifying default risks. Based on these findings, this study uses the Merton Model as a financial distress measurement tool to obtain a more accurate picture of the company's financial risks and in accordance with the characteristics of the Indonesian capital market.

With the measurement of financial distress that is more sensitive to market conditions, this study does not only focus on the direct impact of ESG score and foreign ownership on financial reporting delays. ESG scores and foreign ownership are seen as having a direct influence on the timeliness of reporting through governance mechanisms, supervisory pressures, and signals captured by the market. However, under certain conditions, these influences can also work through changes in the company's financial condition. Therefore, financial distress is placed as a partial mediating variable in explaining the relationship between ESG score and foreign ownership of financial reporting delays.

In conditions of increasing financial pressure, attention to non-financial factors has become increasingly relevant, especially mechanisms that can affect the resilience of companies in the midst of limited resources. In this context, Environmental, Social, and Governance (ESG) is seen as an important indicator to assess the quality of a company's management and sustainability. A number of studies show that companies with better ESG disclosures tend to have more stable financial performance, lower risk, and easier access to financing (Nanda and Yandari; Nurachman and Soeratin, 2025). However, the effectiveness of ESG implementation is still a debate, especially in the manufacturing sector which is capital-intensive and has a high risk to the environment. In practice, a high ESG score does not necessarily reflect optimal risk management, as ESG implementation can be symbolic or purely formal compliance-oriented. This mismatch between ESG commitments and operational realities gives rise to the ESG paradox, where companies with relatively good ESG scores still

have the potential to face financial pressure due to environmental conflicts, compliance costs, and reputational risks.

In Indonesia's manufacturing sector, ESG has shifted from just a normative commitment to a factor that has the potential to determine business continuity. The reality on the ground shows that failure to manage environmental and social aspects can lead to serious operational disruptions. A number of factories in the Java region, such as in Pati and Temanggung, were forced to stop operations due to environmental pollution and licensing issues, while conflicts between the community and PT New Ramon Star in Pati shows how environmental issues can develop into significant legal and reputational pressure

(Dian Utoro Aji, 2024). A similar case also occurred in Mojokerto, when PT Pakerin faced administrative sanctions and criminal threats due to B3 waste pollution, which has direct implications for costs, legal risks, and the sustainability of the company's operations (Basyaiban and Wartiningsih, 2021). This phenomenon confirms that although environmental performance does not always have a direct impact on increasing the company's value (Laras Bela Utami et al., 2025), failure in ESG implementation has the potential to trigger or exacerbate financial distress.

In line with the pressure on governance and sustainability, Environmental, Social, and Governance (ESG) reporting practices in Indonesia also still face challenges in terms of standardization and compliance. The Financial Services Authority in Indonesia (OJK), through OJK regulation Number 51/POJK.03/2017 expressly requires financial service institutions, issuers, and public companies to implement sustainable finance and prepare sustainability reports (Darwati, 2025). The Indonesia Stock Exchange (IDX) targets ESG reporting to be fully implemented by 2025, with data as of December 2024 showing that 94% of listed companies (882 companies) have submitted sustainability reports (Puspadini, 2025).

However, despite the regulations in place and the level of compliance is quite high, ESG reporting practices in Indonesia still face challenges. A study by EY Indonesia from Linda (2025), revealed that sustainability reporting practices in Indonesia are still in their infancy, with considerable gaps between sectors and varying levels of readiness. In addition, the disclosure of specific aspects such as greenhouse gas emissions is still voluntary and has not been comprehensively carried out by most public companies. In other words, although regulations have mandated reporting, ESG has not yet fully become a key standard integrated into business practices and investment decision-making in Indonesia. The incompleteness of ESG data in many companies, especially in the early years of this study period, is empirical evidence of this condition.

In the context of financial reporting, companies that show a high commitment to ESG tend to have better governance and reporting systems, so they have the potential to deliver financial reports more in a timely manner. On the other hand, in manufacturing companies that face financial pressure and have not adequately integrated ESG, the limitations of internal reporting systems and reputational risks can trigger financial reporting delays.

In Indonesia's manufacturing sector, which is under economic pressure, ESG can no longer be understood solely as a normative commitment or regulatory compliance. ESG implementation has the potential to become a new source of pressure through increased environmental compliance costs, social demands, and strengthening governance that requires large resources. This situation poses a dilemma, where ESG is expected to be able to strengthen the company's sustainability and reputation, but in the short term it can exacerbate financial pressures. Therefore, ESG needs to be studied not only in terms of performance, but also from its role in influencing financial distress and its implications for the timeliness of financial reporting.

In addition to the company's internal mechanisms reflected through the implementation of ESG, external factors in the form of ownership structures are also important elements that

affect the company's financial stability and reporting quality. In the context of the Indonesian capital market, the role of foreign investors is becoming increasingly relevant given their contribution to market liquidity and the formation of risk perception towards issuers. Foreign investors generally bring stricter standards of analysis, governance, and transparency expectations, thus potentially encouraging improvements in the quality of company management.

However, in emerging capital markets such as Indonesia, foreign ownership is also sensitive to macroeconomic dynamics and corporate financial risks. Amid the pressures facing the manufacturing sector, foreign investors tend to be more responsive to signals of financial instability, which can increase pressure on management. On the one hand, the existence of foreign investors has the potential to reduce the risk of financial distress through increased transparency and operational efficiency (Pardede and Syafruddin, 2022). On the other hand, such sensitivity can also affect the quality and timeliness of financial reporting. Therefore, the influence of foreign ownership on financial reporting delays is not always direct, but it is very likely to work through the financial distress conditions experienced by companies.

In addition to having an impact on financial conditions, foreign ownership also has implications for the timeliness of financial reporting (financial reporting delay). Companies with foreign investors are typically under greater pressure to comply with international reporting standards and maintain a reputation in the global market. Research by Hermansyah and Ghiffari (2025), shows that the proportion of foreign ownership does not always have a significant effect on audit delays, as foreign investors focus more on results than the audit process. However, this result is different from the study by Hendi and Sitorus (2023), which found that the more widespread the ownership structure, including the presence of foreign investors, the greater the pressure on management to maintain the quality and timeliness of reporting. On the other hand, research by Yulianti (2020), shows that ownership structures do not always have a significant impact on the timeliness of financial statements, indicating that there is still a research gap regarding the role of foreign investors in accelerating financial reporting in Indonesia's manufacturing sector. These diverse findings indicate that the influence of foreign ownership on the timeliness of financial reporting is not always direct, but can depend on the company's financial stability as reflected through the level of financial distress.

This study was conducted because there are still inconsistencies in the results of previous studies related to financial distress and delayed financial reporting. Unlike previous studies that generally use financial ratio-based measures of financial distress, this study uses the Merton Model as a market-based approach. In addition, this study examines the integrated influence of ESG score and foreign ownership on financial reporting delay with financial distress as a mediating variable in one analytical framework

METHOD

Types and Data Sources

This study employs a quantitative approach using officially published secondary data from manufacturing companies listed on the Indonesia Stock Exchange (IDX) during 2020–2024. Primary data sources include annual financial statements, sustainability reports, and company ownership information. Audited financial statements were used to ensure data consistency and quality, particularly for measuring potential financial distress, with financial figures obtained from the IDX website and the Thomson Reuters database.

Financial reporting delay was measured as the number of days between the fiscal year-end (December 31) and the publication date of annual reports. Foreign ownership data were extracted from the shareholder structure sections of the reports. ESG (Environmental, Social, Governance) scores were sourced from Thomson Reuters (Refinitiv Eikon/LSEG Workspace)

to ensure standardization, comparability, and consistency. All collected data were processed to create the research variables needed for subsequent analysis.

Population and Sample

The study population consists of all manufacturing companies listed on the Indonesia Stock Exchange (IDX) during 2020–2024, covering four sub-sectors: Basic Materials, Industrial, Consumer Cyclical, and Consumer Non-Cyclical. This sector was chosen due to its capital-intensive nature, sensitivity to production cost fluctuations, governance and sustainability pressures, and complex operations that may affect financial reporting timeliness (Nanda and Yandari, 2025; Sihombing and Hing, 2021; Wijoyo, 2021).

Purposive sampling was applied to select companies with audited financial statements, complete foreign ownership data, and full ESG scores or sustainability reports for 2020–2024 (Abdussamad, 2021). After screening for data completeness, 23 companies met all criteria and were selected as the research sample. This ensures the sample is consistent, complete, and suitable for the study’s analytical purposes.

RESULTS AND DISCUSSION

Sample Description

This study uses secondary data from manufacturing companies listed on the Indonesia Stock Exchange (IDX) for the 2020–2024 period. Using purposive sampling based on the availability of ESG scores (from LSEG Workspace/Thomson Reuters), audited financial reports, and foreign ownership data, the final sample consists of 23 companies with 115 annual observations (23 companies $\times$ 5 years). Table 2 lists the sample companies, and Table 3 summarizes the sampling process.

Table 2. Sample Companies

No.	Company Name	Stock Code
1	PT. Akasha Wira International Tbk	ADES
2	PT. Astra Agro Lestari Tbk	AALI
3	PT. Avia Avian Tbk	AVIA
4	PT. Barito Pacific Tbk	BRPT
5	PT. Chandra Asri Pacific Tbk	TPIA
6	PT. Charoen Pokphand Indonesia Tbk	CPIN
7	PT. Cisarua Mountain Dairy Tbk	CMRY
8	PT. Gajah Tunggal Tbk	GJTL
9	PT. Garudafood Putra Putri Jaya Tbk	GOOD
10	PT. Gudang Garam Tbk	GGRM
11	PT. Hanjaya Mandala Sampoerna Tbk	HMSP
12	PT. Indah Kiat Pulp and Paper Tbk	INKP
13	PT. Indocement Tunggal Prakarsa Tbk	INTP
14	PT. Indofood CBP Sukses Makmur Tbk	ICBP
15	PT. Indofood Sukses Makmur Tbk	INDF
16	PT. Industri Jamu dan Farmasi Sido Muncul Tbk	SIDO
17	PT. Japfa Comfeed Indonesia Tbk	JPFA
18	PT. Kalbe Farma Tbk	KLBF
19	PT. Mayora Indah Tbk	MYOR
20	PT. Pabrik Kertas Tjiwi Kimia Tbk	TKIM
21	PT. Semen Indonesia (Persero) Tbk	SMGR

22	PT. Unilever Indonesia Tbk	UNVR
23	PT. Wijaya Karya Beton Tbk	WTON

Source: Data processed (2026)

Table 3. Sampling Process

Description	Number
Manufacturing companies listed on IDX	268
Companies not meeting criteria	-245
Final sample companies	23
Research period (years)	5
Total observations (23 × 5)	115

Source: Data processed (2026)

Descriptive Statistics

Table 4 presents the descriptive statistics for all variables. The mean financial distress (measured by the Merton Model) is 0.175 (17.5%), with a maximum of 0.730 (73%) for Unilever Indonesia in 2024. The mean ESG score is 39.07, ranging from 0 to 82.12, indicating that some companies did not report ESG in the early years. Foreign ownership averages 33.6%, with a maximum of 93.1% (Unilever Indonesia, 2024). Financial reporting delay averages 72.9 days, ranging from 0 to 267 days. Firm size (log of total assets) shows relatively little variation, indicating homogeneous sample firms.

Table 4. Descriptive Statistics

Variable	Mean	Median	Maximum	Minimum	Std. Dev.
DISTRESS	0.175	0.07	0.73	0	0.208
ESGSCORE	39.074	39.82	82.12	0	25.968
FOREIGN	0.336	0.261	0.931	0	0.283
DELAY	72.904	81	267	0	30.746
SIZE	30.972	31.02	32.94	27.59	1.255

Number of observations = 115.

Source: Data processed with EViews 10 (2026)

Panel Model Selection

Table 5 presents the Chow test results for selecting between the Common Effect Model (CEM) and Fixed Effect Model (FEM). For Equation 1 (dependent variable: DISTRESS), the F-statistic (0.757) is smaller than the F-table (1.61), so H0 is accepted, indicating that CEM is appropriate. For Equation 2 and Equation 3 (dependent variable: DELAY), the F-statistics (4.538 and 4.440) are larger than the F-table (1.61), so H0 is rejected, indicating that FEM is appropriate.

Table 5. Chow Test Results

Equation	F-statistic	F-table ($\alpha=0.05$)	Conclusion	Selected Model
Eq. 1	0.757	1.61	H0 accepted	CEM
Eq. 2	4.538	1.61	H0 rejected	FEM
Eq. 3	4.44	1.61	H0 rejected	FEM

CEM = Common Effect Model, FEM = Fixed Effect Model.

Source: Data processed with EViews 10 (2026)

Table 6 summarizes the Hausman test results. For Equation 1, REM collapsed into CEM (Rho=0), and FEM was not fit, so CEM remains the final model. For Equation 2 and Equation 3, REM was not fit ($p > 0.05$), while FEM was fit ($p < 0.001$). Therefore, FEM was selected for both equations, consistent with the Chow test results.

Table 6. Hausman Test Summary

Equation	REM Condition	FEM Condition	Final Model
Eq. 1	REM collapsed to CEM (Rho=0)	Not fit (p=0.585)	CEM
Eq. 2	Not fit (p=0.903)	Fit (p=0.000)	FEM
Eq. 3	Not fit (p=0.956)	Fit (p=0.000)	FEM

Source: Data processed with EViews 10 (2026)

Classical Assumption Tests

Table 7 presents the multicollinearity test results. All correlation values between independent variables are below 0.80, and all VIF values are below 10. The highest correlation is 0.421 (between ESGSCORE and SIZE). Therefore, no serious multicollinearity is present in any of the equations.

Table 7. Multicollinearity Test

Variable Pair	Correlation	VIF	Conclusion
ESGSCORE – SIZE	0.421	< 10	No multicollinearity
ESGSCORE – FOREIGN	0.178	< 10	No multicollinearity
ESGSCORE – DISTRESS	0.186	< 10	No multicollinearity
FOREIGN – SIZE	-0.094	< 10	No multicollinearity
FOREIGN – DISTRESS	0.11	< 10	No multicollinearity
DISTRESS – SIZE	0.173	< 10	No multicollinearity

Source: Data processed with EViews 10 (2026)

Table 8 presents the Durbin-Watson test for autocorrelation. For Equation 1 (CEM), the DW value (2.05) indicates no autocorrelation. For Equation 2 and Equation 3 (FEM), the DW values (1.41 for both) indicate positive autocorrelation. However, this issue was mitigated by applying White cross-section standard errors (HAC) during TSLS estimation, making the results robust and valid for interpretation.

Table 8. Autocorrelation Test (Durbin-Watson)

Equation	Durbin-Watson	Conclusion
Eq. 1 (CEM)	2.05	No autocorrelation
Eq. 2 (FEM)	1.41	Positive autocorrelation (corrected with White SE)
Eq. 3 (FEM)	1.41	Positive autocorrelation (corrected with White SE)

Hypothesis Testing

Table 9 presents the hypothesis test results for all seven hypotheses. H1 (ESG score → financial distress) is rejected ($p = 0.293 > 0.05$). H2 (foreign ownership → financial distress) is rejected ($p = 0.280 > 0.05$). H3 (ESG score → reporting delay) is rejected at the 5% significance level ($p = 0.0697$), although the negative coefficient indicates a direction consistent with the hypothesis and approaches significance at the 10% level. H4 (foreign ownership → reporting delay) shows a significant positive effect ($p = 0.000$), but the direction is contrary to the hypothesis (coefficient positive), thus the hypothesis is rejected. H5 (financial distress → reporting delay) is rejected ($p = 0.348 > 0.05$), despite the positive coefficient being in the hypothesized direction. H6 and H7 (mediation effects) are rejected because the first condition for mediation ($X \rightarrow M$) is not significant for both ESGSCORE ($p = 0.293$) and FOREIGN ($p = 0.280$).

Table 9. Hypothesis Test Result (H1-H7)

Hypothesis	Relationship	p-value	Result
H1	ESG score → Financial distress (negative)	0.293	Rejected
H2	Foreign ownership → Financial distress (negative)	0.280	Rejected
H3	ESG score → Reporting delay (negative)	0.0697 (approaching significance at 10%)	Rejected (at $\alpha=5\%$)
H4	Foreign ownership → Reporting delay (negative)	0.000 (significant but positive direction)	Rejected (direction contrary)
H5	Financial distress → Reporting delay (positive)	0.348	Rejected
H6	Mediation: ESG → Distress → Delay	X→M: p=0.293 (not significant)	Rejected (condition 1 fails)
H7	Mediation: Foreign → Distress → Delay	X→M: p=0.280 (not significant)	Rejected (condition 1 fails)

Source: Data processed with EViews 10 (2026)

Table 10 tests the mediation conditions for H6 and H7. For both ESGSCORE and FOREIGN, the first condition ($X \rightarrow M$) is not significant ($p = 0.293$ and $p = 0.280$, respectively). Therefore, the necessary conditions for mediation are not met, confirming the rejection of H6 and H7.

Table 10. Mediation Conditions Test

Condition	ESGSCORE	FOREIGN
$X \rightarrow M$ (Eq. 1)	Not significant ($p = 0.293$)	Not significant ($p = 0.280$)
$M \rightarrow Y$ (Eq. 3)	–	Not significant ($p = 0.331$)
$X \rightarrow Y$ after M (Eq. 3)	Not significant ($p = 0.747$)	Not significant ($p = 0.083$)

X = independent variable, M = mediator (DISTRESS), Y = dependent variable (DELAY).

Source: Data processed with EViews 10 (2026)

Table 11 calculates the indirect effects. The indirect effect for ESGSCORE is 0.00384, and for FOREIGN is 0.32971. Both values are very small, confirming that almost no indirect effect is transmitted through financial distress. This further supports the rejection of H6 and H7.

Table 11. Indirect Effect Calculation

Hypothesis	Indirect Effect ($\beta \times \gamma_3$)	Value
H6 (ESGSCORE)	0.000886×4.337238	0.00384
H7 (FOREIGN)	0.076023×4.337238	0.32971

Source: Data processed with EViews 10 (2026)

After presenting the results of the hypothesis testing in the previous sub-chapter, this section will discuss in depth the findings. Overall, all seven hypotheses in this study were rejected (with the note that H3 approaches significance at the 10% level). There is insufficient statistical evidence to support that ESG scores and foreign ownership have a negative effect on financial distress (H1, H2), that ESG scores have a negative effect on financial reporting delays (H3), that foreign ownership has a negative effect on financial reporting delays (H4), that financial distress has a positive effect on financial reporting delays (H5), or that financial distress plays a mediator role (H6, H7). These results are interesting to discuss further because they contradict a framework built on agency theory, signal theory, and legitimacy theory.

The Effect of ESG Score on Financial Distress

This study found that ESG scores do not have a significant effect on financial distress in manufacturing companies for the 2020-2024 period. These findings apply both when ESG is broken down into three components (environmental, social, governance) and after they are combined into a single aggregate score. The CEM model used to test this relationship is declared fit at a significance level of 10%, as explained in Chapter 3 that in social research a significance level of up to 10% is still acceptable, especially for models with a certain complexity or a limited number of samples.

One of the most likely explanations is that ESG score in Indonesia is still not the main benchmark in assessing a company's financial risk. In contrast to developed countries where ESG has become an integral part of investment analysis, in Indonesia awareness of the importance of ESG is still relatively low. Investors, creditors, and other stakeholders have not fully made ESG scores an indicator in decision-making. As a result, companies with high ESG scores do not necessarily get a better perception of risk from the market, while companies with low ESG scores are also not necessarily considered high risk.

Another factor that is no less important is the quality of the ESG data itself. Based on the raw data used in this study, it can be seen that many sample companies had an ESG score of zero (0) in the early years of the study period. For example, PT. Avia Avian Tbk (AVIA) has an ESG score of 0 from 2020 to 2022, only having scores in 2023 (75.50) and 2024 (76.64). PT. Akasha Wira International Tbk (ADES) has an ESG score of 0 in 2020-2021, only to have a score in 2022-2024. PT. Charoen Pokphand Indonesia Tbk (CPIN) also recorded an ESG score of 0 in several periods. Even large companies such as PT. Gudang Garam Tbk (GGRM) and PT. Wijaya Karya Beton Tbk (WTON) also has a record of ESG scores that are empty in certain years.

The incompleteness of this data reflects that ESG reporting practices in Indonesia are still inconsistent. Many companies are only starting to report ESG in the final years of the study period, so the data available may not yet reflect true sustainability performance. In addition, the LSEG Workspace database (Thomson Reuters/Refinitiv), which is the source of ESG scores in this study, also has limited coverage for companies in Indonesia. Not all listed companies have complete ESG data, and even companies with ESG scores may not have data for each year in a row.

Thus, the finding that ESG scores have no significant effect on financial distress is not entirely surprising. If ESG data alone is still largely blank or only available in the final years of the period, then it is difficult to expect that these variables can explain the variation in financial distress significantly. This shows that it takes longer time and stricter regulations for ESG reporting in Indonesia to be more mature and the data more reliable to analyse.

The Effect of Foreign Ownership on Financial Distress

The study also found that foreign ownership had no significant effect on financial distress. Even the direction of the positive coefficient, although not significant, indicates that the larger the portion of foreign ownership tends to increase the risk of financial distress. These findings contradict the argument that foreign investors bring better governance standards and stricter supervision.

A possible explanation is that foreign investors are not always active in overseeing management. In many cases, foreign investors are passive and only invest for long-term profits. When companies start to show signs of financial pressure, foreign investors tend to withdraw their funds faster than domestic investors. This behaviour can actually worsen the company's financial condition.

For example, PT. Goodyear Indonesia Tbk (GOOD), which had foreign ownership of around 20% at the beginning of the period, actually experienced quite high financial pressure with a financial distress rate of 37.98% in 2021 and 60.92% in 2024. PT. Unilever Indonesia

Tbk (UNVR), which has the highest foreign ownership (93.09%), also recorded the highest financial distress (72.96%) in 2024. Although this relationship is not causal, it at least suggests that high foreign ownership does not necessarily guarantee the financial health of a company.

Additionally, companies with significant foreign ownership often face additional challenges such as differences in business culture, geographic distance, and the cost of compliance with international standards. These challenges can be a burden that increases operational costs, which can ultimately worsen financial conditions.

The Effect of ESG Score on Financial Reporting Delay

This study also examined the direct effect of ESG score on financial reporting delay (H3). The results show a negative coefficient (-0.167890) with a probability value of 0.0697. Although this value does not reach the 5% significance level ($p > 0.05$), the negative coefficient direction is consistent with the hypothesis that higher ESG scores are associated with shorter reporting delays. At the 10% significance level, this relationship is considered significant. This finding indicates that ESG score tends to accelerate financial reporting timeliness. The systems built to collect ESG data may also improve the quality of a company's internal information, ultimately speeding up the financial reporting process. However, the effect has not been strong enough in this study, possibly due to limited ESG data availability and the pandemic period. Nevertheless, this result provides an early indication that ESG has the potential to improve reporting timeliness in Indonesia.

The Effect of Foreign Ownership on Financial Reporting Delay

This study found that foreign ownership has a significant effect on financial reporting delay ($p = 0.0000$), but with a positive coefficient (9.815713) contrary to the hypothesis. This means that the higher the proportion of foreign ownership, the slower the financial reporting. These findings contrast with studies in Nigeria (Koroye et al., 2025) and Sweden (Lux et al., 2024) that found foreign ownership shortens audit report lag. However, the results align with Beuselinck et al., (2017), who stated that the effect of foreign ownership on reporting timeliness can be hindered by geographic distance and cultural differences. In Indonesia, foreign investors may face challenges in monitoring effectively due to language differences, business culture, and limited access to information. Agency theory explains that geographically distant foreign investors may rely more on written reports than direct oversight, which can lengthen the audit process due to higher demands for international standards.

The Effect of Financial Distress on Financial Reporting Delay

This study found that financial distress did not have a significant effect on financial reporting delay, although the direction of the positive coefficient was in accordance with the hypothesis. This means that while companies under financial stress should intuitively be slower to report financially, the empirical evidence in this study does not support this relationship.

The most plausible explanation is the regulatory factor. The Financial Services Authority and the Indonesia Stock Exchange have strict sanctions for companies that are late in submitting financial statements, such as written warnings, fines, and suspension of stock trading. This regulatory pressure may be more dominant than the pressure from the company's own financial condition. In other words, even though companies are experiencing financial difficulties, they are still trying to meet deadlines for fear of sanctions.

For example, PT. Avia Avian Tbk (AVIA), which experienced the longest reporting delay (267 days) in 2020, in the same year had a very low financial distress (0%). On the other hand, companies with high financial distress such as UNVR (72.96% in 2024) actually have relatively low delays (44 days). This pattern suggests that reporting delays are not always caused by financial pressures. Other factors such as the change of public accounting firms, natural disasters, or pandemics that cause social restrictions and working from home may play a greater role in causing delays.

The Role of Financial Distress as a Mediator

This study also examines whether financial distress plays a mediator role in the influence of ESG score and foreign ownership on financial reporting delays (H6 and H7). The results show no mediating effect, for either ESG scores or foreign ownership. Two main conditions of mediation were not met: first, ESG score and foreign ownership had no significant effect on financial distress (H1 and H2 rejected); second, financial distress itself also did not have a significant effect on financial reporting delays (H5 rejected). Based on the Baron & Kenny (1986) approach, the first condition of mediation ($X \rightarrow M$) is not met because ESGSCORE and FOREIGN are not significant. Therefore, H6 and H7 are rejected. The very small indirect effect values (0.00384 and 0.32971) further confirm that almost no indirect effects are transmitted through financial distress.

CONCLUSION

Based on the results of the analysis and discussion that has been carried out, this study concludes several things as follows. First, the ESG score has not been proven to have a negative effect on financial distress in manufacturing sector companies for the 2020-2024 period (H1). Based on the results of a statistical test using an aggregate ESG score, it was found that ESG score did not have a significant influence on financial distress ($p = 0.293 > 0.05$). Second, foreign ownership has also not been proven to have a negative effect on financial distress (H2). The results of the statistical test show that foreign ownership does not have a significant influence on financial distress ($p = 0.280 > 0.05$). Third, ESG score has not been proven to have a negative effect on financial reporting delay at the 5% significance level (H3). The coefficient is negative (-0.167890), consistent with the hypothesis, but the p-value (0.0697) indicates significance only at the 10% level. Fourth, foreign ownership has a significant positive effect on financial reporting delay ($p = 0.000$), but the direction is contrary to the hypothesis (H4). This indicates that higher foreign ownership tends to lengthen, rather than shorten, financial reporting delays. Fifth, financial distress has not been proven to have a positive effect on financial reporting delays (H5). Although the direction of the positive coefficient corresponds to the hypothesis, the effect is not statistically significant ($p = 0.348 > 0.05$). Sixth, financial distress does not play a mediator role in the influence of ESG score on financial reporting delays (H6). The first condition of mediation ($X \rightarrow M$) is not met because ESG score is not significant. Seventh, financial distress does not play a mediator role in the influence of foreign ownership on financial reporting delays (H7). The first condition of mediation ($X \rightarrow M$) is not met because foreign ownership is not significant. Thus, all seven hypotheses put forward in this study were rejected (with the note that H3 approaches significance at the 10% level). This research has several limitations that need to be acknowledged. First, the research period is relatively short (2020–2024) and covers the COVID-19 pandemic which is an abnormal condition, so the research results may not be generalized to the normal period. Second, the limited number of samples (23 companies) is due to the availability of ESG data that is still largely blank in the LSEG Workspace database for Indonesian companies, which at the same time confirms that ESG reporting in Indonesia is still immature. Third, the ESG data used comes from a single source that may have limited coverage. Fourth, the low adjusted R-squared values in some models indicate that there are many other factors outside the model that affect financial distress and financial reporting delays. Fifth, because all hypotheses are rejected, this result actually opens up a space for discussion that the theories that apply in developed countries are not necessarily relevant in the Indonesian context, especially for new topics such as ESG.

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