UNTAR Universitas Tarumanagara
Jurnal Akuntansi
e-JA
E-ISSN 2549-8800
P-ISSN 1410-3591

Environment Uncertainty, Earnings Volatility and Their Role in Financial Statement Fraud?

Lin Oktris[1*], Agustin Fadjarenie[2], Apollo Daito[3], and Zuha Rosufila Bt Abu Hasan[4]

[1,2,3]Department of Accounting, Faculty of Economy and Business, Mercu Buana University, Jakarta, Indonesia

[4]Bachelor of Management Programme, University Terengganu Malaysia, Malaysia

Email Address:

linoktris@mercubuana.ac.id, agustin.fadjarenie@mercubuana.ac.id, apollo@mercubuana.ac.id, zuha@umt.edu.my*

*Corresponding Author

Submitted *27-08-2024* ***Reviewed*** *17-09-2024* ***Revised*** *20-09-2024* ***Accepted*** *23-09-2024* ***Published*** *31-01-2025*

Abstract: This study examines the influence of environmental uncertainty (EU) and earnings volatility (EV) on fraudulent financial statements (FFS) in Indonesia's manufacturing sector. The research utilises observational data from 902 instances across 188 manufacturing companies from 2019 to 2023, employing multiple regression analysis to test the relationships between variables. The results reveal that EV has a significant positive effect on FFS, while EU does not show a significant impact. The novelty of this study lies in its integrative approach, considering the interactive effects between EU and EV, which have been underexplored in previous literature. The findings suggest that high earnings volatility can be an early indicator of financial statement manipulation. The practical implications emphasise the importance of closely monitoring earnings volatility by regulators and auditors as a preventive measure against financial fraud and strengthening internal control mechanisms and corporate governance to minimise the risk of financial statement manipulation.
Keywords: Environmental Uncertainty; Earnings Volatility; Fraudulent Financial Reporting; Manufacturing Sector; Corporate Governance.

Abstrak: Penelitian ini bertujuan untuk mengkaji pengaruh ketidakpastian lingkungan (EU) dan volatilitas laba (EV) terhadap manipulasi laporan keuangan (FFS) pada sektor manufaktur di Indonesia. Data observasi yang digunakan sebanyak 902 dari 188 perusahaan manufaktur selama periode 2019 to 2023, dan analisis regresi berganda untuk menguji hubungan antar variabel. Hasil penelitian menunjukkan bahwa EV memiliki pengaruh signifikan positif terhadap FFS, sementara EU tidak menunjukkan pengaruh yang signifikan. Kebaruan penelitian ini terletak pada pendekatan integratif yang mempertimbangkan efek interaksi antara EU dan EV, yang sebelumnya kurang mendapat perhatian dalam literatur. Temuan ini mengindikasikan bahwa fluktuasi laba yang tinggi dapat menjadi indikator awal terjadinya manipulasi laporan keuangan. Implikasi praktis dari penelitian ini menyoroti pentingnya pengawasan ketat terhadap volatilitas laba oleh regulator dan auditor sebagai upaya pencegahan kecurangan keuangan. Selain itu, studi ini memberikan kontribusi bagi pembuat kebijakan dan praktisi dalam memperkuat mekanisme pengendalian internal dan tata kelola perusahaan untuk meminimalkan risiko manipulasi laporan keuangan.
Kata Kunci: Ketidakpastian Lingkungan; Volatilitas Laba; Manipulasi Laporan Keuangan; Sektor Manufaktur; Tata Kelola Perusahaan.

INTRODUCTION

Financial statement fraud is a pervasive issue that undermines the integrity of financial reporting and erodes investor confidence (Ugbah et al., 2023; Rostami & Rezaei, 2022). Despite regulatory efforts to detect and prevent fraud (Kaur et al., 2023), incidents continue to occur, resulting in significant financial losses for stakeholders (Toit, 2023; Lisowsky,

2023). Understanding the underlying factors contributing to financial statement fraud, especially the role of environmental uncertainty and earnings volatility, is crucial in addressing this issue.

Financial statement fraud has become a critical concern in accounting and finance, particularly with the rise of significant fraud cases involving prominent companies. Such fraudulent activities harm the affected companies and undermine public trust and market stability. This research explores how environmental uncertainty and earnings volatility impact the likelihood of financial statement fraud.

One key factor considered in this research is environmental uncertainty. It refers to a company's unpredictability due to changes in the external environment, such as economic fluctuations, regulatory changes, and increasing competition. High levels of uncertainty can pressure management to meet financial targets, leading to aggressive or speculative decisions, which may result in the manipulation of financial statements.

Another significant factor is earnings volatility, which indicates large company profit fluctuations over time. High volatility can signal instability and raise concerns among investors and stakeholders. In such situations, management may feel tempted to manipulate earnings figures to present a more stable and positive company image. This practice is particularly relevant when a company's earnings are a primary performance indicator and basis for market valuation.

This study explores the relationship between environmental uncertainty, earnings volatility, and management's propensity to engage in financial statement fraud. It is based on the premise that uncertainty and volatility can create conditions where management feels pressured to meet market expectations. This pressure may lead to unethical practices, including financial statement manipulation, if not managed effectively.

The business environment has become increasingly volatile and uncertain in recent years due to rapid technological advancements, globalisation, economic fluctuations, and geopolitical tensions (Bai, He & Hou, 2021). Concurrently, earnings volatility has emerged as a critical indicator of financial health and managerial performance (Chen & Zhang, 2023). By examining these factors, this study seeks to provide new insights into how environmental uncertainty and earnings volatility contribute to financial statement fraud.

This research problem is formulated from the need to understand the underlying factors contributing to financial statement fraud, particularly the role of environmental uncertainty and earnings volatility. This research problem arises from the need to understand the underlying factors contributing to financial statement fraud, mainly focusing on environmental uncertainty and earnings volatility. Financial statement fraud has become a critical issue in accounting and finance, especially with the rise of significant fraud cases involving prominent companies. Such fraud not only undermines the integrity of the affected company but also negatively impacts public trust and market stability.

One of the primary factors considered in this research is environmental uncertainty. Environmental uncertainty can be defined as the degree of unpredictability that a company faces due to changes in the external environment, such as economic fluctuations, regulatory changes, and increasing competition. This uncertainty pressures company management to meet financial targets, which may lead them to engage in unethical behaviour, including manipulating financial statements. High levels of uncertainty often force management to make more aggressive or even speculative decisions, which can result in the presentation of misleading financial information. Financial statement fraud remains a critical concern in corporate governance and financial reporting, undermining investor confidence and the integrity of financial markets.

UNTAR Universitas Tarumanagara
Jurnal Akuntansi
e-JA
E-ISSN 2549-8800
P-ISSN 1410-3591

Defined as the intentional misrepresentation or omission of material information in a company's financial statements, financial statement fraud can manifest in various forms, including earnings manipulation, revenue recognition fraud, and asset misstatement. The repercussions of such fraudulent activities extend beyond immediate financial losses, eroding stakeholder trust, damaging corporate reputations, and inviting stringent regulatory scrutiny (Zhao & Wang, 2023).

Earnings volatility is also a significant factor in this context. Earnings volatility refers to the large fluctuations in a company's profits from one period to the next. High volatility is often perceived as a sign of instability within the company and can raise concerns among investors and other stakeholders. In such situations, management may be tempted to manipulate earnings figures to maintain a positive image of the company in the eyes of shareholders and the market.

This is particularly relevant in contexts where a company's earnings are the primary indicator of its performance and the basis for market valuation. This research will explore the relationship between environmental uncertainty, earnings volatility, and the propensity of management to engage in financial statement fraud. One of the key premises of this study is that uncertainty and volatility create conditions in which management feels pressured to meet market expectations. If not appropriately managed, this pressure can lead management to resort to unethical practices, including financial statement manipulation. The business environment has become increasingly volatile and uncertain in recent years, driven by rapid technological advancements, globalisation, economic fluctuations, and geopolitical tensions.

This heightened environmental uncertainty poses significant challenges for organisations, compelling them to adapt swiftly to changing conditions to maintain competitiveness and operational stability (Bai, He, & Hou, 2021). Concurrently, earnings volatility, characterised by significant fluctuations in a company's profitability over time, has emerged as a critical indicator of financial health and managerial performance. High earnings volatility often signals instability, prompting heightened scrutiny from investors, analysts, and regulatory bodies (Chen & Zhang, 2023).

This study will employ various analytical methods, including statistical analysis and case studies, to understand how environmental uncertainty and earnings volatility influence financial statement fraud. Statistical analysis will allow the researcher to identify patterns and relationships between the investigated variables. At the same time, case studies will provide more in-depth insights into specific fraud situations. The findings of this research are expected to significantly contribute to the literature on financial statement fraud, particularly by offering new perspectives on how external and internal environmental factors within a company can contribute to manipulative practices.

Additionally, the results of this study are anticipated to provide practical recommendations for company management on managing uncertainty and volatility more effectively, thereby minimising the risk of financial statement fraud. The research aims to deepen the theoretical understanding of the factors influencing financial statement fraud and offer practical contributions to the business world to enhance financial transparency and accountability. By shedding light on the connections between environmental uncertainty, earnings volatility, and fraudulent activities, this study seeks to provide a comprehensive framework for understanding and mitigating financial statement fraud.

The selection of research topics aims to reveal a fundamental concept: the relationship between environmental uncertainty, earnings volatility, and the propensity for financial statement fraud. By exploring this nexus, the research seeks to uncover potential triggers

and mechanisms underlying fraudulent activities in corporate financial reporting. The importance of this research lies in its potential to enhance fraud detection mechanisms, inform regulatory policies, and protect investor interests.

The study will address the research problem by combining quantitative analysis, statistical modelling, and empirical investigation. Key approaches include analysing financial statements, firm-specific characteristics, and macroeconomic indicators to identify patterns and correlations, testing hypotheses to explore the causal relationships between environmental uncertainty, earnings volatility, and financial statement fraud, and using case studies and qualitative analysis to provide contextual insights and validate the findings. Additionally, these methods often incorporate advanced statistical techniques such as regression analysis, time-series analysis, and machine-learning algorithms to enhance the robustness and accuracy of the results.

For instance, analysing financial statements involves scrutinising key financial ratios, such as profitability, liquidity, and solvency, which may indicate potential manipulations or anomalies. Meanwhile, macroeconomic indicators like GDP growth, inflation rates, and market volatility assess broader economic conditions that might influence corporate behaviour. Furthermore, case studies allow for an in-depth examination of specific instances of fraud, providing a richer understanding of the underlying motivations and mechanisms involved, thus supporting the generalizability of the quantitative findings.

Recent studies have highlighted various factors contributing to financial statement fraud, including internal control weaknesses (Manry et al., 2023), (Al-Beity, 2022) managerial incentives (Seifzadeh et al., 2023), (Mongwe & Malan, 2020), and organisational culture (Liu et al., 2023), (Mukhtaruddin et al., 2022), (Gepp et al., 2020). For example, research (Valaskova & Durana, 2020), (Alhadab, 2022) emphasises the role of earnings management in financial fraud schemes, where managers manipulate accounting figures to meet earnings targets or conceal underlying financial problems. Similarly, studies (Hong, 2022) identify executive compensation structures and pressure from capital markets as drivers of fraudulent behaviour. Moreover, the literature recognises the importance of corporate governance mechanisms in mitigating the risk of financial statement fraud (Kassem, 2022), (Girau et al., 2021). Research by (Hatane et al., 2019), (Le & Tran, 2022) underscores the significance of adequate internal controls, and independent board oversight (Barros et al., 2021), and audit committee diligence in detecting and preventing fraudulent activities (Aqlan et al., 2021).

Furthermore, studies by (Alkhadara et al., 2022), (Burhan et al., 2023) highlight the role of ethical leadership and corporate culture in fostering a climate of transparency and integrity. In addition to internal factors, environmental uncertainty and earnings volatility have emerged as critical determinants of financial statement fraud (Arianpoor & Asali, 2023), (Li & Luo, 2024). Research by (Tibiletti et al., 2021), (Sultana et al., 2021) suggests that firms operating in highly uncertain environments may face increased pressure to manipulate financial statements to maintain investor confidence or secure financing. Similarly, studies by (Azad et al., 2023) highlight the relationship between earnings volatility and the likelihood of financial misstatements, particularly in industries characterised by cyclical or volatile market conditions (Danielson, 2018).

Despite these insights, gaps remain in our understanding of the interplay between environmental uncertainty, earnings volatility, and financial statement fraud. Existing research has primarily focused on individual determinants of fraud (Kalovya, 2020) and (Maulidi, 2020), overlooking the complex interactions and synergies between these factors. Moreover, empirical evidence on the effectiveness of fraud detection mechanisms and

regulatory interventions remains limited, highlighting the need for further investigation and analysis.

Future research should adopt a holistic approach to examine the combined influence of internal and external factors on financial statement fraud. Researchers can develop comprehensive models and frameworks to explain the underlying mechanisms driving fraudulent behaviour by integrating insights from accounting, finance, economics, and organisational behaviour. Additionally, longitudinal studies and cross-country comparisons can provide valuable insights into the evolution of fraud schemes and the effectiveness of regulatory responses in different institutional contexts.

While existing research has made significant strides in understanding the determinants of financial statement fraud (Othman, 2021), (Blanco et al., 2022), the proposed study aims to contribute novel insights by focusing on the impact of environmental uncertainty and earnings volatility. This research represents a departure from traditional approaches examining internal factors such as corporate governance mechanisms and managerial incentives.

One novel aspect of this study is its emphasis on environmental uncertainty as a potential trigger for financial statement fraud. While prior research has acknowledged the influence of external factors on fraudulent behaviour, such as regulatory environments and market conditions, limited attention has been paid to the role of broader environmental uncertainty. By examining how economic instability, geopolitical risks, and technological disruption affect firms' propensity for fraudulent reporting, this research seeks to uncover new pathways and mechanisms driving fraudulent behaviour in dynamic and uncertain business environments.

Similarly, the study's focus on earnings volatility as a determinant of financial statement fraud represents a novel contribution to the literature. While previous research has explored the relationship between earnings management and fraudulent activities (Svabova et al., 2020), (Nasir et al., 2018), less attention has been paid to the specific role of earnings volatility in shaping firms' incentives and opportunities for financial misstatements. By investigating how fluctuations in earnings stability and predictability influence firms' reporting decisions, this research aims to provide new insights into the nuanced dynamics of fraudulent behaviour and the effectiveness of fraud detection mechanisms.

Specifically, the study explores how inconsistent earnings patterns, such as sudden spikes or drops in reported income, may serve as red flags for potential manipulation. These irregularities often reflect attempts by management to obscure underlying financial difficulties or to meet market expectations, which can lead to deceptive financial reporting practices. Furthermore, the research examines the role of internal and external monitoring mechanisms, such as audits and regulatory oversight, in mitigating the risks associated with earnings manipulation. It considers the effectiveness of these mechanisms in various economic contexts, particularly under conditions of high environmental uncertainty, where firms might be more inclined to engage in fraudulent activities.

Additionally, this research contributes to the broader literature on corporate governance by analysing how the interplay between managerial incentives, such as bonuses tied to financial performance, and external pressures from investors and analysts can influence the likelihood of financial statement fraud. Ultimately, the findings aim to enhance the understanding of how firms' earnings management behaviours are shaped and how these behaviours can be better detected and prevented.

The proposed study seeks to adopt an integrated approach that considers the interactive effects of environmental uncertainty and earnings volatility on financial

statement fraud. By examining how these factors intersect and amplify each other's impact on firms' reporting practices, the research aims to uncover complex patterns and synergies that traditional models or frameworks may not capture. This holistic perspective acknowledges the multifaceted nature of fraudulent behaviour and underscores the importance of considering internal and external factors in understanding and addressing financial statement fraud.

In addition to its conceptual novelty, the proposed study contributes methodologically by leveraging advanced quantitative techniques and empirical analysis. The research aims to rigorously test hypotheses and validate findings using large-scale financial datasets by employing state-of-the-art statistical models and data analytics tools. This methodological rigour enhances the robustness and reliability of the study's conclusions, advancing the field's methodological frontier and setting a benchmark for future research in financial statement fraud. Overall, the proposed study's novelty lies in its innovative approach to examining the impact of environmental uncertainty and earnings volatility on financial statement fraud. By integrating insights from multiple disciplines, adopting an integrated perspective, and leveraging advanced methodologies, this research aims to push the boundaries of knowledge in the field and provide actionable insights for policymakers, regulators, and practitioners grappling with the challenges of detecting and preventing financial statement fraud in an increasingly complex and uncertain business environment.

This interdisciplinary approach draws on concepts from finance, accounting, economics, behavioural science, and data analytics to develop a holistic understanding of the factors driving fraudulent activities. For instance, behavioural science insights can shed light on the psychological and organisational factors that may incentivise individuals to commit fraud. At the same time, data analytics and machine learning techniques offer powerful tools for identifying patterns and anomalies that traditional methods might overlook. Additionally, this research recognises the need for adaptive and forward-looking fraud detection mechanisms by considering the evolving nature of business environments, including technological advancements and global economic shifts.

Integrating these varied perspectives and tools aims to enhance theoretical frameworks and provide practical recommendations for improving regulatory policies and corporate governance practices. Ultimately, the goal is to create more effective strategies for mitigating the risks of financial statement fraud, thereby contributing to a more transparent and trustworthy business landscape. Empirical studies have begun to explore the nuanced relationships between environmental uncertainty, earnings volatility, and financial statement fraud. For instance, (Jiang & Zhang, 2023) found that firms operating in highly uncertain environments are likelier to manipulate earnings to project stability and reassure investors. Similarly, research by (Zhao & Wang, 2023) demonstrated that earnings volatility is positively associated with the likelihood of financial misreporting, as managers may seek to smooth earnings to present a more consistent performance trajectory. These findings suggest that external and internal financial pressures are pivotal in incentivising fraudulent behaviour.

Despite these insights, the interplay between environmental uncertainty and earnings volatility as combined triggers for financial statement fraud remains underexplored. Most existing studies have isolated these factors, limiting fraud risk assessments' comprehensiveness. Modern business environments' dynamic and interconnected nature necessitates a more integrated approach to understanding how multiple stressors collectively influence managerial decision-making and ethical conduct (Zhou & Zhang, 2022). The contemporary economic landscape, marked by unprecedented challenges such as the

COVID-19 pandemic, geopolitical conflicts, and rapid technological disruptions, has heightened environmental uncertainty and earnings volatility across various industries. These conditions have intensified the pressures on firms to perform and adapt, potentially exacerbating the incentives for financial misreporting as organisations strive to maintain investor confidence and market positioning amidst instability.

The regulatory environment has also evolved in response to the increasing complexity and frequency of financial fraud cases. Legislative measures and enhanced disclosure requirements aim to bolster corporate accountability and transparency. However, financial statement fraud continues to surface despite these efforts, suggesting that existing frameworks may not fully address the underlying drivers of fraudulent behaviour. This gap underscores the need for ongoing research to identify and mitigate the risk factors associated with financial misreporting (Sun & Yu, 2021). Data analytics and forensic accounting advancements offer new avenues for detecting and preventing financial statement fraud. While technological innovations have improved the ability to uncover discrepancies and irregularities in financial data, they also present challenges in keeping pace with sophisticated fraud schemes.

Understanding the contextual factors, such as environmental uncertainty and earnings volatility, that predispose firms to fraud can enhance the effectiveness of these technological tools and inform the development of more robust preventive strategies (Li & Liu, 2022). The role of corporate governance cannot be understated in this context. Strong governance structures, including independent audit committees, adequate internal controls, and ethical leadership, are critical in mitigating the risk of financial statement fraud. However, the effectiveness of these mechanisms may be compromised under high levels of environmental uncertainty and earnings volatility as managerial focus shifts towards short-term performance and crisis management rather than long-term ethical considerations (Luo & Wang, 2020).

The impetus for investigating whether environmental uncertainty and earnings volatility trigger financial statement fraud is multifaceted and rooted in practical and theoretical considerations. The contemporary business environment is characterised by rapid and often unpredictable changes that amplify organisational challenges. Events such as the COVID-19 pandemic, supply chain disruptions, and fluctuating geopolitical landscapes have heightened environmental uncertainty, compelling firms to navigate these complexities while striving to maintain financial stability and growth. In such turbulent times, the temptation for managers to engage in fraudulent reporting to ensure project stability and stakeholders becomes more pronounced. Earnings volatility is a critical indicator of a firm's financial health and managerial effectiveness. Persistent fluctuations in earnings can erode investor confidence and signal underlying operational inefficiencies, prompting increased scrutiny from analysts and regulators. In response, managers may manipulate earnings to smooth out performance, masking actual financial conditions and misleading stakeholders. Understanding how earnings volatility contributes to fraudulent behaviour is essential for developing targeted interventions to mitigate this risk (Chen & Zhang, 2023).

Despite advancements in regulatory frameworks and detection technologies, financial statement fraud remains a significant concern. High-profile cases, such as scandals involving major corporations during economic downturns, highlight the persistent vulnerabilities within existing governance and oversight mechanisms. This underscores the necessity for ongoing research to identify emerging risk factors and enhance preventive measures.

This study focuses on the combined effects of environmental uncertainty and earnings volatility to provide a more comprehensive understanding of the conditions that facilitate financial misreporting (Li & Liu, 2022). Integrating environmental uncertainty and earnings volatility into financial statement fraud analysis offers a novel perspective that can bridge existing gaps in the literature.

Most prior research has examined these factors in isolation, limiting the ability to capture their interactive effects on fraudulent behaviour. This study seeks to address this gap by exploring how the convergence of external uncertainties and internal financial fluctuations jointly influence the propensity for financial statement fraud, thereby offering more nuanced insights for scholars and practitioners alike (Zhao & Wang, 2023). The practical implications of this research are significant for various stakeholders, including investors, regulators, and corporate managers. Investors rely on accurate financial statements to make informed decisions, and understanding the risk factors associated with financial misreporting can enhance their ability to assess the reliability of financial information. For regulators, insights from this study can inform the design of more effective monitoring and enforcement strategies, ensuring that regulatory frameworks evolve in tandem with the changing business landscape.

On the other hand, corporate managers can leverage these findings to implement stronger internal controls and governance practices that deter fraudulent behaviour, particularly in environments characterised by high uncertainty and earnings volatility. The study contributes to the broader discourse on ethical corporate behaviour and financial transparency. In an era where corporate social responsibility and stakeholder engagement are increasingly emphasised, fostering an environment that discourages financial manipulation is paramount.

By elucidating the conditions that lead to financial statement fraud, this research supports the development of ethical frameworks and corporate cultures that prioritise integrity and accountability (Sun & Yu, 2021) the ongoing advancements in data analytics and forensic accounting present opportunities and challenges in combating financial statement fraud. By identifying the specific triggers related to environmental uncertainty and earnings volatility, this study can enhance the effectiveness of analytical tools and forensic techniques in detecting and preventing fraudulent activities. This alignment of theoretical insights with practical applications underscores the relevance and timeliness of the research, ensuring that it addresses contemporary challenges faced by organisations worldwide (Luo & Wang, 2020).

THEORETICAL REVIEW

Agency Theory. In business development up to this time, the company owner has faced problems related to the company's management. In this condition, the company owner cannot manage his company, so management responsibilities are delegated to another party. This decision led to a separation between ownership and control of the company between company owners as principals and managers as agents (Jensen & Meckling, 2004).

When considering the impact of environmental uncertainty and earnings volatility on financial statement fraud, agency theory provides a crucial framework for understanding the underlying dynamics. In environments characterised by high uncertainty, managers often face significant pressure to meet earnings expectations or to maintain a stable financial outlook, even when the underlying business conditions are unfavourable. This pressure can be exacerbated when earnings are volatile, as fluctuations in financial performance may

raise concerns among investors, creditors, and other stakeholders, potentially leading to adverse consequences such as a decline in stock prices or increased cost of capital.

In such scenarios, the agency problem becomes more pronounced. Managers, driven by the need to demonstrate stability or to secure their positions, might be tempted to engage in financial statement fraud. This could involve manipulating earnings reports, inflating revenue figures, or concealing liabilities to create an illusion of financial health. The information asymmetry between principals and agents, where managers have more information about the company's operations than the owners, further exacerbates this issue, making it difficult for owners to detect fraudulent activities until they become significant. Environmental uncertainty and earnings volatility can weaken the effectiveness of traditional oversight mechanisms, such as audits and board supervision. In highly volatile or uncertain environments, these mechanisms may struggle to distinguish between genuine performance issues and fraudulent manipulations, thus providing more opportunities for managers to commit fraud without detection. Agency theory not only helps to explain the inherent risks associated with the separation of ownership and control but also underscores the potential for environmental uncertainty and earnings volatility to act as triggers for financial statement fraud. Addressing these risks requires enhancing the alignment between principals and agents, improving transparency, and strengthening the oversight mechanisms to mitigate the opportunities for fraudulent behaviour in challenging business environments.

Signal Theory. (Spence, 1973) first developed signal theory, which states that a good financial statement is a signal or a sign that the company has operated well. Signal theory explains how a manager's success or failure signal should be conveyed to the principal. Using signal theory, information asymmetry in the market can be reduced by providing signals to capital market players.

These signals communicate the company's performance, indicating whether the company is operating effectively and efficiently. Financial statements function as a form of communication from managers (agents) to owners (principals) and other stakeholders, helping reduce information asymmetry by providing insight into the company's economic condition. Signalling becomes even more critical in environments characterised by uncertainty and earnings volatility. Companies operating in uncertain markets or experiencing fluctuating earnings may face increased scrutiny from investors, analysts, and regulators, who rely heavily on financial statements to assess the company's stability and prospects. In such contexts, a strong, positive financial statement can signal that the company is managing external challenges effectively, boosting investor confidence and supporting the company's market valuation. Signal theory suggests that managers who send misleading signals through manipulated financial statements exploit the information asymmetry between them and the capital market participants. The distorted information misled investors and other stakeholders relying on these signals to make informed decisions, leading to significant market inefficiencies and loss of trust when the truth emerged.

Therefore, while signal theory underscores the importance of financial statements as a tool for reducing information asymmetry and conveying a company's actual performance, it also highlights the system's vulnerabilities, particularly in uncertain and volatile environments. Effective corporate governance, rigorous auditing processes, and enhanced transparency are essential to ensure that the signals sent to the market are accurate and reliable, protecting against the risk of financial statement fraud.

Planned Behavior Theory. This theory develops the theory of reasoned action (Ajzen, 2020). The theory explains that a person's intention will shape how they behave. He

added a construct not previously in his research, namely perceived behavioural control, so his research was called the theory of planned behaviour.

This theory posits that an individual's behaviour is shaped by their intentions, which are influenced by three key factors: their attitudes toward the behaviour, subjective norms, and perceived behavioural control. The addition of perceived behavioural control, an individual's perception of their ability to perform a particular behaviour, distinguishes this theory by acknowledging that people may be constrained by factors beyond their control, which can impact whether they act on their intentions.

In the context of financial statement fraud, Planned Behavior Theory provides a valuable framework for understanding the psychological and social factors that influence a manager's decision to engage in fraudulent activities. For instance, a manager's intention to commit fraud may be shaped by their attitudes toward the act itself (e.g., believing that fraud is necessary to meet financial targets), the subjective norms (e.g., perceived pressure from peers or superiors to manipulate earnings), and their perceived behavioural control (e.g., believing that they can commit fraud without being detected).

Environmental uncertainty and earnings volatility can exacerbate these factors, increasing the likelihood of fraudulent behaviour. In uncertain environments with unpredictable future outcomes, managers may develop a more favourable attitude toward fraud to achieve stability or meet expectations. Additionally, the organisation has intense normative pressure to meet specific financial benchmarks. In that case, managers may feel compelled to engage in fraudulent activities, believing it to be a standard or necessary practice.

Perceived behavioural control plays a crucial role in this decision-making process. Suppose managers perceive that they have the means to manipulate financial statements without facing significant risks such as weak internal controls, lax oversight, or the belief that external audits can be circumvented. In that case, they may be more likely to commit fraudulent behaviour. Conversely, if they perceive strong controls and high risks of detection, their intention to commit fraud may be diminished, even if the other factors encourage it.

Thus, Planned Behavior Theory helps to elucidate how intentions, shaped by attitudes, norms, and perceived control, can lead to fraudulent financial reporting, particularly in challenging business environments characterised by uncertainty and earnings volatility. Understanding these psychological and social dynamics is crucial for developing effective prevention strategies, such as strengthening internal controls, fostering ethical corporate cultures, and reducing the pressures that might drive managers toward fraudulent behaviour.

UNTAR Universitas Tarumanagara
Jurnal Akuntansi
e-JA
E-ISSN 2549-8800
P-ISSN 1410-3591

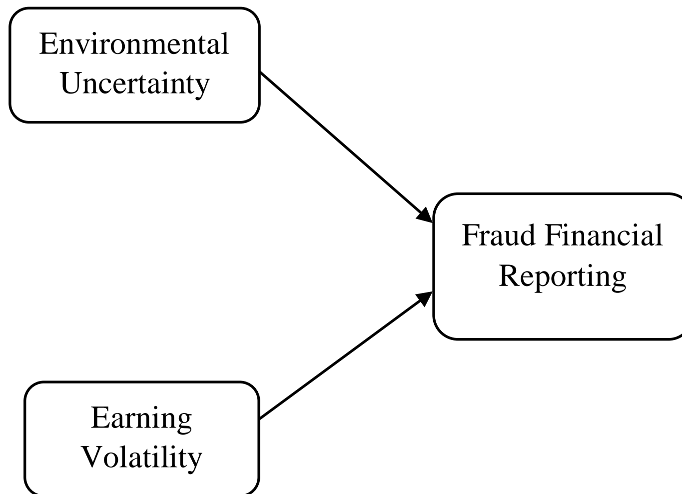

Figure 1. Research Model

METHODS

This research includes all manufacturing companies listed on the Indonesia Stock Exchange, totalling 188 companies. Using panel data selection, it analyses 902 data from a sample of companies that meet the criteria, as shown in **Table 1**.

Table 1. Sampling Criteria

Purpose	Amount
1. Manufacture Companies listed at the Indonesian Stock Exchange (IDX)	188
Year of Analysis	5
Amount of data panel (188 X 5)	940
2. Company with not complete data analysed	-38
Data panel analysed	902

Table 1 shows the sampling criteria used in this study. Initially, the sample included 188 manufacturing companies listed on the Indonesian Stock Exchange (IDX). The analysis covered 5 years, resulting in a total panel dataset of 940 observations (calculated as 188 companies multiplied by 5 years).

However, 38 companies were excluded due to incomplete data, reducing the final number of analysed data points to 902.

Table 2. Variables Measurement

No	Variables	Indicators
1	Environment Uncertainty (Huang et al., 2017)	Total sales divided by total assets over 5 years. Environmental uncertainty is the coefficient of variation of total sales divided by total assets over 5 years.
2	Earnings Volatility (Antoniou et al., 2017)	$\frac{\text{Operating Profit}}{\text{Total Asset}}$

UNTAR Universitas Tarumanagara
Jurnal Akuntansi
e-JA
E-ISSN 2549-8800
P-ISSN 1410-3591

3	Fraudulent Financial Statements (Dechow, 2023)	Accruals = ΔNOA – ΔCash – ΔST Investments • ΔNOA is differences in net operating assets • ΔCash is differences in cash • ΔST Investments differences in short-term investment. (Modified Jones Model Discretionary Accruals)

Table 2 shows the variables and their corresponding measurements used in this study. The first variable, Environmental Uncertainty, is measured using the total sales divided by total assets over 5 years. The coefficient of variation of this ratio over the 5 years is used to represent environmental uncertainty, following the method by (Huang et al., 2017).

The second variable, Earnings Volatility, is calculated by dividing operating profit by total assets, as (Antoniou et al., 2017) outlined.

The third variable, Fraudulent Financial Statements, is measured using accruals, which are defined as the difference in net operating assets (ΔNOA), cash (ΔCash), and short-term investments (ΔST Investments), based on the model by (Dechow, 2023). Additionally, the Modified Jones Model calculates discretionary accruals to detect potential fraudulent financial statements further.

RESULTS

The descriptive statistics provide an overview of each variable's central tendency and variability in the dataset.

Table 3. Descriptive Statistics

Statistic	Environmental Uncertainty (EU)	Earnings Volatility (EV)	Fraudulent Financial Statements (FFS)
Count	130	130	130
Mean	0.750	-0.070	5.320
Standard Deviation	0.150	0.050	0.320
Minimum	0.460	-0.180	4.790
25th Percentile	0.640	-0.110	5.110
Median	0.750	-0.080	5.300
75th Percentile	0.870	-0.040	5.550
Maximum	1.140	0.030	6.150

Source: Author’s Own Processing, (2024)

Table 3 shows *that environmental uncertainty* (EU) has an average value of 0.750, ranging from 0.460 to 1.140, indicating a moderate level of environmental uncertainty among the analysed entities. *Earnings Volatility* (EV) shows an average value of -0.070, suggesting a tendency towards negative earnings volatility. Meanwhile, *Fraudulent Financial Statements* (FFS) have an average value of 5.320, ranging from 4.790 to 6.150, indicating variation in the level of fraudulent financial reporting among the observed entities.

Jurnal Akuntansi
e-JA
E-ISSN 2549-8800
P-ISSN 1410-3591

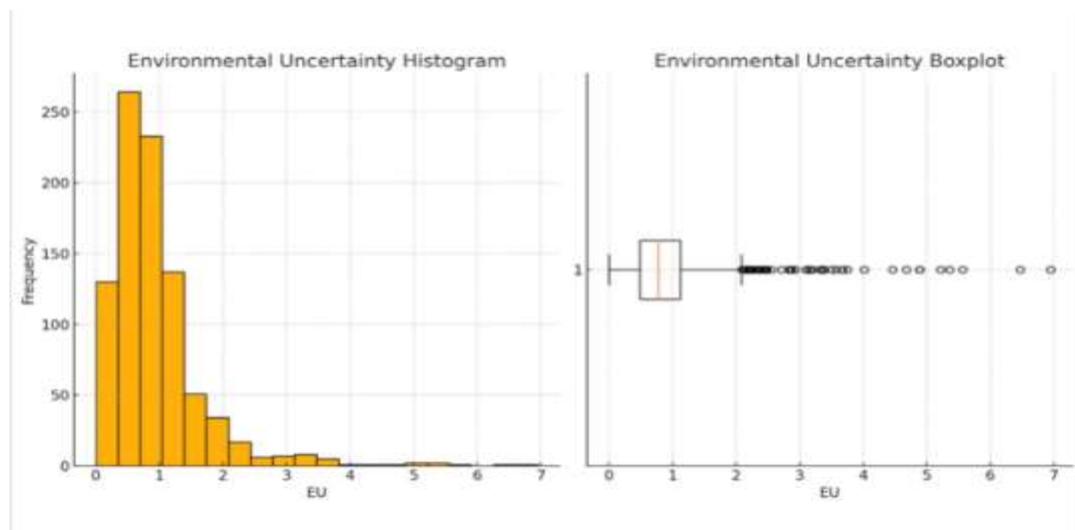

Figure 2. Environmental Uncertainty Boxpot & Histogram
Source: Author's Own Processing, (2024)

Figure 2 shows the frequency distribution of Environmental Uncertainty (EU) within the dataset. It can be seen that most EU values are concentrated in the range of 0 to 2, with the highest frequency around 0.500 to 1. This indicates that most of the data exhibits low to moderate levels of environmental uncertainty. However, there are also some higher EU values (between 2 and 7), although their frequency is much lower. The boxplot provides information about the EU values' distribution, centre, and potential outliers. The box in the middle represents the data's interquartile range (IQR), with the horizontal line inside the box indicating the median (around 1).

The whiskers extending from the box represent the range of values considered as non-outliers. Some points outside the whiskers indicate the presence of outliers or extreme values in the data, particularly in the EU range above 2. Most of the data on environmental uncertainty is distributed at low to moderate levels, but a few values indicate very high uncertainty levels (outliers). This suggests that while most companies or situations in the data set face moderate uncertainty, cases are experiencing much higher environmental uncertainty, which should be considered in further analysis.

Jurnal Akuntansi
e-JA
E-ISSN 2549-8800
P-ISSN 1410-3591

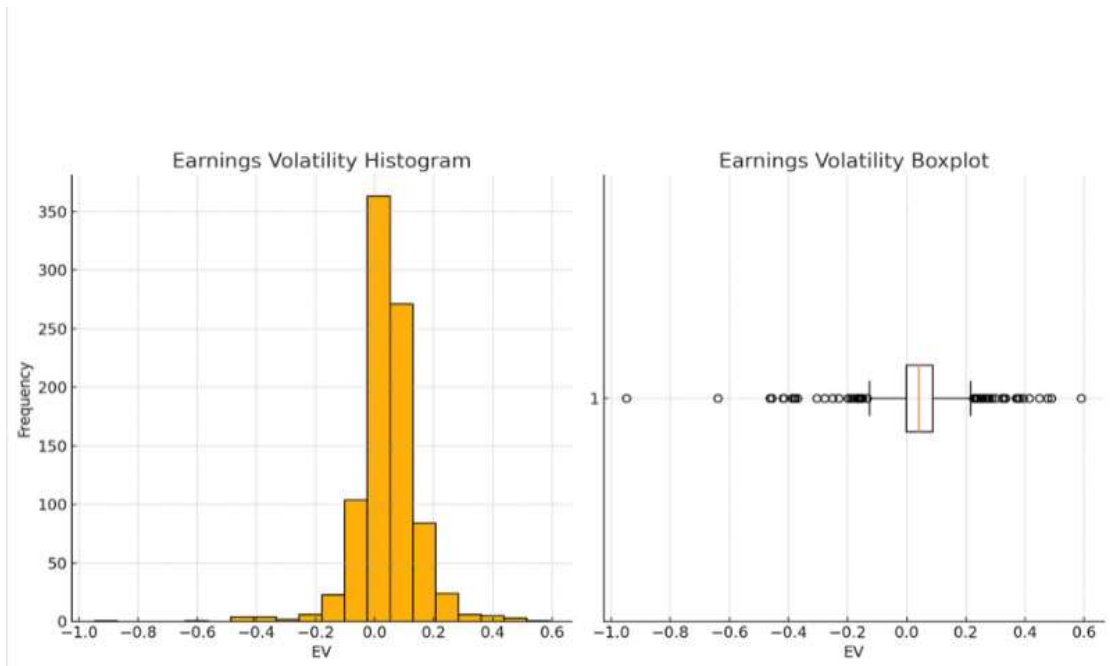

Figure 3. Earnings Volatility Boxpot and Histogram
Source: Author's Own Processing, (2024)

Figure 3 shows the dataset's frequency distribution of Earnings Volatility (EV). Most EV values are concentrated around zero, indicating that most companies or entities in the dataset have low or stable earnings volatility. The distribution is bell-shaped with fairly good symmetry, suggesting that earnings fluctuations tend to be around the average value, with few data points showing extreme negative or positive volatility. The boxplot provides information about the distribution of EV values, showing the median, quartiles, and the presence of outliers. The box in the centre represents the interquartile range (IQR), with the line inside indicating the median, around zero, consistent with the histogram. The whiskers extending from the box indicate the range of data considered non-outliers.

The points outside the whiskers indicate the presence of outliers, particularly at negative EV values around -1 and positive values around 0.500 to 0.600, showing some cases with very extreme earnings volatility. Most of the data shows that companies tend to have low earnings volatility, with an almost symmetrical distribution around zero. However, outliers indicate that some companies have much higher or lower earnings volatility than usual, possibly due to specific factors such as extreme market conditions or significant changes in company operations.

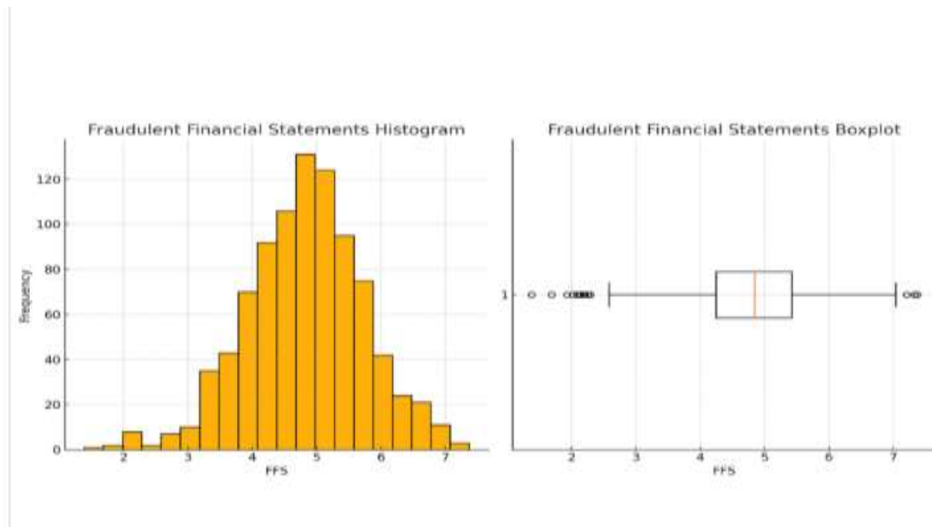

Figure 4. Fraudulent Financial Statements Boxpot and Histogram
Source: Author's Own Processing, (2024)

Figure 4 shows the dataset's frequency distribution of Fraudulent Financial Statements (FFS). Most FFS values are concentrated between 4 and 5, indicating that most cases in the dataset have moderate levels of fraudulent activities. The distribution is bell-shaped with relatively good symmetry, suggesting that fraud generally clusters around an average value, with fewer cases exhibiting extreme levels of fraud, either very low or very high.

The boxplot provides additional details about the distribution of FFS values, highlighting the median, quartiles, and the presence of outliers. The box in the centre represents the interquartile range (IQR), with the line inside indicating the median, which aligns closely with the central peak of the histogram. The whiskers extending from the box show the range of data considered non-outliers, while the points outside the whiskers indicate the presence of outliers. These outliers are evident at lower FFS values, around 2, and higher values, around 7, demonstrating some instances with significantly lower or higher fraudulent activities than the average. Most data points suggest that companies exhibit moderate levels of fraudulent financial reporting, with a near-symmetrical distribution. However, outliers indicate that some companies have either exceptionally low or high levels of fraud, which could be due to unique circumstances such as different regulatory environments, specific company practices, or market conditions.

Table 4. Variance Inflation Factor (VIF)

Variable	VIF
const	2.513
EU	1.040
EV	1.040

Source: Author's Own Processing, (2024)

Table 4 shows The Variance Inflation Factor (VIF) values for the variables in the model const (2.514), Environmental Uncertainty (EU) (1.041), and Earnings Volatility (EV) (1.041) are all well below 10, suggesting that there is no multicollinearity among the independent variables. This means that the variables are not highly correlated, allowing the

UNTAR Universitas Tarumanagara
Jurnal Akuntansi e-JA
E-ISSN 2549-8800
P-ISSN 1410-3591

model to reliably estimate the coefficients for EU and EV without the risk of inflated standard errors or misleading significance levels. As a result, the interpretation of the relationship between these variables and Fraudulent Financial Statements (FFS) is likely accurate and unbiased.

The multiple regression analysis examines the relationship between Environmental Uncertainty (EU), earnings Volatility (EV), and Fraudulent Financial Statements (FFS).

Table 5. Regression Analysis

Variable	Coefficient	Standard Error	t-value	p-value	95 per cent CI Lower	95 per cent CI Upper
const	4.784	0.048	99.178	0	4.689	4.879
EU	0.007	0.041	0.172	0.864	-0.073	0.087
EV	0.615	0.287	2.148	0.032	0.053	1.178

Source: Author's Own Processing, (2024)

Table 5 shows that The regression analysis indicates that the intercept (const) term is 4.784, which represents the predicted value of Fraudulent Financial Statements (FFS) when both Environmental Uncertainty (EU) and Earnings Volatility (EV) are zero. The coefficient for EU is 0.007, suggesting a positive relationship with FFS. However, this relationship is not statistically significant, as indicated by a high p-value of 0.864. In contrast, the coefficient for EV is 0.616, demonstrating a positive and statistically significant relationship with FFS, with a p-value of 0.032. This implies that the likelihood or extent of fraudulent financial statements increases as earnings volatility increases. At the same time, changes in environmental uncertainty do not significantly affect FFS in this model.

Table 6. Hypothesis Testing

Hypothesis	Coefficient	t-value	p-value	95 per cent CI Lower	95 per cent CI Upper	Result
H1: Environmental Uncertainty (EU) has a significant impact on Fraudulent Financial Statements (FFS)	0.007	0.172	0.864	-0.073	0.087	Not Significant
H2: Earnings Volatility (EV) has a significant impact on Fraudulent Financial Statements (FFS)	0.616	2.148	0.032	0.053	1.178	Significant

Source: Author's Own Processing, (2024)

Table 6 shows The hypothesis testing results indicate that the impact of Environmental Uncertainty (EU) on Fraudulent Financial Statements (FFS) is not statistically significant, as evidenced by a high p-value of 0.864, which suggests that variations in EU do not have a meaningful effect on FFS. In contrast, the impact of Earnings Volatility (EV) on FFS is statistically significant, with a p-value of 0.032. This finding implies that changes in EVs are associated with significant changes in the level of fraudulent financial statements, indicating that companies with greater earnings volatility are more likely to engage in financial fraud.

Jurnal Akuntansi
e-JA
E-ISSN 2549-8800
P-ISSN 1410-3591

The value indicates that only 0.300 per cent of the variability in the dependent variable, Fraudulent Financial Statements (FFS), is explained by the independent variables, Environmental Uncertainty (EU) and Earnings Volatility (EV). This low percentage suggests that the model has very limited explanatory power, meaning that EU and EV do not significantly account for the variations in FFS. Consequently, this implies that other factors not included in the model likely influence FFS to a much greater extent. The model's inability to capture the significant determinants of FFS indicates a need for additional research to identify other variables that could better explain or predict fraudulent financial reporting.

DISCUSSION

The findings from the regression analysis and hypothesis testing provide valuable insights into the relationship between environmental uncertainty (EU), earnings volatility (EV), and fraudulent financial statements (FFS). This discussion will delve into the implications of these findings, the reasons behind the results, and how they compare to previous studies.

Impact of Environmental Uncertainty (EU) on Fraudulent Financial Statements (FFS). The regression analysis indicates that environmental uncertainty (EU) does not significantly impact fraudulent financial statements (FFS). This result challenges the theoretical expectation that heightened uncertainty would pressure management to engage in financial misreporting to present a stable financial outlook. Prior studies have shown mixed outcomes regarding this relationship. For example, (Arianpoor & Asali, 2023) and (Alhadab, 2022) suggested that firms in uncertain environments might manipulate earnings to maintain investor confidence. However, the findings of this study align with those (Dechow, 2023) who argued that external environmental factors alone do not sufficiently explain the occurrence of financial fraud.

Several reasons may explain the lack of a significant relationship between the EU and FFS. Firstly, firms might have robust internal controls and governance mechanisms that effectively mitigate the impact of environmental uncertainty on financial reporting practices. These controls could prevent fraudulent activities, regardless of the external uncertainties they face. Secondly, the regulatory environment in Indonesia, characterised by strict regulations and enforcement, may act as a deterrent against fraud, even in times of uncertainty. Lastly, industry-specific characteristics such as strong market positions or diversified operations might provide a buffer against adverse effects, reducing the likelihood of fraudulent reporting.

These findings imply that the relationship between environmental uncertainty and financial fraud susceptibility may be more complex and moderated by factors not captured in the current model. Factors like organisational culture, managerial risk tolerance, and corporate governance effectiveness could significantly influence this relationship. Additionally, the broader economic environment and industry-specific risks may be crucial in determining how environmental uncertainty affects fraud susceptibility. Therefore, future research should explore these moderating factors using more sophisticated models to capture the nuanced dynamics of this interaction.

The implications of these findings are crucial for policymakers, auditors, and company management. Given that environmental uncertainty alone does not trigger fraud, emphasis should be placed on strengthening internal controls, corporate governance, and regulatory compliance to mitigate potential fraudulent behaviour. Regulators may also need to consider

industry-specific attributes and provide tailored guidelines to ensure effective fraud prevention.

Impact of Earnings Volatility (EV) on Fraudulent Financial Statements (FFS). In contrast to the EU, earnings volatility (EV) has a statistically significant positive impact on FFS, consistent with prior research suggesting that firms with volatile earnings are more likely to engage in financial misreporting (Rostami & Rezaei, 2022). High earnings volatility exerts significant pressure on management to smooth earnings and meet market expectations, which can lead to manipulative practices such as earnings management or outright fraud. This pressure is particularly pronounced in industries where market performance is closely monitored, and companies are expected to deliver consistent financial results.

The desire to present a stable financial outlook may drive management to use aggressive accounting tactics, misreport earnings, or engage in other unethical practices to conceal underlying financial instability. This finding aligns with the study by (Arianpoor & Asali, 2023), which demonstrated that firms with higher earnings volatility are more likely to have material accounting misstatements. Our research supports this notion and suggests that earnings volatility significantly triggers fraudulent financial reporting in the Indonesian context.

These findings highlight the importance of stringent oversight mechanisms, such as independent audits and robust internal controls, to mitigate the risks associated with earnings volatility. Investors and analysts should remain vigilant, as periods of high earnings volatility may indicate a heightened risk of financial misreporting. Moreover, regulatory authorities should prioritise firms with high earnings volatility in their monitoring efforts to detect and prevent fraud.

While the findings related to earnings volatility are consistent with previous literature, the results regarding environmental uncertainty differ. Some studies, such as those by (Arianpoor & Asali, 2023), (Alhadab, 2022), found that firms in uncertain environments manipulate earnings to reassure investors. However, our study suggests that environmental uncertainty does not significantly influence fraudulent reporting, possibly due to strong internal controls, regulatory compliance, and industry-specific factors within the Indonesian market.

CONCLUSION

The study provides important insights into the impact of earnings volatility on financial fraud, emphasising the crucial need for vigilant monitoring, robust internal controls, and a proactive approach to corporate governance. The research highlights that while environmental uncertainty did not directly affect financial fraud, it underscores the issue's complexity, suggesting that fraud detection and prevention cannot rely on single-factor analysis. Instead, a multifaceted approach is necessary, considering various internal and external factors such as corporate governance structures, managerial incentives, and the regulatory environment. This comprehensive approach is vital to gaining a more nuanced understanding of the intricate dynamics contributing to financial misreporting.

Additionally, the study points to the importance of continuous improvement in fraud detection mechanisms, urging companies to regularly update their internal control systems to adapt to evolving risks. The findings imply that regulators and policymakers should consider the broader economic context and firm-specific characteristics when designing regulations and guidelines to reduce financial fraud. Future research should build on these

findings to develop more sophisticated models that capture the complex interplay between earnings volatility and financial fraud and integrate the role of other potentially influential variables, thereby contributing to more effective strategies for fraud prevention and corporate transparency. The findings of our study align with several previous studies but differ from others. For instance, our results are consistent with the significant impact of earnings volatility on financial fraud, as reported in previous research (Arianpoor & Asali, 2023), (Alhadab, 2022).

This supports the theory that increased earnings volatility heightens the likelihood of financial misreporting. However, our study deviates from these findings in terms of environmental uncertainty. We found no significant impact of environmental uncertainty on financial fraud, which contrasts with the results of (Arianpoor & Asali, 2023), (Dechow, 2023). This discrepancy suggests that the influence of environmental uncertainty may be context-specific and moderated by other factors, such as internal controls and the regulatory environment.

Given the low adjusted R-squared value, which indicates that only a tiny portion of the variability in fraudulent financial statements is explained by the current model, future research should consider exploring additional variables that might provide a better understanding of what drives financial fraud. One potential area for further investigation is corporate governance mechanisms, including the role of board characteristics, the effectiveness of audit committees, and the strength of internal controls in preventing fraudulent activities. Another important factor to examine is managerial incentives, such as how executive compensation structures and levels of managerial ownership may influence the likelihood of financial misreporting.

Additionally, industry-specific factors should be considered, as characteristics like market competition and regulatory pressures could significantly impact the occurrence of financial fraud. By exploring these areas, future studies may uncover more comprehensive explanations for the variability in fraudulent financial statements and improve the predictive power of models in this field.

REFERENCES

Ajzen, I. (2020). The Theory Of Planned Behavior: Frequently Asked Questions. *Human Behavior And Emerging Technologies*, 2(4), 314-324. https://doi.org/10.1002/hbe2.195.

Al-Beity, S. (2022). Effects Of Internal Control Weaknesses, Financial Independence And Size On Quality Of Financial Statements In The Tanzanian Local Government Authorities. *Business Management Review*, *25*(1), 60–74. https://doi.org/10.56279/bmrj.v25i1.4.

Alhadab, M. (2022). Earnings Management And The Reputation Of Nomads Around Ipos: The Experience Of The UK Alternative Investment Market. *The International Journal of Accounting*, 57(02). https://doi.org/10.1142/s109440602250007x.

Alkhadra, W., Khawaldeh, S., & Aldehayyat, J. (2022). Relationship Of Ethical Leadership, Organisational Culture, Corporate Social Responsibility And Organizational Performance: A Test Of Two Mediation Models. *International Journal of Ethics and Systems*, 39(4), 737-760. https://doi.org/10.1108/ijoes-05-2022-0092

Aqlan, S., Alashaf, Y., Barakat, M., & Zaid, D. (2021). Effect Of Corporate Governance Mechanisms On Value Relevance Of Eps And Bv: Evidence From The Indian

Tourism Industry. *Studies in Economics and Business Relations*, 2(1), 31-44. https://doi.org/10.48185/sebr.v2i1.285.

Arianpoor, A. and Asali, F. (2023). The Impact Of Earnings Volatility, Environmental Uncertainty, And the Covid-19 Pandemic On Accounting Comparability In An Emerging Economy. *Asian Review of Accounting*, 31(4), 612-630. https://doi.org/10.1108/ara-10-2022-0257.

Azad, A., Salehi, M., & Dashtbayaz, M. (2023). The Materiality Of Identified Misstatements By Auditors And Earnings Management. *Management Research Review*, 46(10), 1405-1426. https://doi.org/10.1108/mrr-01-2022-0073.

Barros, F. E. E., dos Santos, R. C., Orso, L. E., & Sousa, A. M. R. (2021). The Evolution Of Corporate Governance And Agency Control: The Effectiveness Of Mechanisms In Creating Value For Companies With IPO On The Brazilian Stock Exchange. *Corporate Governance: The International Journal of Business in Society*, *21*(5), 775–814. https://doi.org/10.1108/cg-11-2019-0355.

Blanco, B., Dhole, S., & Gul, F. (2022). Financial Statement Comparability And Accounting Fraud. *Journal of Business Finance & Accounting*, 50(7-8), 1166-1205. https://doi.org/10.1111/jbfa.12652

Burhan, Q.-A., Khan, M. A., & Malik, M. F. (2023). Achieving Transparency In Business Processes By Developing And Implementing Ethical Climate: An Integrated Model Of Ethical Leadership And Engagement. *Business Process Management Journal*, *29*(3), 757–776. https://doi.org/10.1108/bpmj-08-2022-0384

Daníelsson, J., Valenzuela, M., & Zer, I. (2018). Learning From History: Volatility And Financial Crises. *Review of Financial Studies*, 31(7), 2774-2805. https://doi.org/10.1093/rfs/hhy049.

Dechow Patricia M.(2023). Understanding The Sustainability Reporting Landscape And Research Opportunities In Accounting. *SSRN (6 June 2023)*. https://dx.doi.org/10.2139/ssrn.4390117.

Gepp, A., Kumar, K., & Bhattacharya, S. (2020). Lifting The Numbers Game: Identifying Key Input Variables And A Best-Performing Model To Detect Financial Statement Fraud. *Accounting and Finance*, 61(3), 4601-4638. https://doi.org/10.1111/acfi.12742

Girau, E., Bujang, I., Jidwin, A., & Said, J. (2021). Corporate Governance Challenges And Opportunities In Mitigating Corporate Fraud In Malaysia. *Journal of Financial Crime*, 29(2), 620-638. https://doi.org/10.1108/jfc-02-2021-0045.

Hatane, S., Supangat, S., Tarigan, J., & Jie, F. (2019). Does Internal Corporate Governance Mechanism Control Firm Risk? Evidence From Indonesia's Three High-Risk Sectors. *Corporate Governance,* 19(6), 1362-1376. https://doi.org/10.1108/cg-02-2019-0071.

Hong, Y. (2022). Research On Institutional Investors And Executive Compensation Stickiness Based On Fixed Effect Model: A Case Study Of Chinese Listed Companies. *Mathematical Problems in Engineering*, 2022, 1-13. https://doi.org/10.1155/2022/1402891.

Huang, Henry, Sun, Li, & Zhang, Joseph. (2017). Environmental Uncertainty And Tax Avoidance. *Advances in Taxation*, 24, 83–124. Https://Doi.Org/10.1108/S1058-749720170000024002.

Jensen, C, Michael & Meckling, W. (2004). Theory Of The Firm: Managerial Behavior, Agency Costs, And Ownership Structure., 162-176. https://doi.org/10.1002/9780470752135.ch17.

Kalovya, O. (2020). Determinants Of Occupational Fraud Losses: Offenders, Victims And Insights From Fraud Theory. *Journal of Financial Crime*, 30(2), 361-376. https://doi.org/10.1108/jfc-10-2019-0136.

Kassem, R. (2022). Elucidating Corporate Governance's Impact And Role In Countering Fraud. *corporate governance*, 22(7), 1523-1546. https://doi.org/10.1108/cg-08-2021-0279.

Kaur, B., Sood, K. & Grima, S. (2023), "A Systematic Review On Forensic Accounting And Its Contribution Towards Fraud Detection And Prevention", *Journal of Financial Regulation and Compliance*. 31 (1), 60-95. https://doi.org/10.1108/JFRC-02-2022-0015

Le, A. & Tran, T. (2022). Corporate Governance And Labor Investment Efficiency: International Evidence From Board Reforms. *Corporate Governance an International Review*, 30(5), 555-583. https://doi.org/10.1111/corg.12422.

Lisowsky, P., Minnis, M., & Sutherland, A. (2017). Economic Growth And Financial Statement Verification. *Journal of Accounting Research*, 55(4), 745-794. https://doi.org/10.1111/1475-679X.12165.

Li, V., & Luo, Y. (2024). Changes In Accounting Estimates During The COVID-19 Pandemic In The USA. *Asian Review of Accounting*, 32(2), 223-248. https://doi.org/10.1108/ARA-10-2022-0243.

Liu, R., Huang, J., & Zhang, Z. (2023). Tracking Disclosure Change Trajectories For Financial Fraud Detection. *Production and Operations Management*, 32(2), 584-602. https://doi.org/10.1111/poms.13888.

Manry, D., Huang, H. W., & Yan, Y. C. (2023). Financial Statement Fraud Litigation, Material Weaknesses, And Board Characteristics. *Accounting Research Journal*, 36(4/5), 349-368. https://doi.org/10.1108/arj-08-2022-0218.

Maulidi, A. (2020). Critiques And Further Directions For Fraud Studies. *Journal of Financial Crime*, 27(2), 323-335. https://doi.org/10.1108/jfc-07-2019-0100.

Mongwe, W. T., & Malan, K. M. (2020). A Survey Of Automated Financial Statement Fraud Detection With Relevance To The South African Context. *South African Computer Journal*, *32*(1), 74–112. https://doi.org/10.18489/sacj.v32i1.777.

Mukhtaruddin, M., Chairunnisa, W. Z., Patmawati, P., & Saftiana, Y. (2022). Financial Distress, Earning Management, Financial Statement Fraud And Audit Quality As A Moderating Variable: Listed Companies On The Indonesia Stock Exchange. *F1000Research*, *11*, 1362. https://doi.org/10.12688/f1000research.123525.1.

Nasir, N., Ali, M., Razzaque, R., & Ahmed, K. (2018). Real Earnings Management And Financial Statement Fraud: Evidence From Malaysia. *International Journal of Accounting and Information Management,* 26(4), 508-526. https://doi.org/10.1108/ijaim-03-2017-0039.

Othman, I. (2021). Financial Statement Fraud: Challenges And Technology Deployment In Fraud Detection. *International Journal of Accounting and Financial Reporting*, 11(4), 1. https://doi.org/10.5296/ijafr.v11i4.19067.

Rostami, V., & Rezaei, L. (2022). Corporate Governance And Fraudulent Financial Reporting. *Journal of Financial Crime*, *29*(3), 1009–1026. https://doi.org/10.1108/JFC-07-2021-0160.

Seifzadeh, M., Rajaeei, R., & Allahbakhsh, A. (2021). The Relationship Between Management Entrenchment And Financial Statement Fraud. *Journal of Facilities Management*, 20(1), 102-119. https://doi.org/10.1108/jfm-02-2021-0026.

Spence M. (1973). Job Market Signaling. *Q. J. Econ.* 87(3):355–74. https://doi.org/10.1016/B978-0-12-214850-7.50025-5.

Sultana, R., Ghosh, R., & Sen, K. (2021). Impact Of Covid-19 Pandemic On Financial Reporting And Disclosure Practices: Empirical Evidence From Bangladesh. *Asian Journal of Economics and Banking*, 6(1), 122-139. https://doi.org/10.1108/ajeb-09-2021-0110.

Svabova, L., Kramárová, K., Chutka, J., & Straková, L. (2020). Detecting Earnings Manipulation And Fraudulent Financial Reporting In Slovakia. *Oeconomia Copernicana*, 11(3), 485-508. https://doi.org/10.24136/oc.2020.020

Tibiletti, V., Marchini, P., & Bertacchini, F. (2021). The Effects Of COVID-19 On Financial Statements: Some Insights From Italy Through An International Literature Review. *Universal Journal of Accounting and Finance*, 9(5), 1033-1048. https://doi.org/10.13189/ujaf.2021.090514.

Toit, E. (2023). The Red Flags Of Financial Statement Fraud: A Case Study. *Journal of Financial Crime*, *31*(2), 311–321. https://doi.org/10.1108/JFC-02-2023-0028.

Ugbah, A. A., Kingsley, C. K., Ofor, N. T., & Gerald, A. N. (2023). Testing Financial Statement Fraud: Perspective Of The M-Score Model In Nigeria And South Africa. *International Journal of Research and Innovation in Social Science*, *7*(8), 1–19. https://doi.org/10.47772/ijriss.2023.7801.

Valaskova, K. and Durana, P. (2020). Global Context Of Disparities In Earnings Management Among Enterprises: Evidence From Slovakia. *SHS Web of Conferences*, 74, 01034. https://doi.org/10.1051/shsconf/20207401034.

ACKNOWLEDGEMENTS

This section conveys gratitude to those involved in research, such as funders, sponsors, and mentors. Finally, we acknowledge the financial support LPPM Universitas Mercu Buana, Jakarta, Indonesia, provided.