Fraudulent Financial Reporting and Earnings Management in Shariah Compliant Companies

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ARTICLE INFO	ABSTRACT
	Fraudulent financial reporting and earnings management have been significant concerns for investors, regulators, and scholars since the 1940s, impacting the allocation of resources in the economy and the credibility of financial reports. While most research has focused on developed markets like the U.S. and Europe, there is a notable lack of studies in Asian and emerging markets, especially within Shariah compliant companies, highlighting the importance of this study. The increase in fraudulent financial reporting and earnings management threatens market integrity and decision-making, leading to substantial losses subsequent to its exposure. Moreover, such practices contravene the foundational principles of Shariah compliance. This study aims to explore the impact of pressure, opportunity, and rationalisation on the probability of fraudulent financial reporting and earnings management preceding the year of fraudulent activity in public listed Shariah compliant companies. It employs the Fraud Triangle Theory and utilizes two quantitative models: the Beneish M-Score model to evaluate the likelihood of fraud and the Modified Jones model to identify earnings management. The samples were sourced from Bursa Malaysia and Securities Commission databases, targeting firms convicted of fraud and earnings management between 2014 and 2023. Eight proxies were analysed: leverage (LEV), liquidity (LIQ) and performance (ROE) for pressure; audit firm size (AUDS) and CEO duality (CEOD) for opportunity; and board independence (BODIND), related party transactions (RPT) and founder on the board (FOUND) for rationalisation. The study anticipates positive relationships between pressure, opportunity and rationalisation to fraud and earnings management, with fraud directly linked to previous instances of earnings management. This study contributes to the literature on fraud and earnings management in Shariah compliant companies, supports regulatory authorities in enhancing detection and prevention mechanisms, and facilitates informed decision-making for investors based on reliable financial reporting, besides confirming the applicability of the Beneish M-Score model and Modified Jones models to emerging markets like Malaysia. **Keywords:** Beneish M-Score, earnings management, fraud, modified Jones, Shariah compliant.

BACKGROUND OF STUDY

Financial reports are crucial in the corporate world, but material misstatements can compromise their reliability (Hariri et al., 2017). Fraudulent financial reporting and earnings management are significant issues that necessitate robust control mechanisms (Perols & Lougee, 2011; Tibbs, 2003). Even in conformity with standards, financial reports may not invariably present a true and fair view of a company's financial position (Shah, 1996). Several theories including Agency Theory, Positive Accounting Theory and Fraud Triangle Theory provide insights into fraud and earnings management practices. This study employs the Fraud Triangle Theory to investigate how pressure, opportunity, and rationalisation influence the likelihood of fraudulent financial reporting and earnings management in Shariah compliant companies in Malaysia. Fraudulent financial reporting and earnings management are

significant challenges with substantial negative impacts on financial reporting (Jaggi & Tsui, 2007) and reporting quality (Durana et al., 2022; Erdogan & Erdogan, 2020).

Earnings management involves using judgment in financial reporting to mislead stakeholders or influence contractual outcomes (Healy & Wahlen, 1999), while fraudulent financial reporting involves intentional misstatement or concealment of financial information to deceive and gain unjust advantage out of it (Garner, 2004).

High-quality financial reporting provides accurate and fair information about an organization's financial position. Developed countries typically have higher financial reporting quality compared to emerging markets (Herath & Albarqi, 2017; Tang et al., 2016). Malaysia's Financial Reporting Standards (MFRS) framework is aligned with the International Financial Reporting Standards (IFRS) and Generally Accepted Accounting Principles (GAAP), ensuring high transparency and credibility in financial reporting. The MFRS framework, managed by the Malaysian Accounting Standards Board (MASB), has been effective since January 1, 2012, and it applies to all registered companies in Malaysia.

This study contributes to understanding the dynamics of fraudulent financial reporting and earnings management in Shariah compliant companies, emphasizing the need for robust prevention and detection mechanisms. Fraudulent financial reporting and earnings management have long been issues, with some Malaysian companies, including Shariah compliant companies, possibly involved in such practices. These activities mislead investors, suppliers, and customers who rely on these financial reports, potentially leading to poor business decisions. The Beneish M-Score model is used to validate the likelihood of fraudulent financial reporting, and the Modified Jones model reconfirms earnings management. The study covers a ten-year period from 2014 to 2023 to ensure relevance to the current Malaysian capital market. It aims to contribute to better market monitoring and regulation, providing insights for regulators and policymakers to safeguard the integrity of financial reporting in Shariah compliant companies.

PROBLEM STATEMENT

The increasing concern over fraud cases (Association of Certified Fraud Examiners, 2024; Khan et al., 2022; PwC, 2023) raises questions about the quality and integrity of reported earnings (Shaharuddin et al., 2022; Yusoff et al., 2023; Zainal Abidin et al., 2023) and the dynamism of auditors, regulators and governance (PwC, 2023). Fraudulent financial reporting and earnings management can lead to investor's losses, bad decisions, penalties, legal actions and bankruptcies. The repercussions will extend beyond the company itself, impacting the economy, industry and all relevant stakeholders.

Earnings misreporting can mislead users, causing a domino effect of inaccurate reports. Fraudulent activities in both conventional and Shariah compliant companies strongly erode stakeholder trust, especially given the higher expectations for Shariah compliant companies (Abdulrahman et al., 2023). Investor mistrust significantly impacts the economy.

The Islamic capital market is crucial for Malaysia, making combating fraud and earnings management essential (S&P Global, 2022). Frauds, a deliberate act of deception and earnings management, a strategy involving the manipulation of financial data to present a misleading performance report, are frequently observed in various contexts. In this study, the Fraud Triangle's elements (pressure, opportunity, rationalisation) are used to assess fraud risk in listed Shariah compliant companies. Prior research often overlooks these companies, highlighting the need for focused studies in this area (Al Rahahleh & Bhatti, 2022; Saba et al., 2021; Shahrier et al., 2020; Tahir & Ibrahim, 2020).

Recent financial scandals have underscored the imperative of robust preventive measures and regulatory oversight. It is paramount that earnings reporting of high quality remains impartial and minimally manipulated within the allowable accounting reporting framework. Instances of deceptive financial reporting and excessive earnings manipulation not only tarnish market credibility but also impede economic progress, with Shariah compliant entities subject to heightened and additional scrutiny. Stakeholders vested in Shariah compliant companies anticipate strict adherence to religious tenets encapsulating an all-encompassing interpretation of Islam. This adherence is envisioned to foster economic prosperity, camaraderie, societal welfare and justice.

Research Objective

Shariah compliance promotes ethical and responsible behaviour, crucial in Muslim-majority countries with prominent Islamic capital market activities. However, the risk of fraud and earnings management remains. Fraud is

an intentional misstatement or omission of material facts to deceive and gain an unjust advantage, examined in this study using the Beneish M-Score model, with a threshold value of -2.22 indicating potential fraud. Earnings management, where managers manipulate financial statements, is evaluated using the Modified Jones model, which measures discretionary accruals.

The study has three objectives. These are to examine the effect of pressure, opportunity, and rationalisation on the likelihood of fraudulent financial reporting; to investigate how these factors influence earnings management prior to the fraud year; and to explore the relationship between fraudulent financial reporting and earnings management prior to the fraud year. Pressure is measured by leverage, liquidity, and return on equity ratios. Opportunity is assessed by whether a company is audited by the big four audit firms or otherwise and CEO duality, while rationalisation is proxied by board independence, related party transactions, and the presence of a founder on the board.

Research Questions

The perpetration of fraud and earnings management represents an illicit activity that poses a significant threat to the progress of the capital market. The study is designed to identify fraud-risk factors that drive the fraudulent and the earnings management acts. This study has three research questions. The research questions are: do the pressure, opportunity and rationalisation affect the likelihood of fraudulent financial reporting; do the pressure, opportunity and rationalisation affect earnings management prior to the fraud year; and is there a relationship between the likelihood of fraudulent financial reporting and earnings management prior to the fraud year. The study examines earnings management in the three years before the fraud year, thus investigating four years of financial reports (the fraud year and three prior years).

Significance of Study

Financial resources are crucial for economic growth, and a competitive capital market with efficient infrastructure is essential for mobilizing these resources. Malaysia's diverse economy, with a GDP of USD447.3 billion at the current price as of April 2023, boasts one of the largest capital markets in ASEAN, valued at RM3.8 trillion in 2023. Over half of this market, at RM2.4 trillion is Shariah compliant (Securities Commission Malaysia, 2024), highlighted by the 808 Shariah compliant listed companies out of 991 total as of November 2023. Ensuring and maintaining the integrity of the Shariah compliant capital market is therefore key to preventing corporate scandals. This study seeks to enrich the Fraud Triangle Theory by integrating specific local factors of pressure, opportunity and rationalisation, to offer a more pertinent viewpoint for the Malaysian market. It delves into the interconnectedness of these components and their impact on the likelihood of fraudulent activities.

The study contributes to the extant body of literature concerning fraud and earnings management, with a specific focus on Shariah compliant companies in emerging markets such as Malaysia. It serves to bridge existing gaps in studies dedicated to fraudulent financial reporting and earnings management, thereby furnishing pertinent points of reference for regulatory authorities and advocating for the reinforcement of anti-fraud policies within Shariah compliant enterprises. The study provides valuable insights for stakeholders, including investors, analysts, and regulators, empowering them to foresee circumstances that may lead to fraud and earnings management. By examining the link between fraud and earnings management before the fraud occurs, the study offers early indicators of potential fraud. This knowledge can support informed investment decisions and improve the integrity and reliability of financial reports. Additionally, it suggests refinements for current practices in predicting fraudulent financial reporting and contributes to more effective fraud management measures in the Malaysian Islamic capital market.

LITERATURE REVIEW

Fraud and earnings management have been pivotal topics in finance since the 1940s, primarily due to their profound impact on stakeholders like accountants, auditors, regulators, and investors. Earnings management can distort a firm's performance, sometimes affecting stock prices and economic activity, as observed by Gaio (2010) during the early 2000s equity market decline. Most research has concentrated on western markets, which differ significantly from emerging countries in terms of economic conditions, cultural environments, and regulations. For instance, Ahmad-Zaluki (2009) identified that pre-IPO earnings management led to poor performance post-IPO. Factors such as high surplus free cash flow and economic crises can drive earnings management, while Rahman et al. (2005) found

lower tendencies in Muslim-managed companies. This study offers new perspectives on applying the Beneish M-Score model and Modified Jones models to Shariah compliant companies in emerging markets and examines fraud-risk factors using the Fraud Triangle Theory.

Theoretical Underpinnings

This study adopts a quantitative method rooted in positivism, which emphasises objective measurement and numerical data, asserting that reality exists independently of human perception and relies on deductive methods to test hypotheses and predict phenomena (Park et al., 2020; Rehman & Alharthi, 2016). The Fraud Triangle Theory, a framework for understanding fraud and earnings management, is central to this study. Developed by Donald Ray Cressey in 1953, the theory identifies three factors that lead trusted individuals to commit fraud: non-shareable financial pressure, perceived opportunity, and rationalisation (Cressey, 1953). This theory is widely accepted in the study of occupational fraud and is a cornerstone of auditing standards globally (Lokanan, 2015; Lou & Wang, 2009).

Financial or non-financial pressure can be personal, employment-related, or external. Financial pressures include lifestyle expenses, financial instability and the need to meet financial targets. Non-financial pressures encompass job dissatisfaction and the need to uphold a company's reputation (Albrecht & Albrecht, 2004; Kagias et al., 2022). This study will focus on company-level financial and non-financial pressures from employment and external sources, as these are the most relevant to corporate fraud.

Opportunities for fraud arise from weak internal controls, ineffective board oversight, and lack of audit mechanisms. These can stem from organisational deficiencies like inadequate supervision or poor governance structures (Demetriades & Owusu-Agyei, 2022; Soepriyanto et al., 2020).

Rationalisation involves justifying fraudulent actions, often linked to an individual's character and the ethical climate of the organization. Common rationalisations include viewing the act as not criminal or believing that rules are not enforced (Abdullahi et al., 2015; Fajri, 2019). An unethical management team can foster an environment where fraud is easily rationalised (Khamainy et al., 2022).

This study applies the Fraud Triangle Theory to fraudulent financial reporting and earnings management in Shariah compliant companies listed on Bursa Malaysia. While abundant research exists in the US and Europe, it is limited in emerging markets like Malaysia (Abdul Aris et al., 2015; Ramírez-Orellana & Martínez-Romero, 2017). This study uses the Beneish M-Score Model and the Modified Jones Model to assess the likelihood of fraud and earnings management.

Fraud

Fraud, a global phenomenon especially prevalent in developing countries, has been studied across various disciplines like criminology, sociology, psychology, and primarily finance, accounting, and auditing due to its secretive, pervasive, and multidimensional nature (Huber, 2017; Lokanan, 2015; Okoye & Gbegi, 2013). Fraudulent financial reporting involves intentionally misrepresenting financial statements, often to deceive users for personal gain (Apostolou et al., 2000; Rezaee & Davani, 2013). The Association of Certified Fraud Examiners (ACFE) ranks fraudulent financial reporting as one of the top three types of occupational fraud, despite it being the least common but costliest (Association of Certified Fraud Examiners, 2024).

In Malaysia, high-profile cases like Serba Dinamik and 1MDB highlight the critical nature of fraudulent financial reporting. The 1MDB scandal involved massive financial discrepancies and international legal action (Jones, 2020; Lotfi et al., 2022; Saravanamuttu, 2019), while Serba Dinamik's case centred on overinflated financial reports (Aluwi et al., 2023; Ng, 2022). Fraud cases in Malaysia increased from 41% in 2018 to 43% in 2020, resulting in significant financial losses (PwC, 2023).

Earnings Management

Earnings management manipulates financial reports to present an overly positive view of a company's financial position, often blurring the lines between legal and unethical practices. These acts of manipulating financial reports, either to mislead stakeholders or influence contractual outcomes (Healy & Wahlen, 1999) often involve altering expense timing, capitalizing costs incorrectly or adjusting inventory valuations to meet market expectations, achieve income smoothing or managerial bonuses.

Despite regulations like the Sarbanes-Oxley Act (SOX) of 2002 in the United States, aimed at improving financial transparency, earnings management persists due to flexibility in accounting standards. Major scandals like Enron (Joel et al., 2023) and WorldCom (Hendieh et al., 2023) highlight its potential for significant abuse. Notable cases such as the Adani Group's (Chatterjee, 2023) accounting irregularities and the Serba Dinamik's (Isahak et al., 2023) inflated financials emphasise the need for stricter regulations and effective monitoring to curb such practices. Research shows a strong relationship between earnings management and subsequent fraud, often transitioning at a point of no return.

Shariah Compliant Companies

Shariah is Islamic law based on the Qur'an and the teachings of Prophet Muhammad (Sunnah). It aims to protect five basic interests: religion, life, reason, progeny, and property (Siddiqi, 2004). Shariah compliance requires adherence to Islamic principles and avoiding activities prohibited by Islam like usury, gambling and ambiguity. In Malaysia, Shariah Advisory Councils oversee compliance for Islamic financial institutions and the Islamic Capital Market (ICM). Shariah-compliant companies, guided by Islamic principles promoting ethical financial reporting, continue to encounter challenges related to financial reporting fraud and earnings management, despite their adherence to these principles.

Research Gap

Malaysia's fraudulent financial reporting and earnings management issues are significant, with an average of 13 companies sanctioned annually from 2015 to 2022 (Bursa Malaysia, 2023; Securities Commission Malaysia, 2023), resulting in RM33.8 million in fines. Previous studies had not differentiated between Shariah compliant and non-compliant companies. This study fills this gap by focusing on Shariah compliant companies, a relatively underexplored area, employing the Beneish M-Score model, the Modified Jones model and the Fraud Triangle Theory for the likelihood of fraud and earnings management detection. Additionally, the study offers theoretical insights and practical recommendations for regulatory authorities and industry professionals in policy development, regulatory frameworks and ethical corporate practices in compliance with Shariah principles. The study aims to bridge the literature, geography and evidence gaps, enhancing fraud detection and improving market efficiency.

Conceptual Framework

This study is based on positivism, which asserts that reality exists independently of human perception (Rehman & Alharthi, 2016). This is rightly so because fraud and earnings management are not perpetual practices that are there to be adopted. It has unvarying standards and carries multiple realities to be created and not discovered. There must be some factors that motivate organizations to commit fraud and earnings management practices. Even the companies that are not adopting the practice must have some real reasons for not doing so. Here, again realities and justifications that backed up the actions are created.

Fraud and earnings management are influenced by various factors motivating companies to engage in or avoid these practices. The study will explore these factors, framed within three main objectives with eight proxies. The proxies for pressure are leverage (LEV), liquidity (LIQ) and return on equity (ROE). The opportunity would use auditor size (AUDS) and CEO duality (CEOD) as its proxies. While the rationalisation is proxied by related party transactions (RPT), founder on board (FOUND) and board independence (BODIND). These proxies will help establish the likelihood of fraudulent financial reporting and earnings management in Shariah compliant companies. This framework is illustrated in the Figure 1 below:
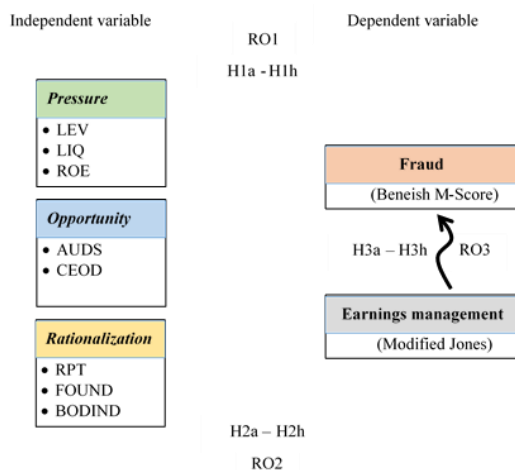
Figure 1. Conceptual Framework

METHODOLOGY

The financial statements of both fraudulent and non-fraudulent companies will be sourced from Bursa Malaysia and Securities Commission databases. Subsequently, a thorough comparison and validation process will be carried out, leveraging the Bloomberg database to reinforce the consistency and validity of the data.

Dependent Variable

The dependent variables in this study are fraudulent financial reporting and earnings management. The fraud samples are validated by the Beneish M-Score model and the earnings management samples are substantiated by the Modified Jones model.

Beneish M-Score Model

The Beneish M-Score model (Beneish et al., 2023) developed by M. Daniel Beneish, uses financial ratios to predict the likelihood of fraudulent financial reporting through eight variables: DSRI, GMI, AQI, SGI, DEPI, SGAI, TATA, and LVGI. An M-Score of above -2.22 (Mantone, 2013; Omar et al., 2014; Warshavsky, 2012) indicates potential fraud. The model is a probabilistic model based on a probit regressive method which uses financial ratios constructed from the data derived from the companies' financial reports. The use of the Beneish M-Score Model in this study is due to some reasons. Among those, the model uses a systematic and quantitative approach via the use of objective criteria and a predefined set of financial ratios. These ratios are a combination of current and historical financial data, which is critical in trends and performance analysis. Significant deviations from historical patterns are worthy of investigation that might be an indicative of manipulation. The model can be adapted to different industries that provide early signs and red flags and can be used by various stakeholders. According to Mohamad Kamal et al., (2016), 82% of listed companies prosecuted for fraudulent financial reporting have been detected by Beneish M-Score Model before a public announcement was made. They further concluded that the model is reliable and capable of identifying potential companies that practiced earnings manipulation and possibly investigated, charged and convicted for fraud. Beneish M-Score is a suitable model for detecting possible manipulation (A. Girau et al., 2022; Franceschetti & Koschtial, 2013; Shakouri et al., 2021). M-Score is the more accurate model for forecasting (Anh Phong et al., 2022). The formula used is as follows:

M-Score $= -4.84 + 0.92 * DSRI + 0.528 * GMI + 0.404 * AQI + 0.892 * SGI + 0.115 * DEPI - 0.172 * SGAI + 4.679 * TATA - 0.327 * LVGI$

Where,

DSRI : Days Sales in Receivables Index

GMI : Gross Margin Index

AQI : Asset Quality Index

SGI : Sales Growth Index

DEPI	:	Depreciation Index
SGAI	:	Sales, General, Administrative Expenses Index
TATA	:	Total Accruals to Total Assets
LVGI	:	Leverage Index

Modified Jones Model

The Modified Jones model detects earnings management by analysing discretionary accruals (Dechow et al., 1995), considering factors like revenue changes, receivables, property, plant and equipment and total assets. This model is expected to separate discretionary accruals from non-discretionary accruals. Discretionary accruals are the accounting adjustments that the management has the discretion to make. These accruals involve estimates and judgments made by management rather than being dictated by actual transactions. The non-discretionary accruals are those that are considered a normal part of a company's business operations and are not subject to manipulation by management. A positive coefficient in the model suggests that an increase in the variable would increase the discretionary accruals which in turn is expected to increase the likelihood of earnings management.

This model has been substantiated by many studies and is known to be the most powerful and highly reliable (Ismail-Khan & Muhammad-Hapiz, 2022). Dechow et al., (1995) in their study evaluated the ability of other alternative aggregate accrual models' ability such as Healy, DeAngelo, Industry, Jones, and found that the Modified Jones Model is the best model to detect earnings management. The model focuses on discretionary accruals where management has more flexibility, which is the root of the manipulation. This version of the accruals model fits the data much better than the other (Ducharme et al., 2001). Similar to Beneish M-Score model, the Modified Jones Model incorporates historical financial data that identifying the red flags much easier. The model is not industry specific, thus, could be used on multiple industries, making it easier to adapt and analyze. It also considers the cash flow and reversals, includes reliability and avoids intrinsic problems of omitted variables (Costa & Soares, 2022).

The model uses the following formula:

$$TA_t / A_{t-1} = \alpha_1 (1 / A_{t-1}) + \alpha_2 (\Delta REV_t / A_{t-1} - \Delta REC_{it}) / TA_{t-1} + \alpha_3 (PPE_t / TA_{t-1}) + \varepsilon_t$$

$$\text{Total Accruals} = \text{Non-Discretionary Accruals} + \text{Discretionary Accruals}$$

Where,

TA_{it}	:	total accruals in year t
A_{t-1}	:	total assets in year t-1
ΔREV_{it}	:	revenues in year t less revenues in year t-1
ΔREC_{it}	:	net receivables in year t less net receivables in year t-1
PPE_{it}	:	gross property plant and equipment in year t
ε_{it}	:	error term in year t
$\alpha_1, \alpha_2 \& \alpha_3$	:	firm-specific parameters

Independent Variable

The independent variables in this study are divided into three elements. The pressure elements consist of leverage (LEV) which is a ratio of total liabilities to total assets; liquidity (LIQ), the ratio of current assets to current liabilities; and return on equity (ROE) where the net income is divided by shareholder's equity. The opportunity elements consist of auditor size (AUDS) with big audit firms believed to be more rigorous, reducing opportunities for financial misconduct; CEO duality (CEOD) which increases the opportunity for fraud due to potentially reduced oversight. The rationalisation elements are board independence (BODIND) where fewer independent directors suggest weaker oversight; Related Party Transactions (RPT) where higher RPT indicates greater opportunity for manipulation; and founder on board (FOUND) who could rationalise questionable practices effortlessly.

The study employs a matched sample design with the control variables being the financial reporting year, firms' size, firms' age and firms' industry. Financially distressed companies (PN17 and GN3) are excluded due to higher manipulation tendencies. The study focuses on 808 Shariah compliant companies listed on Bursa Malaysia as of November 30, 2023, covering a ten-year period from January 2014 to December 2023, excluding banks, financial institutions, insurance companies and REITs due to specific reporting regulations and different financial characteristics.

Secondary data would be collected primarily through media releases and enforcement actions summaries, scrutinizing convicted fraud cases fitting the study's definition of fraudulent financial reporting. Data analysis involved multivariate regression and fraud-risk factor tests using models like the Beneish M-Score model and the Modified Jones model. Twenty-four hypotheses were formulated based on the Fraud Triangle Theory (pressure, opportunity, rationalisation) to analyze factors influencing the likelihood of fraud and earnings management.

DISCUSSION AND CONCLUSION

Fraud and earnings management have far-reaching and profound effects on various stakeholders. While these practices may temporarily enhance a company's performance, they often deceive and manipulate the public, legislators, creditors, debtors or investors. They might appear to offer quick solutions to short-term problems, persistent earnings management can escalate into fraud that demonstrates a point of no return scenario, a difficulty of coming back to the original states of accounts after a prolonged practice of earnings management, as evidenced by numerous financial scandals.

The three proxies of pressure are significantly influencing the likelihood of fraud and earnings management. The higher the LEV the more likely a company to commit fraud and manage its earnings. The lower the LIQ the more likely a company to commit fraud and manage its earnings. The lower the ROE the more likely a company to commit fraud and manage its earnings. A company that is not audited by the big four audit firms is more likely to commit fraud and manage its earnings. A company with CEO and board chairman duality is more likely to commit fraud and manage its earnings. The lower the independence of the board of directors the more likely a company to commit fraud and manage its earnings. The higher the related party transaction the more likely a company to commit fraud and manage its earnings. A company with a founder on the board is more likely to commit fraud and manage its earnings. The study also found that all companies that engaged in earnings management would commit fraud two to three years later.

High-profile cases of fraud and earnings management not only devastate corporate leaders and nations but also impact society and future generations by prompting policy changes and diminishing socio-economic opportunities.

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