

DOI: <https://doi.org/10.57125/FEL.2024.12.25.08>

How to cite: Anggraeni, D., Levia Sitompul, G., Hergani, A., & Ismail, T. (2024). Determinants of Fraudulent Financial Statements Through the Fraud Hexagon Theory Perspective: The Empirical Study of Mining Sector Companies Listed on the Indonesia Stock Exchange 2018–2022. *Futurity Economics&Law*, 4(4). 137-153. <https://doi.org/10.57125/FEL.2024.12.25.08>

Determinants of Fraudulent Financial Statements Through the Fraud Hexagon Theory Perspective: The Empirical Study of Mining Sector Companies Listed on the Indonesia Stock Exchange 2018–2022

Dini Anggraeni

Bachelor's degree, Department of Accounting, Faculty of Economics and Business, Sultan Ageng Tirtayasa University, Serang, Indonesia, <https://orcid.org/0009-0008-5749-6621>

Gebi Levia Sitompul

Bachelor's degree, Department of Accounting, Faculty of Economics and Business, Sultan Ageng Tirtayasa University, Serang, Indonesia, <https://orcid.org/0009-0009-5253-4761>

Ashari Hergani

Bachelor's degree, Department of Accounting, Faculty of Economics and Business, Sultan Ageng Tirtayasa University, Serang, Indonesia, <https://orcid.org/0009-0003-3042-631X>

Tubagus Ismail

Professor, Department of Accounting, Faculty of Economics and Business, Sultan Ageng Tirtayasa University, Serang, Indonesia, <https://orcid.org/0000-0002-2559-6926>

***Corresponding Author:** dinianggraeni1162@gmail.com.

Received: June 17, 2024 | **Accepted:** September 23, 2024 | **Available online:** October 14, 2024

Abstract: The research means observing and presenting empirical data on the impact of the six variables that make up the fraud hexagon theory: external pressure, nature of the industry, change in auditor, change in directors, CEO duality, and political connection of fraudulent financial statements. In

determining fraudulent financial statements. This research makes use of the f-score model to identify fraudulent financial statements. Companies in the mining industry registered in the Indonesia Stock Exchange between 2018 and 2022 comprise that study's population. Purposive sampling, used in this research, resulted in 30 companies for five years, with four outlier data units, so the total analysis units were 146. Using SPSS V.25 software, logistic regression analysis is the data analysis technique used. The results showed that the variables that positively influence fraudulent financial statements are external pressure and changes in directors. In contrast, the variable that negatively influences fraudulent financial statements is the nature of the industry. In comparison, auditor changes, CEO duality, and political connections do not affect fraudulent financial statements. This study provides theoretical and practical implications for stakeholders in detecting fraudulent financial statements as well as for future research. The limitation of this study is that the variables can only explain fraudulent financial statements by 23.4%, so further researchers are advised to add other proxies to measure elements of the fraud hexagon theory.

Keywords: F-Score Model, Fraudulent Financial Statement, Fraud Hexagon Theory, Stock Exchange.

Introduction

The heat of intense rivalry necessitates a paradigm change from resource-based competition to knowledge-based competitiveness (Abbas et al., 2021a). Financial reports are crucial because they provide management with a basis for strategic decision-making by summarising the state of the organisation (Zulfikar et al., 2022). Ismail (2015) asserts that the data on financial accounts must be accurate, dependable, and reasonable for the intended audience. However, in actuality, fraud is a factor that hinders the expansion of businesses and poses a persistent challenge to the development of financial markets (Ozcelik, 2020). People who use financial statements to make decisions may be misled by inaccurate information inside the company, which might result in a loss of reporting quality and profit quality (Dewiyanti et al., 2023).

According to the 2020 Report to the Nations (RTTN) survey findings from the Association of Certified Fraud Examiners (ACFE), asset theft cases had the greatest incidence (86%), followed by corruption (43%) and financial statement fraud (10%). Nevertheless, despite the lowest frequency of occurrences, financial statement fraud caused the largest average total loss (\$954,000) (Association of Certified, 2020).

Fraud frequently happens when the control mechanism is fragile, and there is no well-supervised financial management (Taqi et al., 2021). Fraud is a common occurrence in many industries, including mining. The Financial Services Authority (OJK) and the Indonesia Stock Exchange (IDX) were notified in 2016 of allegations, including accounting manipulation, embezzlement, and false disclosure concerns concerning the directors of PT Cakra Mineral Tbk. This was one of the mining industry's instances of financial fraud in Indonesia. Jefferson Dau, the attorney for PT Murui Jaya Perdana, said that starting in August 2014, the directors of PT Cakra Mineral Tbk conspired to execute a share purchase agreement with false representations and neglected to carry out their end of the bargain. The directors of PT Cakra Mineral Tbk fraudulently claimed to own a 55% stake in PT Murui Jaya Perdana for more than two years. Furthermore, it was alleged that the firm's directors had purposefully inflated investor capital and manipulated asset values, resulting in significant losses for investors due to inaccurate, deceptive, and fraudulent disclosures (Berita Lima, 2016).

It seems inevitable based on incidents of misleading financial statements in the mining industry. According to the 2019 ACFE Indonesia Chapter survey findings, with a 5.0% fraud rate, the mining business ranks third among all industrial types in terms of disadvantage. The mining industry, which contributes significantly to developing a resource-rich country, is one of the critical pillars of Indonesia's

national economic development. It is proven that during 2020, the mining industry could provide Non-Tax State Revenue (PNBP) of IDR 34.6 trillion, which exceeded around 110.15% of the target set by the state of IDR 31.41 trillion (Rahajeng, 2021). Therefore, the revenue obtained by mining companies can be free to commit fraud, and fraud in the mining industry may not have been detected and reported entirely.

Financial statement fraud is an issue that cannot be disregarded because fraud can result in losses for the company and related external parties. Financial statement fraud is essential because accounting fraud requires better, comprehensive, integrated efforts (Taqi et al., 2019b). Because of that, fraud must be identified to lessen the possibility of fraudulent financial statements. One method to spot financial statements submitted illegally is to use a fraud model (Sukmadilaga et al., 2022). The present study involves the sequential proximation of the six constituents of the fraud hexagon hypothesis, namely pressure, opportunity, rationalisation, capability, ego, and conspiracy. Vousinas developed the most current fraud model in 2019, the fraud hexagon hypothesis. External pressure represents pressure, the nature of industry represents opportunity, change in auditor represents rationalisation, change in directors represents capability, CEO duality represents ego, and political connections represent collusion.

Research Problem

Global economic development makes business and trade competition in domestic and international markets increasingly competitive. Stakeholders need financial reports to predict and assess the company's future business growth and assess investment activities in a certain period, so this report must provide a representation of the company's finances and operations during a period this is helpful to influencing stakeholders to decide (Agusputri & Sofie, 2019). In reality, it may be challenging to recognise the accuracy of financial statements. Still, it has been proven that there are many cases of financial statement manipulation in companies because companies present incorrect information in financial statements (Abbas et al., 2021b). Every business seeks to provide financial reports showing its performance is consistently in "good" shape to gain the trust of the many stakeholders that use it. However, when performance results fall short of expectations, management may feel pressured to modify the numbers to make the financial statements seem better. In the end, however, the misrepresented information will hurt many people (Novitasari & Chariri, 2019). Financial statement fraud is a problem that cannot be disregarded because it can result in losses for the business and associated third parties (Sukmadilaga et al., 2022). As a result, fraud detection is critical to lowering the likelihood of false financial statements, anticipating the harm that certain parties may suffer, and aiding stakeholders in making well-informed decisions.

Research Focus

This research focuses on identifying the six components of fraud in the mining sector registered on the IDX between 2018–2022. The six elements of the fraud hexagon theory, pressure, opportunity, rationalisation, capability, ego, and conspiracy, are proxied, respectively. External pressure proxy for pressure, nature of industry proxy for opportunity, change in auditor proxy for rationalisation, change in directors proxy to capability, CEO duality proxy for ego, and political connections proxy for conspiracy, as well as measuring financial statements identified as fraudulent through the f-score model.

Research Aim and Research Questions

The research means observing and presenting empirical proof of the impact of fraud hexagon theory elements on fraudulent financial statements. The research questions in this study were whether [external pressure], [nature of industry], [change in auditor], [change in directors], [CEO duality], and [political connection] can affect [fraudulent financial statements].

Literature Review

Agency Theory

Jensen and Meckling presented the idea of agency theory in 1976, describing the contractual tie between the principal and the agent. As principals under the existing contractual structure, shareholders authorise management to operate as agents and supervise the company's activities (Sagala & Siagian, 2021). Management is more informed about the firm than the founders since they are its representatives. Knowledge asymmetry, or the unequal knowledge-sharing between agents and principals, is the outcome. Asymmetric information that engages the principal and agent allows the agent to hide information from the principal, which might result in partial, skewed, or asymmetric financial information disclosure in the financial statements (Saipuloh et al., 2023).

Fraud

The ACFE defines fraud as a deliberate legal violation committed with the goal of deceiving and manipulating others to benefit oneself or a group (Association Of Certified, 2020). The ACFE classifies fraudulent activities into three groups, one of which is financial statement fraud.

Fraudulent Financial Statement. The deliberate and inaccurate presentation of financial statements resulting from management mistakes or omissions to deceive users is known as fraudulent financial statement presentation (ACFE Indonesia, 2019). Fraudulent financial statements can arise from several sources, as stated in Statement of Auditing (SAS) No. 99 (Larum et al., 2021). Among these are: (1) willful misapplication of rules concerning the quantity, classification, disclosure, or submission processes; (2) carelessness or intentional error preventing events, transactions, or data that forms the foundation of financial statements; and (3) falsification, manipulation, or modification of accounting records and supporting documentation while preparing financial statements.

Fraud Hexagon Theory. The Fraud Hexagon theory explores the causes of fraud in deeper detail and is currently being developed. The Fraud Hexagon was developed based on Donald R. Cressey's 1953 Fraud Triangle Theory. The Fraud Triangle hypothesis evolved into the Fraud Diamond theory, coined by Wolfe and Hermanson in 2004. Crowe then took this concept and added the ego component in 2011 to develop the Fraud Pentagon. Then, in 2019, Vousinas refined the Fraud Hexagon by including the collusion component. Thus, the elements of the Fraud Hexagon are pressure, opportunity, rationalisation, capability, ego, and collusion (Vousinas, 2019).

Hypothesis Development

The Effect of External Pressure on Fraudulent Financial Statements. Pressure management faced by outside sources to satisfy its needs or commitments to external parties is known as external pressure (Faradiza, 2019). One kind of external pressure occurs when there is a strong need for operational funds and the financial environment is perceived as favourable to outside stakeholders (Achmad et al., 2022).

Agency theory and external pressure are related because, as the principal's agent, management must get extra funding from other sources to expand its business lines. However, while fulfilling their obligations, management often encounters financial obstacles that might impede the company's growth. This pressures management to produce financial reports accurately to comply with third-party standards and make them seem reasonable, even in light of the potential for fraudulent financial statements (Imtikhani & Sukirman, 2021). The leverage ratio, or the proportion of total liabilities to total assets, determines how much external pressure there is. Leverage ratios are a helpful metric for evaluating a business's capacity to repay debt (Imtikhani & Sukirman, 2021). According to studies by Achmad et al. (2022) and Imtikhani and Sukirman (2021), a company's leverage ratio raises the possibility of making fraudulent financial statements. Based on the above explanation, one may hypothesise the following:

H₁. External pressure has a positive effect on fraudulent financial statements.

The Effect of the Nature of Industry on Fraudulent Financial Statements. The regulations governing the industry in which a firm operates define its ideal state, referred to as the nature of the sector (Agusputri & Sofie, 2019). A company's operational activities that depend on estimates or estimations are directly related to its industry under Statement on Audit Standards (SAS) No. 99 (Narsa et al., 2023).

Because of the information asymmetry that allows the agent access to more knowledge than the principal about the company status and prospects, agency theory and the nature of the industry are related. Management may thus create false financial statements by calculating the excess value of accounts based on estimates in the company's financial statements. One might utilise the ratio of receivables changes as a stand-in for industry characteristics. It is a sign of subpar business circumstances if the company's receivables are in worse shape than the previous year (Ritonga & Apriyani, 2019). According to research by Nurardi and Wijayanti (2021), a company's growing accounts receivable may be a red flag for falsified financial statements. Drawing from the previous description, the following conjecture may be made:

H₂. The nature of the industry has a positive effect on fraudulent financial statements.

The Effect of Change in Auditor on Fraudulent Financial Statement. The term "change in auditor" describes the appointment of a new auditor instead of the previous one (Iciah et al., 2021). An auditor may oversee and review the company's financial accounts if he has the necessary intellectual, emotional, and social competencies and abilities (Taqi et al., 2019a). The auditor will also be informed if there are any signs that the firm has committed fraud (Agusputri & Sofie, 2019). However, the firm's management may change the prior auditor with a new one to remove any proof of fraud discovered by the former auditor to prevent such identification (Alifa & Rahmawati, 2022).

Change in auditors is related to agency theory because it can increase conflicts of interest between principals and agents and issues with adverse selection brought on by information asymmetry, which can be utilised to commit fraud. According to Syahria's (2019) study, there is a positive correlation between the frequency of auditor changes in a firm and the indicators of fraud committed. Drawing from the previous description, the following conjecture may be made:

H₃. Change in auditor has a positive effect on fraudulent financial statements.

The Effect of Change in Directors on Fraudulent Financial Statements. A change in directors refers to leadership or directorship that the organisation makes (Imtikhani & Sukirman, 2021). Directors who occupy high positions in the company can create or utilise the power to commit fraud by influencing other employees so that the scam can be covered (Achmad et al., 2022).

Agency theory states that directors as agents can have personal interests and take actions inconsistent with the principal's interests. Given these presumptions, the new directors could be persuaded to do different things to make their performance seem better than the prior directors'. This is because changing the directors is to identify specific interests, such as replacing outgoing directors who are no longer eligible or have a history of fraud (Imtikhani & Sukirman, 2021). The board of commissioners also exercises supervision, both generally and specifically, about the directors (Abbas et al., 2021c). A company's chance of financial statement fraud is positively correlated with the frequency of director change, according to research by Aviantara (2021). According to the explanation provided above, one may hypothesise the following:

H₄. Change in directors has a positive effect on fraudulent financial statements.

The Effect of CEO Duality on Fraudulent Financial Statements. CEO duality occurs when an individual holds positions on the same company's board of commissioners and board of directors (Widyatama & Setiawati, 2020). On the other hand, Indonesia maintains a two-tier board structure,

which states that a person cannot simultaneously serve on the Board of Commissioners and the Board of Directors. As a result, the board of directors and the board of commissioners are considered family or have a familial tie regarding CEO duality in Indonesia (Widyatama & Setiawati, 2020).

The dual character of the CEO's role is related to the agency hypothesis, which maintains that agents and principals have different interests due to management discretion circumstances where management has discretion in decision-making. Because of the supervisory function's inefficiency and the board of commissioners' broad managerial power, events may be put in motion to maximise individual gains (Dewi & Anisykurlillah, 2021). Research conducted by Widyatama and Setiawati (2020) proves that when there is a kinship relationship between directors and commissioners, The possibility of an event occurring in the financial statements becomes greater. Conflicts of interest, in this case, a family relationship, can cause directors to escape internal control, thereby triggering fraud. Drawing from the previous description, the following conjecture may be made:

H₅. CEO duality has a positive effect on fraudulent financial statements.

The Effect of Political Connection on Fraudulent Financial Statements. Political connections refer to strong links between companies, governments, politicians, and public officials (Imtikhani & Sukirman, 2021). These connections provide companies with convenience in terms of licensing and obtaining loans (Imtikhani & Sukirman, 2021). Thus, it can be concluded that companies with close ties to the government will find it easier to get help and privileges (Harymawan et al., 2019).

The relationship between political connection and agency theory arises from the different goals of agents and principals. This is because the agent wants his welfare to benefit from the performance that has been carried out so that the facilities and privileges that the company has allowed management to make fraudulent financial reporting (Imtikhani & Sukirman, 2021). Stronger political connections are associated with an increased risk of financial statement fraud, according to research by Kusumosari and Solikhah (2021). Given the description given above, one may hypothesise the following:

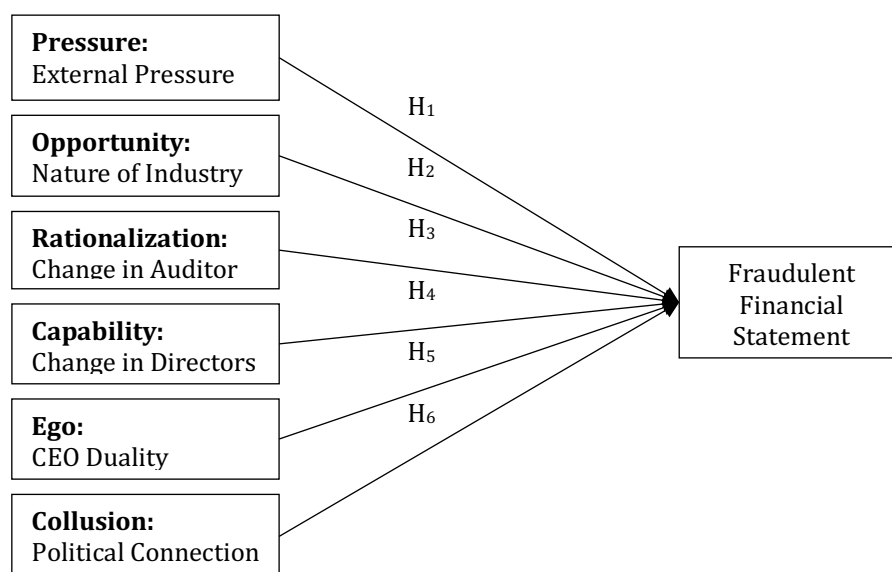
H₆. Political connection has a positive effect on fraudulent financial statements

Conceptual Framework

Based on theoretical underpinnings, prior research findings, and issues briefly covered above, this study uses a proxy for each component of the fraud hexagon hypothesis to determine its impact on fraudulent financial statements. The following is an explanation of the research model.

Figure 1

Conceptual Framework



Source: Authors' development.

Research Methods

This study employs secondary data and falls under the quantitative research area. Notes or evidence made public may be found on the official website as secondary data. This analysis uses the population mining industry companies listed on the IDX for 2018–2022. The purposive sampling technique, which entails selecting samples by pre-set standards, was used to choose this sample.

The following summarises the dependent and independent variables and their measurements in this research.

Table 1

Variable Measurement

Variable	Indicator	Scale
Fraudulent Financial Statement	F-Score = Accrual Quality + Financial Performance (Dechow et al., 2011) Code 1 if there is visible fraud in financial statements with F-Score > 1.00, and code 0 if there is no fraud in financial statements with F-Score < 1.00 (Agusputri & Sofie, 2019).	Nominal
External Pressure	Leverage = Total Liabilities/Total Assets (Skousen et al., 2009)	Ratio
Nature of Industry	Receivable = $\frac{\text{Receivable (t)}}{\text{Sales (t)}} - \frac{\text{Receivable (t-1)}}{\text{Sales (t-1)}}$ (Skousen et al., 2009)	Ratio
Change in Auditor	Dummy variable. Code 1 is for when there is a change of auditor during the study period, and code 0 is for when it does not happen otherwise (Achmad et al., 2022).	Nominal
Change in Directors	Dummy variable. Code 1 is for when directors change during the study period, and code 0 is when it does not occur otherwise (Achmad et al., 2022).	Nominal
CEO Duality	Dummy variable. Code 1 is for if the board of directors and the board of commissioners have a kinship relationship, and code 0 is for if it does not happen otherwise (Dewi & Anisykurlillah, 2021).	Nominal
Political Connection	Dummy variable. Code 1 if the president and independent commissioner have political connections, and code 0 if it does not happen otherwise (Fan et al., 2007; Matangkin et al., 2018).	Nominal

Source: Obtained from various sources (2024).

Data Collection Method

Documentation is the technique utilised to acquire data. Data for the documentation method is obtained from the IDX Indonesia Stock Exchange by looking at the annual financial statements of mining companies for 2018–2022, available through the company's official website and www.idx.co.id.

Data Analysis Technique

Logistic regression analysis is used because the dependent variable in this research strategy is a dummy variable with just two categories. The steps of analysis in this research are as follows: Descriptive Statistical analysis (1), (2) The logistic regression analysis consists of several tests, such as the Wald Test, Nagelkerke R Square, omnibus of model coefficients, overall model fit test, goodness of fit test, and regression model created.

Results

Description of Research Objects

This research concentrates on mining sector companies listed from 2018 to 2022 on IDX. The data utilised is derived from annual reports of the mining sector, available at www.idx.co.id or on the company's official website. The sample for this study was chosen using a purposive sampling method. After selecting a representative sample of the research population, the following results were discovered:

Table 2

Sample Selection Results

No	Criteria	Total
1.	Companies in the mining industry were listed between 2018 and 2022 on the Indonesia Stock Exchange (IDX).	52
2.	Mining sector companies were not listed consecutively on the Indonesia Stock Exchange (IDX) from 2018 to 2022.	(5)
3.	Mining sector companies that do not publish complete annual reports on the Indonesia Stock Exchange (IDX) website or the company website between 2018 and 2022.	(13)
4.	The data related to the variables used in the research are not available in full in the annual reports published during the 2018-2022 period.	(4)
	Number of companies that fulfil the sample criteria	30
	Total data in the study (30 × 5 years)	150
	Outlier Data	(4)
	Total research data	146

Source: Secondary data processed (2024).

Descriptive Statistical Analysis

Table 3

Numerical Data Descriptive Results

	N	Minimum	Maximum	Mean	Std. Deviation
External Pressure	146	,088040	2,418443	,57336758	,366757833
Nature of Industry	146	-35,385003	1,525631	-,74276200	4,393135433
Valid N (listwise)	146				

Source: Secondary data processed (2024).

Table 4

Category Data Descriptive Results

	Category	Frequency	Per cent
Change in Auditor	No change of auditor	85	58,2
	There was a change of auditor	61	41,8
	Total	146	100,0
Change in Directors	No change of directors	80	54,8
	There is a change of directors	66	45,2
	Total	146	100,0
CEO Duality	The directors' board and the commissioners' board have no kinship relationship	118	80,8

	The directors' board and The directors' board have a kinship relationship	28	19,2
	Total	146	100,0
Political Connection	President commissioners and independent commissioners have no political connections	43	29,5
	President commissioners and independent commissioners have political connections	103	70,5
	Total	146	100,0
F-Score	There is no indication of FFS	134	91,8
	FFS indicated	12	8,2
	Total	146	100,0

Source: Secondary data processed (2024).

Table 3 uses the leverage ratio to measure external pressure variables. Its minimum value is 0.088040, corresponding to PT Harum Energy Tbk in 2020; Its average value is 0.57336758 with a standard deviation value of 0.366757833. Its highest value is 2.418443, which belongs to PT Eksploitasi Energi Indonesia Tbk in 2022. This indicates that, on average, the company's debt represents 57.34% of its total assets. Additionally, the data is homogenous or uniformly distributed, with a standard deviation less than the mean value.

The receivables industry variable has an average value of -0.74276200 and a standard deviation of 4.393135433. In 2022, PT Astrindo Nusantara Infrastruktur Tbk had the lowest value of -35.385003, and PT Bumi Resources Minerals Tbk had the most significant value of 1.525631. This indicates that the data is neither dispersed nor heterogeneous, as the standard deviation is greater than the mean, which implies that the typical firm has a receivable turnover of -74.28%.

Table 4, descriptive statistics for variables that use variable dummy proxies. The change in auditor variable with no auditor change occurred as much as 85 data or 58.2%, then 61 data or 41.8% occurred auditor change. The variable change in directors with no change in directors is 80 data or 54.8%, then 66 data or 45.2% of the change in directors occurs. As many as 118 data points, or 80.8%, show no kindred between the CEO duality variable and the board of directors and commissioners. However, 28 data points, or 19.2%, show the kinship between the Board of Commissioners and the Board of Directors. The political connection variable with the independent commissioner and or president commissioner does not have a political connection as much as 43 data or 29.5%, then 103 data or 70.5% visible political relations between president commissioners or independent commissioners. The variable fraudulent financial statement does not indicate fraudulent financial statements as much as 134 data or 91.8%, and then 12 data or 8.2% indicated fraudulent financial statements.

Overall Model Fit Test

Table 5

Iteration History

Iteration Block Number	-2 Log likelihood
0	82,954
1	67,353

Source: Secondary data processed (2024).

Table 5 indicates a 15.601 (82.954-67.353) decline in the -2LogL value between block numbers = 0 and 1, indicating that the proposed model either aligns well with the data or constitutes a valid regression model.

Goodness of Fit Test

Table 6

Hosmer and Lemeshow Test

Step	Chi-square	df	Sig.
1	2,586	8	,958

Source: Secondary data processed (2024).

Table 6 shows a significance level of 0.958 and a chi-square value of 2.586. These findings suggest that if the significance value exceeds 0.05, the model is likely capable of predicting the observation values accurately or is considered well-fitted to the data and acceptable.

Nagelkerke R Square

Table 7

Model Summary

Step	-2 Log likelihood	Cox & Snell R Square	Nagelkerke R Square
1	67,353 ^a	,101	,234

Source: Secondary data processed (2024).

Table 7 shows a result of 0.234. It may be inferred that the independent factors (industry nature, external pressure, changes in auditors and directors, CEO duality, and political connection) can explain up to 23.4% of the dependent variable. In contrast, variables not included in this research can explain up to 76.6% of the dependent variable.

Classification Matrix

Table 8

Classification Table

	Observed	F-Score	Predicted		
			There is no indication of FFS.	FFS indicated	
Step 1	F-Score	There is no indication of FFS	134	0	100,0
		FFS indicated	11	1	8,3
	Overall Percentage				92,5

Source: Secondary data processed (2024).

Table 8 shows the percentages. Using the regression model, one financial report data, 8.3% of which was predicted to commit fraud, of 12 financial report data indicated fraud, while the prediction power that does not indicate fraud is 100.0%. Thus, the regression model used 134 predicted financial report data, which didn't indicate fraud. So, the conclusion is that the overall classification accuracy of the predictive power is 92.5%.

Simultaneous Significance Test

Table 9

Omnibus Tests of Model Coefficients

Chi-square	df	Sig.
------------	----	------

Step 1	Step	15,601	6	,016
	Block	15,601	6	,016
	Model	15,601	6	,016

Source: Secondary data processed (2024).

Table 9 produced a Sig value of $0.016 < 0.05$, a computed chi-square value of 15.601, and a table chi-square value of 12.592 then ($15.601 > 12.592$), suggesting that fraudulent financial statements are simultaneously and significantly impacted by external pressure, industry type, director and auditor changes, CEO duality, and political connections.

Individual Parameter Significance Test

Table 10

Wald Test

		B	S.E.	Wald	df	Sig.	Exp(B)
Step 1 ^a	External Pressure	2,027	,788	6,624	1	,010	7,595
	Nature of Industry	-,096	,045	4,544	1	,033	,909
	Change in Auditor	,431	,654	,435	1	,510	1,539
	Change in Directors	1,643	,749	4,811	1	,028	5,172
	CEO Duality	,889	,785	1,283	1	,257	2,433
	Political Connection	-1,355	,695	3,801	1	,051	,258
	Constant	-4,416	1,068	17,085	1	,000	,012

Source: Secondary data processed (2024).

The Regression Model Formed

Table 10, which may be used, is based on the results of the logistic regression model:

$$FFS = -4,416 + 2,027EP - 0,096NOI + 0,431CIA + 1,643CID + 0,889CED - 1,355PC + \varepsilon$$

Discussion

From some data analysis that has been done, the following is a discussion of the results of hypothesis testing in this research:

The Effect of External Pressure on Fraudulent Financial Statements

The first hypothesis of the study posits that fraudulent financial statements are influenced by external pressure. Testing of this hypothesis reveals that external pressure positively impacts fraudulent financial statements, as indicated by a beta coefficient of 2.027 for the external pressure variable and a probability value of 0.010, which is below the significance level of 0.05. Consequently, **H₁ is accepted.**

The outcome of this research is in keeping with agency theory; the distinction in pursuits among agents and principals will purpose agency issues. Based on research data, the typical debt stage of mining sector corporations is 57.34% of total assets. This figure shows that the corporation's debt ratio (leverage) is relatively high and has the potential risk of debt default. This is because companies must have a low level of leverage to obtain financing from external parties. Creditors won't provide loans to a firm with a high leverage level because of the elevated credit risk. Consequently, management must prepare financial statements that meet third-party criteria and seem respectable, even if that means fabricating financial figures. The results of this study are consistent with studies by Achmad et al. (2022) and Imtikhani and Sukirman (2021), which contend that fraudulent financial statements benefit from external pressure.

The Effect of the Nature of Industry on Fraudulent Financial Statements

The study's second hypothesis is that the industry type positively influences fraudulent financial statements. The kind of industry variable's beta coefficient value, according to the findings of the hypothesis test, is -0.096, and its probability value is $0.033 < 0.05$, which is less than the significant threshold. This indicates that fraudulent financial statements harm the sector because of their nature, so **H₂ is rejected**.

The outcome of this research does not follow agency theory, which considers control as people trusted by investors to manage the company. Thus, if a corporation's industry deteriorates, management will try to appear good to investors. Based on the research data, the average company has an accounts receivable turnover of -74.28%, meaning that the company's receivables in this study experienced too massive changes during the study year and had an unstable ratio of changes in receivables. This is because growth in receivables that happens is an outcome of income growth. After all, mining companies may provide longer payment terms to buyers to attract more customers or strengthen business relationships; new or extended long-term sales contracts with buyers can cause an increase in receivables along with sales that occur during the contract period. Therefore, generally speaking, a rise in receivables in the mining industry typically indicates corporate development and growth together with higher sales. To prevent misleading financial reports generated by changes in the receivables ratio throughout the study year. The results of this study are in opposition to research by Nurardi and Wijayanti (2021), which demonstrates that the nature of the sector has a favourable impact on fraudulent financial statements.

The Effect of Change in Auditor on Fraudulent Financial Statement

The third hypothesis posits that changes in auditors positively affect fraudulent financial statements. Testing this hypothesis revealed that the change in the auditor variable has a beta coefficient of 0.431 and a probability value of 0.510, above the 0.05 significance threshold. This suggests that changes in auditors do not significantly impact fraudulent financial statements; **H₃ is rejected**.

The results of this study contradict the agency theory, which holds that a corporation's change in auditor results in more conflicts of interest between the agent and the principal. As a result, fraud may be committed using asymmetric knowledge between two parties. This is because auditors have a professional duty to remain impartial and unbiased in their job, and frequent changes in an organization's audit team do not impact the likelihood of false financial statements. The professional code of ethics continues to bind newly appointed auditors. Fraud may be hard to spot due to certain inherent constraints in the audit process. Therefore, if the scam is well planned, the auditor may not be able to find it even if they replace the previous one. The findings of this study run counter to research by Syahria et al. (2019), which indicates that a change in auditor might favour fraudulent financial statements.

The Effect of Change in Directors on Fraudulent Financial Statement

The study's fourth hypothesis suggests that changes in directors positively influence the occurrence of falsified financial statements. The hypothesis's findings show that the change in the directors variable has a beta coefficient of 1.643 and a probability value of 0.028, below the significance threshold of 0.05. This implies that the beneficial impact of fraudulent financial statements is increased when directors change, such that **H₄ is accepted**.

The study's findings support the agency hypothesis, which states that directors acting as agents are free to pursue their interests and act against the principals. Because new directors need time to get used to their new roles and lack sufficient knowledge of the company, the stress period they experience can reduce an organisation's work effectiveness. To mask this, new directors are encouraged to commit fraud to give the impression that they have made better changes than the previous directors. The

findings of this study are consistent with research conducted by Aviantara (2021), indicating that a change in directors has a favourable impact on fraudulent financial statements.

The Effect of CEO Duality on Fraudulent Financial Statements

The study's fifth hypothesis is that CEO duality increases the likelihood of fraudulent financial statements. According to the hypothesis test results, the CEO duality variable's beta coefficient value is 0.889, with a probability value significantly more than the significant threshold $0.257 > 0.05$. Therefore, the impact of fraudulent financial statements is unaffected by CEO duality; **H₅ is rejected**.

The findings of this study contradict agency theory, which holds that directors have the authority to decide policies and feel independent of the board of commissioners because of familial ties. As a result, fraud can be committed to maximise personal gain due to managerial power and the board of commissioners' ineffective supervisory functions. On the other hand, false financial statements were not caused by the familial ties between the board of directors and the board of commissioners in this investigation. This is so that family ties won't encourage someone to make false financial statements and can be used to collaborate in finding solutions to the company's issues. Regardless of whether they are related to the board of commissioners, directors may better understand their roles and responsibilities in managing the business. The findings of this investigation go counter to those of Widyatama and Setiawati's (2020) study, which demonstrates that CEO duality has a favourable impact on fraudulent financial statements.

The Effect of Political Connection on Fraudulent Financial Statements

The study's sixth hypothesis claims that having political connections helps explain misleading financial statements. According to the hypothesis test results, the political link variable has a beta coefficient value of -1.355 and a probability value larger than the significant threshold, or $0.051 > 0.05$. This implies that political affiliation has no bearing on fraudulent financial statements, so **H₆ is rejected**.

The outcome of this research does not follow agency theory, where the facilities and privileges that companies have because of political connections are sometimes used in a bad direction by management, allowing fraudulent financial statements to be made. But on the other hand, political connections in this study did not trigger fraudulent financial statements. Because politically connected control does not always utilise their position for personal gain, political connections aren't directly motivated to commit fraud on economic reports. They are more likely to offer benefits through access to sources or regulatory protection, which aren't always related to fraudulent practices. Authorities or other stakeholders may scrutinise corporations with political connections. Hence, they tend to be extra cautious in preparing financial reports to avoid the risk of a bad reputation or legal sanctions. The outcome of this research contradicts studies by Kusumosari and Solikhah (2021), which show that political connections positively affect fraudulent financial statements.

Conclusions

Based on the research analysis conducted on mining sector companies, they are indexed on the Indonesia Stock Exchange (IDX) from 2018 to 2022. This shows that the variable external pressure and change of directors have been proven to affect fraudulent financial statements positively. Meanwhile, the nature of the industry hurts fraudulent financial statements. While other variables, namely auditor turnover, CEO duality, and political connections, have no effect on financial statement fraud.

The research results are anticipated to give investors information for evaluation and analysis before investing in a particular company. Investors are expected to be more careful in making investment decisions, and management is also expected to learn more about the potential causes of fraud and the impacts that arise when committing fraud on financial reports.

Suggestions for Future Research

(1) The dependent variable in this research is fraudulent financial statements, as measured through the f-score. It is hoped that, in addition, the study would use different measurements such as earnings management modified jones model, Altman z-score, or other measurements so that research can be compared. (2) Future study is expected to use different proxies that aren't contained in this study or add other independent variables like financial stability, financial target, ineffective monitoring, and government ownership because the coefficient of determination in this research of only 23.4%, (3) Many variables that refer to behaviour are discussed in this research, so it's was hoping that future researchers able use mixed methods with along primary and secondary data.

Acknowledgements

None.

Conflict of Interest

None.

Funding

The Authors received no funding for this research.

References

- Abbas, D. S., Ismail, T., Taqi, M., & Yazid, H. (2021a). Determinants of enterprise risk management Disclosures: Evidence from insurance industry. *Accounting*, 7(6), 1331–1338. <https://doi.org/10.5267/j.ac.2021.4.005>
- Abbas, D. S., Ismail, T., Taqi, M., & Yazid, H. (2021b). Systematic mapping in the topic of knowledge management: Based on bibliometric analysis 2015–2021. *Library Philosophy And Practice (E-Journal)*, Article 6242. <https://digitalcommons.unl.edu/libphilprac/6242>
- Abbas, D. S., Ismail, T., Taqi, M., & Yazid, H. (2021c). The influence of independent commissioners, audit committee and company size on the integrity of financial statements. *Studies Of Applied Economics*, 39(10). <https://doi.org/10.25115/eea.v39i10.5339>
- ACFE Indonesia. (2019). *Survei fraud Indonesia*. <https://acfe-indonesia.or.id/Survei-Fraud-Indonesia/>
- Achmad, T., Ghozali, I., & Pamungkas, I. D. (2022). Hexagon fraud: Detection of fraudulent financial reporting in state-owned enterprises Indonesia. *Economies*, 10(1), Article 13. <https://doi.org/10.3390/economies10010013>
- Agusputri, H., & Sofie, S. (2019). Faktor—Faktor Yang Berpengaruh Terhadap Fraudulent Financial Reporting Dengan Menggunakan Analisis Fraud Pentagon [Factors influencing fraudulent financial reporting using pentagon fraud analysis]. *Jurnal Informasi, Perpajakan, Akuntansi, Dan Keuangan Publik*, 14(2), 105–124. <https://doi.org/10.25105/jipak.v14i2.5049>
- Alifa, R., & Rahmawati, M. I. (2022). Analisis Teori Hexagon Fraud Sebagai Pendeteksi Financial Statement Fraud [Analysis of hexagon fraud theory as a detector of financial statement fraud]. *Jurnal Ilmu dan Riset Akuntansi*, 11(6). <http://jurnalmahasiswa.stiesia.ac.id/index.php/jira/article/view/4602>
- Association Of Certified Fraud Examiners. (2020). *Report to the nations: 2020 global study on occupational fraud and abuse*. <https://legacy.acfe.com/report-to-the-nations/2020/>
- Aviantara, R. (2021). The association between fraud hexagon and government's fraudulent financial report. *Asia Pacific Fraud Journal*, 6(1), 26–42. <https://doi.org/10.21532/apfjournal.v6i1.192>

- Berita Lima. (2016, December 16). *Direksi PT Cakra Mineral Tbk Dilaporkan Ke BEI Dan OJK* [PT Cakra Mineral Tbk directors reported to BEI and OJK]. <https://beritalima.com/direksi-pt-cakra-mineral-tbk-dilaporkan-bei-dan-ojk-2/>
- Dechow, P. M., GE, W., Larson, C. R., & Sloan, R. G. (2011). Predicting material accounting misstatements. *Contemporary Accounting Research*, 28(1), 17–82. <https://doi.org/10.1111/j.1911-3846.2010.01041.x>
- Dewi, K., & Anisykurlillah, I. (2021). Analysis of the effect of fraud pentagon factors on fraudulent financial statement with audit committee as moderating variable. *Accounting Analysis Journal*, 10(1), 39–46. <https://doi.org/10.15294/aaj.v10i1.44520>
- Dewiyanti, S., Ismail, T., Uzliawati, L., & Yazid, H. (2023). The role of accounting conservatism in influence of financial distress and litigation risk on sustainability report of infrastructure companies listed on Indonesian Stock Exchange for the period 2019–2021. In *Proceedings of the International Conference on Sustainability in Technological, Environmental, Law, Management, Social and Economic Matters (ICOSTELM 2022)*. EAI. <https://doi.org/10.4108/eai.4-11-2022.2328927>
- Fan, J., Wong, T., & Zhang, T. (2007). Politically connected CEOs, corporate governance, and Post-IPO performance of China's newly partially privatized firms. *Journal Of Financial Economics*, 84(2), 330–357. <https://doi.org/10.1016/j.jfineco.2006.03.008>
- Faradiza, S. A. (2019). Fraud Pentagon Dan Kecurangan Laporan Keuangan [Pentagon fraud and financial reporting fraud]. *Ekbis: Jurnal Ekonomi Dan Bisnis*, 2(1), 1–22. <https://doi.org/10.14421/ekbis.2018.2.1.1060>
- Harymawan, I., Nasih, M., Madyan, M., & Sucahyati, D. (2019). The role of political connections on family firms' performance: evidence from Indonesia. *International Journal Of Financial Studies*, 7(4), Article 55. <https://doi.org/10.3390/ijfs7040055>
- Icih, Kurniawan, A., & Andini, A. (2021). Analysis the effect of pentagon fraud theory in detecting financial statement fraud. *Accounting Research Journal Of Sutaatmadja (ACCRUALS)*, 5(2), 139–164. <https://ojs.stiesa.ac.id/index.php/accruals/article/view/884>
- Imtikhani, L., & Sukirman, S. (2021). Determinan Fraudulent Financial Statement Melalui Perspektif Fraud Hexagon Theory Pada Perusahaan Pertambangan [Determinants of fraudulent financial statements through the perspective of fraud hexagon theory in mining companies]. *Jurnal Akuntansi Bisnis*, 19(1), 96–113. <https://doi.org/10.24167/jab.v19i1.3654>
- Ismail, T. (2015). Kepuasan Klien Dan Kegunaan Laporan Audit Eksternal Stake Holder (Perspektif Klien Audit) [Client satisfaction and usefulness of external audit reports stakeholders (audit client perspective)]. *Jurnal Organisasi Dan Manajemen*, 11(1), 1–14. <https://doi.org/10.33830/jom.v11i1.14.2015>
- Kusumosari, L., & Solikhah, B. (2021). Analisis kecurangan laporan keuangan melalui fraud hexagon theory [Analysis of financial reporting fraud through fraud hexagon theory]. *Fair Value: Jurnal Ilmiah Akuntansi Dan Keuangan*, 4(3), 753–767. <http://journal.ikopin.ac.id/index.php/fairvalue/article/download/735/361>
- Meckling, W. H., & Jensen, M. C. (1976). Theory of the firm: Managerial behavior, agency costs and ownership structure. In K. Brunner (Ed.), *Economics Social Institutions* (pp. 163–231). Dordrecht: Springer. https://doi.org/10.1007/978-94-009-9257-3_8
- Larum, K., Zuhroh, D., & Subiyantoro, E. (2021). Fraudulent Financial Reporting: Menguji Potensi Kecurangan Pelaporan Keuangan Dengan Menggunakan Teori Fraud Hexagon [Fraudulent financial reporting: Testing the potential for fraudulent financial reporting using the fraud hexagon theory]. *AFRE Accounting and Financial Review*, 4(1), 82–94. <https://doi.org/10.26905/afr.v4i1.5818>

- Matangkin, L., Ng, S., & Mardiana, A. (2018). Pengaruh Kemampuan Manajerial Dan Koneksi Politik Terhadap Reaksi Investor Dengan Kecurangan Laporan Keuangan Sebagai Variabel Mediasi [The influence of managerial ability and political connections on investor reactions to financial reporting fraud as a mediating variable]. *SIMAK*, 16(2), 181–208. <https://doi.org/10.35129/simak.v16i02.42>
- Narsa, N. P. D. R. H., Afifa, L. M. E., & Wardhaningrum, O. A. (2023). Fraud triangle and earnings management based on the modified m-score: A study on manufacturing company in Indonesia. *Heliyon*, 9(2), Article e13649. <https://doi.org/10.1016/j.heliyon.2023.e13649>
- Novitasari, A. R., & Chariri, A. (2019). Analisis Faktor-Faktor Yang Mempengaruhi Financial Statement Fraud Dalam Perspektif Fraud Pentagon [Analysis of factors influencing financial statement fraud from the perspective of the fraud pentagon]. *Diponegoro Journal Of Accounting*, 7(4). <https://ejournal3.undip.ac.id/index.php/accounting/article/view/25572>
- Nurardi, D. S., & Wijayanti, R. (2021). Determinan Financial Statement Fraud Dengan Analisis Fraud Hexagon Model (Studi Empiris pada Perusahaan Sektor LQ 45 yang Terdaftar di Bursa Efek Indonesia Periode II Agustus-Januari 2016–2019) [Determinants of financial statement fraud with fraud hexagon model analysis (empirical study on LQ 45 sector companies listed on the Indonesian Stock Exchange for the period II August-January 2016–2019)]. In *Proceedings of The 13th University Research Colloquium* (pp. 430–441). Sekolah Tinggi Ilmu Kesehatan Muhammadiyah Klaten. <https://repository.urecol.org/index.php/proceeding/article/download/1379/1346>
- Ozcelik, H. (2020). An analysis of fraudulent financial reporting using the fraud diamond theory perspective: an empirical study on the manufacturing sector companies listed on the Borsa Istanbul. In S. Grima, E. Boztepe, & P. J. Baldacchino (Eds.), *Contemporary Studies in Economic and Financial Analysis* (pp. 131–153). Leeds: Emerald Group Holdings. <https://doi.org/10.1108/s1569-375920200000102012>
- Rahajeng, K. H. (2021, July 29). *Batu Bara Masih Jadi Kontributor PNBPN Terbesar* [Coal is still the largest PNBPN contributor]. CNBC Indonesia. <https://www.cnbcindonesia.com/market/20210729201827-17-264732/batu-bara-masih-jadi-kontributor-pnbp-terbesar>
- Ritonga, F., & Apriyani, N. (2019). Nature Of Industry Dan Ineffective Monitoring Sebagai Determinan Terjadinya Fraud Dalam Penyajian Laporan Keuangan [Nature of industry and ineffective monitoring as determinants of fraud in financial report presentation]. *JSMA (Jurnal Sains Manajemen Dan Akuntansi)*, 11(2), 1–28. <https://doi.org/10.37151/jsma.v11i2.8>
- Sagala, S. G., & Siagian, V. (2021). Pengaruh Fraud Hexagon Model Terhadap Fraudulent Laporan Keuangan Pada Perusahaan Sub Sektor Makanan Dan Minuman Yang Terdaftar Di BEI Tahun 2016–2019 [The influence of the fraud hexagon model on fraudulent financial reports in food and beverage sub-sector companies listed on the IDX in 2016–2019]. *Jurnal Akuntansi*, 13(2), 245–259. <https://doi.org/10.28932/jam.v13i2.3956>
- Saipuloh, S., Ismail, T., & Adha, W. M. (2023). The effect of audit findings, local government losses, and follow-up of audit recommendations on the public services quality through the audit opinion of local government financial statements in Sulawesi. *International Journal Of Applied Business And International Management*, 8(3), 306–321. <https://doi.org/10.32535/ijabim.v8i3.2639>
- Skousen, C. J., Smith, K. R., & Wright, C. J. (2009). Detecting and predicting financial statement fraud: The effectiveness of the fraud triangle and SAS No. 99. In M. Hirschey, K. John, & A. K. Makhija (Eds.), *Corporate Governance and Firm Performance* (vol. 13, pp. 53–81). Leeds: Emerald Group Publishing Limited. [https://doi.org/10.1108/s1569-3732\(2009\)0000013005](https://doi.org/10.1108/s1569-3732(2009)0000013005)

- Sukmadilaga, C., Winarningsih, S., Handayani, T., Herianti, E., & Ghani, E. K. (2022). Fraudulent financial reporting in ministerial and governmental institutions in Indonesia: An analysis using hexagon theory. *Economies*, *10*(4), Article 86. <https://doi.org/10.3390/economies10040086>
- Syahria, R. (2019). Detecting financial statement fraud using fraud diamond (A study on banking companies listed on the Indonesia Stock Exchange period 2012–2016). *Asia Pacific Fraud Journal*, *4*(2), 183–190. <https://doi.org/10.21532/apfjournal.v4i2.114>
- Taqi, M., Ismail, T., Meutia, M., Sabaruddinsah, S., & Arifin, B. (2021). Village fund financial fraud prevention model using analytical hierarchy process method. *Jurnal Organisasi Dan Manajemen*, *17*(2), 203–216. <https://doi.org/10.33830/jom.v17i2.1366.2021>
- Taqi, M., Ismail, T., Sabaruddinsah, S., & Meutia, M. (2019a). Leadership style, independence, motivation, competence and religiosity on the performance of auditors of the inspectorate general of the Ministry of Religion. In *Proceedings of the First International Conference on Islamic Development Studies 2019 (ICIDS 2019)*. EAI. <https://doi.org/10.4108/eai.10-9-2019.2289348>
- Taqi, M., Sabaruddinsah, Ismail, T., & Meutia. (2019b). Antecedent variables and consequences of religiosity on fraud. *International Journal Of Financial Research*, *11*(1), 43–48. <https://doi.org/10.5430/ijfr.v11n1p43>
- Vousinas, G. L. (2019). Advancing Theory Of Fraud: The S.C.O.R.E. model. *Journal Of Financial Crime*, *26*(1), 372–381. <https://doi.org/10.1108/jfc-12-2017-0128>
- Widyatama, W., & Setiawati, L. W. (2020). Analisis Pengaruh Fraud Pentagon Theory Terhadap Fraudulent Financial Reporting Pada Perusahaan Perbankan Yang Terdaftar Di Bursa Efek Indonesia Periode 2014–2019 [Analysis of the influence of the fraud pentagon theory on fraudulent financial reporting in banking companies listed on the Indonesian Stock Exchange for the period 2014–2019]. *Balance: Jurnal Akuntansi, Auditing Dan Keuangan*, *17*(1), 22–47. <https://doi.org/10.25170/balance.v17i1.2010>
- Wolfe, D. T., & Hermanson, D. R. (2004). The fraud diamond: Considering the four elements of fraud. *CPA Journal*, *74*(12), 38–42. <https://digitalcommons.kennesaw.edu/cgi/viewcontent.cgi?article=2546&context=facpubs>
- Zulfikar, R., Astuti, K. D., & Ismail, T. (2022). Financial accounting standards for micro, small, and medium entities (SAK EMKM) in Indonesia: Factors, and implication. *Quality – Access To Success*, *23*(189), 128–143. <https://doi.org/10.47750/qas/23.189.15>