

## THE EFFECT OF IMPLEMENTING CORPORATE GOVERNANCE ON FINANCIAL REPORTING FRAUD (EMPIRICAL STUDY OF COMPANIES LISTED ON THE INDONESIAN STOCK EXCHANGE 2016-2021)

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**Abstract:** This study aims to explore the impact of corporate governance and its mechanisms in preventing companies from resorting to fraudulent financial reporting. The mechanism is based on eight corporate governance mechanisms, including board independence, board remuneration, managerial finance expertise, management industry expertise, board financial expertise, board industry expertise, board scope of effort and managerial ownership. For this purpose, using systematic random sampling, information from 40 companies listed on the Indonesia Stock Exchange (IDX) for six years from 2016 to 2021 was collected, and hypotheses were tested using a linear regression model. To measure fraudulent financial reporting, the Beneish-adjusted model was used to evaluate corporate governance. The mechanism used has been reviewed and calculated as a composite index of corporate governance. The findings indicate that strong corporate governance significantly reduces corporate intentions towards fraudulent financial reporting. A negative and significant relationship was observed between each of the eight corporate governance mechanisms, except for board remuneration which showed an insignificant positive relationship.

**Keywords:** Corporate governance, corporate governance mechanisms, fraudulent financial reporting, the Beneish model.

### INTRODUCTION

One of the key prerequisites for attracting investors and creditors into constructive economic activities and ultimately economic growth is the availability of relevant information to assist in making financial, economic and commercial decisions (Wang C., 2018). However, fraud has become one of the elements that suppresses the reliability of financial reporting and financial statements. Financial reporting fraud is a material misstatement of financial reports that misleads users of financial reports. Apart from causing significant losses for organizations, this also damages the credibility of accounting professionals and negatively affects public confidence in financial reports (Awang Y. Et al. 2017; Ghorbani A. & Salehi M., 2021). Moreover, fraudulent financial reporting negatively affects the global economy, creating risks such as providing wrong information to the market, deepening market inefficiencies in allocating resources, causing material financial losses for individuals and companies (Moradi J. et al. 2014). In Report to the Nations: Asia-Pacific edition 5 (ACFE, 2020) financial statement fraud is one of the most expensive forms of fraud as well as the highest contributor to financial losses. In addition, fraud is also a major ethical problem for business and

the most serious concern in today's business environment (Smith M. et al. 2015). Therefore, there is an urgent need for effective methods in preventing and detecting fraud (Segal S.Y, 2016). In this regard, several studies have been conducted to investigate and identify effective factors of fraudulent financial management. Among them, variables such as the influence of the presence of female senior financial managers (Liao J. et al. 2019), in the study of accounting fraud in commercial companies (Bao Y. et al. 2018), the role of the three main components of corporate governance including internal audit, internal control, and independent auditors (In'airat M., 2015; Lari Dashtbayaz M. et al. 2020) can be mentioned. Apart from the structural characteristics of a company which can increase the risk of fraud, conflict of interest and information asymmetry between the principal (owner) and agent (management) are also causes of corruption. Fraudulent financial reporting is a problem that deserves attention in an agency (Khajavi S. & Ebrahimi M., 2018). To direct management actions in the interests of company stakeholders and influence the quality of financial reporting, regulatory and control mechanisms are needed. Corporate governance plays an important role in ensuring the quality of financial reporting and preventing fraudulent financial reporting. Its role has been proven in various studies as a key factor in improving the quality of financial reporting (Rostami & Razei, 2022). In this case, (Habib A. & Jiang H., 2015) stated that one of the desired features of a good corporate governance system is ensuring the quality of financial reporting on resource allocation and constructive economic growth. Fraudulent financial reporting refers to weaknesses in corporate governance (Ndofor H.A et al. 2015). The effectiveness of the corporate governance system reduces the probability of fraudulent financial reporting and helps in increasing the credibility of financial reporting (Razali W.A.A.W.M & Arshad R., 2014; Nassir Zadeh F. et al. 2018). In order to expand the existing theoretical foundation, this research seeks to test the existence of a significant relationship between corporate governance and its fundamentals on fraudulent financial reporting, and whether strong corporate governance is able to reduce the probability of a company's tendency to commit fraudulent financial reporting or not?

Considering the influence of the quality of financial reporting in order to gain the trust of investors and capital market drivers and protect shareholder rights, in other words, maintaining market efficiency based on accurate and high quality financial reports as well as the many cases of fraudulent financial reporting in Indonesia and the lack of adequate research in This field convinces the author that this research has the knowledge and usefulness necessary to increase the richness of existing literature and understanding of the function of corporate governance systems related to the potential for fraudulent financial reporting. We hope that the research will provide significant findings in preventing fraudulent financial reporting and minimizing its negative impact on a company's market value, credibility, and ability to achieve strategic goals.

## **THEORETICAL FRAMEWORK AND HYPOTHESIS FORMULATION**

### *Fraudulent financial reporting, corporate governance and corporate governance mechanisms*

Fraud is a widespread socio-economic problem that affects public and private sector economies in ultramodern and developing countries throughout the world (Udeh S.N & Ugwu J.I, 2018). The ACFE defines fraud as an intentional act of one or more managers, employees, or third parties that causes misstatement of financial statements. According to Audit Standard No. 240 Indonesia (IAPI, 2008) fraud is a deliberate act by one or more individuals in management, parties responsible for governance, employees, or third parties that involves fraud in order to obtain margins dishonestly or against the law. Fraud in financial statements, financial corruption and misappropriation of assets are three common forms of fraud. Based on a study conducted to distribute forms of fraud by the ACFE in 2014, financial reporting fraud, financial corruption and asset misuse were 73%, 18% and 9% respectively. So, it can be said that financial reporting fraud is the most common type of fraud (Tarjo Herawati N., 2015). The American Society of Certified Public Accountants in Statement of Auditing Standards 99 defines financial reporting fraud as intentional misstatement or omission of disclosures in financial reports which then misleads users of financial statements. Financial reporting fraud is a type of fraud with various significant and destructive effects such as loss of investor confidence, reputation damage, potential fines, criminal proceedings, reduced profitability and losses due to market uncertainty. All of these factors indicate the need to eradicate the problem of fraudulent financial reporting (Ernst & Young, 2009). In Perols and Lougee, fraudulent financial reporting has a broader dimension, including its

indirect influence on the loss of trust in company reporting and financial markets (Rostami & Razei, 2022).

Discussions on corporate governance began in the 1990s in England, the United States and Canada to respond to issues caused by the ineffectiveness of boards of directors in the performance of large companies. Corporate governance is a concept rooted in agency theory which seeks to synchronize the interests of the principal and agent and ensure that the performance of company managers is carried out in the interests of shareholders (Dharmastuti C. & Wahyudi S., 2013). Corporate governance refers to the relationship between the company and shareholders, who choose and control the direction of the company's tactics and performance (Ahmed S.U et.al. 2016). Accounting scandals at well-known companies such as Enron, WorldCom and Global Crossing are sharp examples of opportunistic behavior that have eroded investor and shareholder confidence (Osma B.G & Nogue B.G.A). Most research results show that CEOs, board members and financial managers have played a greater role in creating fraud. Empirical and theoretical research shows that several corporate governance mechanisms can influence the occurrence of fraudulent financial reporting. Asyidin et.al., stated that in recent companies, failure of the corporate governance structure has been cited as the main cause which is an important tool in preventing fraudulent financial reporting (Rostami & Razei, 2022). The results of Razali W.A.A.W.M & Arshad R., show that the effectiveness of the corporate governance structure reduces the possibility of fraudulent financial reporting. According to Malmendier et.al., overconfidence in management distorts the company's financial information (Rostami & Rezaei 2022). Control is one of the most studied aspects of corporate governance literature and is rooted in agency theory, which means coordinating the interests of managers who make organizational decisions with the interests of investors who are influenced by their decisions. Thus, the author hopes that corporate governance has a significant negative relationship with fraudulent financial reporting.

In previous literature and audit standards, various theories have been presented on fraudulent financial reporting, the most important of which is the fraud triangle theory. According to the fraud triangle theory, motivation or pressure, opportunity and justification are three factors of fraud (Kassem R & Higson A., 2012). Motivation or pressure drives management or other employees to engage in fraud. Opportunity is an aspect that influences organizational structure, and factors such as lack of controls or management's ability to violate controls allow opportunities for fraud. Financial pressures and incentives are the main causes of fraud; around 95% of the causes of fraud are financial pressure (Abdullahi R.et al, 2015). On the other hand, a weak board of commissioners and weak internal controls as well as complex organizational structures, financial transactions, and increasingly tight competition between KAPs also influence opportunities to commit fraud (Shaw J, 1995). Deception is the nature of fraud perpetrators, and fraud perpetrators can justify or rationalize their fraudulent actions (Dorminey J.W et.al, 2012). External conditions can also lead to fraudulent behavior in organizations. Meanwhile, stating that the company's profitability is very good and making the manager's performance inappropriate also encourages company managers or accountants to actualize fraudulent financial reports thereby reducing their quality. According to a report published by the Committee of Sponsoring Organizations in 1999, 72% of fraud was committed by managing directors and members of the board of directors and 42% by financial managers. Furthermore, (Beasley M.et al. 2010) states that around 90% of risk managers tend to commit fraudulent financial reporting. (Ernst & Young, 2009) also stated that more than half of the individuals involved in fraudulent financial reporting were among the company's management group. Brubaker and Nguyen 2012 show that as the number of non-executive board members increases, supervision will become more effective, the scope for management opportunism decreases, and company performance also increases (Rostami & Razei, 2022). In addition, independent managers are not controlled and pressured within the organization (Razali W.A.A.W.M & Arshad R., 2014). It is also stated that companies run by CEOs with financial expertise will benefit from increased profitability by reducing the scope for distortion (Custodio C. & Metzger D., 2014). Managers' financial knowledge is associated with increased transparency of financial reporting, which reduces fraudulent financial reporting (Matsunaga S.R et al. 2013). In addition, research results (Erickson J.et al. 2015) show that a board of directors who have knowledge of finance and accounting have more effective supervision over company management. When professional members in the board composition increase, the

possibility of fraudulent financial reporting using continuous monitoring mechanisms also decreases (Zainal A, 2016). Research results (Chen G, 2006) show the importance of board characteristics and property management in explaining fraud, and there is a significant correlation between board characteristics and financial fraud. Furthermore, (Salleh S.M & Othman R., 2016) shows a significant correlation between board meetings and corporate fraud. There is a significant relationship between board size, board meetings and the dual role of CEO and fraudulent financial reporting (Kamarudin K.et al. 2017) (Lotfi A.et al. 2021) found a negative and significant correlation between intellectual capital and fraudulent financial reporting. (Lari Dashtbayaz M.et al. 2021) states that the correlation between internal control weaknesses and the type of opinion differs significantly in fraudulent and non-fraudulent companies. The relationship between internal control weaknesses and the auditor's opinion on companies that commit fraud and the relationship between internal control weaknesses and the auditor's opinion on companies that do not commit fraud is significant. Among the three elements of corporate governance, internal audit is believed to be the most significant in reducing the level of fraud (In'airat M. 2015). Opportunities to commit financial statement fraud are also influenced by weak boards and weak internal controls as well as the complexity of organizational structures, financial transactions and increasingly tight competition between KAPs (Shaw J. 1995). In addition, there is a significant relationship between governance characteristics (board size, board meeting and chairman dual role) and financial report fraud (Kamarudin K.et al. 2017). By considering the theoretical basis and previous research and to realize the research objectives, the following is the development of a hypothesis that can be carried out:

- H1: There is a significant negative relationship between corporate governance and fraudulent financial reporting.
- H2: There is a significant negative relationship between board independence and fraudulent corporate financial reporting.
- H3: There is a significant negative relationship between board remuneration and fraudulent corporate financial reporting.
- H4: There is a significant negative relationship between managerial financial expertise and fraudulent corporate financial reporting.
- H5: There is a significant negative relationship between management industry expertise and fraudulent corporate financial reporting.
- H6: There is a significant negative relationship between the board's financial expertise and fraudulent corporate financial reporting.
- H7: There is a significant negative relationship between board industry expertise and fraudulent corporate financial reporting.
- H8: There is a significant negative relationship between the scope of board efforts and fraudulent corporate financial reporting.
- H9: There is a significant negative relationship between managerial ownership and fraudulent corporate financial reporting.

## RESEARCH METHODS

### Statistical population, sample and research period

This research determines all companies listed on the IDX as the population. In selecting the sample, a systematic random sampling technique was applied. Data from 40 selected companies have been used as sample conditions. Secondary data sourced from company annual reports for the period 2016 – 2021 was used. Data was collected using documentation techniques by accessing the annual report of each sample company via the relevant company website.

### Research models and variables

To test the research hypothesis, two mathematical models have been used, which are presented as follows:

#### Model (1)

$$FRAUD_{i,t} = \beta_0 + \beta_1 CG_{i,t} + \beta_2 EPI_{i,t} + \beta_3 IS_{i,t} + \beta_4 Size_{i,t} + \beta_5 LEV_{i,t} + \beta_6 Busy_{i,t} + \beta_7 Loss_{i,t} + \beta_8 Age_{i,t}$$

## Model (2)

$$FRAUD_{i,t} = \beta_0 + \beta_1 BIND_{i,t} + \beta_2 RD_{i,t} + \beta_3 KKM_{i,t} + \beta_4 KIM_{i,t} + \beta_5 KKD_{i,t} + \beta_6 KID_{i,t} \\ + \beta_7 BEF_{i,t} + \beta_8 KpM_{i,t} + \beta_9 EPI_{i,t} + \beta_{10} IS_{i,t} + \beta_{11} Size_{i,t} + \beta_{12} LEV_{i,t} \\ + \beta_{13} Busy_{i,t} + \beta_{14} Loss_{i,t} + \beta_{15} Age_{i,t}$$

The first model tests the first research hypothesis, and the second is used to test other hypotheses.

FRAUD: Fraudulent financial reporting based on Models (1) and (2) is the dependent variable of the research, which was measured by (Razali and Arshad R, 2014) using the modified Beneish (1999) model.

## Equality (1)

$$Adj - Mscor = 0.002 + 0.665 (TATA) + 0.257 (LVGI) + 0.024 (SGAI) - 0.641 (DEPI) \\ + 0.19 (SGI) + 0.004 (AQI) - 0.032 (GMI) + 0.061 (DSRI)$$

In equation (1), the operational definitions of all variable indicators are described as follows:

DSRI: Sales index on accounts receivable is measured by equation (2). In this relationship, REC is receivables, and SALES is sales:

$$DSRI = \frac{REC_t / SALES_t}{REC_{t-1} / SALES_{t-1}} \quad (2)$$

GMI: Gross margin index measured by equation (3). In this relationship, SALES is annual sales, and COG is cost of goods sold:

$$GMI = \frac{[SALES_{t-1} - COG_{t-1}] / SALES_{t-1}}{SALES_t - COG_t / SALES_t} \quad (3)$$

AQI: Asset quality index measured by equation (4). In this equation CA is the amount of current assets, PPE is the amount of assets, machinery, and equipment and ASSETS:

$$AQI = \frac{1 - [(CA_t + PPE_t) / ASSETS_t]}{1 - [(CA_{t-1} + PPE_{t-1}) / ASSETS_{t-1}]} \quad (4)$$

SGI: Sales growth index measured by equation (5)

$$SGI = \frac{SALES_t}{SALES_{t-1}} \quad (5)$$

DEPI: Depreciation cost index is measured by equation (6). In this case DEP is the depreciation cost of tangible fixed assets and gross PPE of property, plant and equipment:

$$DEPI = \frac{DEP_{t-1} / PPE_{t-1}}{DEP_t / PPE_t} \quad (6)$$

SGAI: General, administrative and sales cost index measured by equation (7). In this equation, SGA and EXP are general, office and sales expenses, and SALES is annual sales:

$$SGAI = \frac{SGA \cdot EXP_t / SALES_t}{SGA \cdot EXP_{t-1} / SALES_{t-1}} \quad (7)$$

LVGI: Financial leverage index measured by equation (8). In this case, LTD is the amount of long-term liabilities, CL is the amount of current liabilities and ASSETS is the amount of assets:

$$LVGI = \frac{LTD_t + CL_t / ASSETS_t}{LTD_{t-1} + CL_{t-1} / ASSETS_{t-1}} \quad (8)$$

TATA: The index of total accruals to total assets is measured using equation (9). In this case, ACC is an accrual item (a measurement between operating profit and operating cash flow), and ASSETS is the amount of assets:

$$TATA = \frac{ACC_t}{ASSETS_t}$$

According to (Razali & Arshad, 2014), to determine the status of companies in the research statistical population in terms of fraudulent financial reporting, companies are divided into the following two groups:

- 1) A company with an Adj-M-Score value of 0.5 proves that the company's financial reports have not been falsified or tampered with, and is assumed to have not committed fraudulent financial reporting and is given a score of zero.
- 2) A company with an Adj-M-score of 0.5 proves that the company's financial reports have been falsified or tampered with and is considered to have committed fraudulent financial reporting and is given a score of one.

### Research independent variables

Corporate governance: Evaluation of corporate governance in this study is calculated through the following eight indicators:

**BIND:** To measure the Board of Directors' independence, the ratio of the number of independent commissioners to the number of members of the Board of Commissioners is used.

**Board Remuneration:** The amount of remuneration provided to the board as approved by the GMS in the year under review.

**Financial Management Skills:** To measure management skills, if the president director has an academic degree in accounting, financial management, and economics, the number is one; otherwise, it is considered zero.

**Managerial Industry Expertise:** To measure managerial industry expertise, if the president has an academic degree related to the industry in question, the number is one. Otherwise, it is considered zero.

**Board Financial Expertise:** To measure the board's financial expertise, if at least one board member has an academic degree in accounting, financial management, and economics, the sum is one; otherwise, it is considered zero.

**Board Industry Expertise:** To measure the board's industry expertise, if at least one of the board members has an academic degree in a field related to the industry in question, the number is one; otherwise, it is considered zero.

**Scope of Board Efforts:** The scope of board efforts is equal to the number of meetings the board holds during the year.

**Managerial Ownership:** Managerial ownership is the result of the president director's dividend divided by the number of company shares.

In this research, exploratory factor analysis (using the principal component method) determines corporate governance variables. This statistical method is used primarily for two reasons: first, the heuristic factor analysis method allows researchers to combine various corporate governance variables to create an expected corporate governance index. Second, one of the features of the exploratory factor analysis method is that this analysis assigns weights to each variable that contributes to corporate governance based on the output of the correlation matrix, and this method does not assume the same effect of each variable factor on corporate governance. Regarding how to calculate corporate governance variables, first collect information about eight corporate governance factors that influence management motivation and ability for each year of the company. Second, the linear correlation coefficient matrix of the seven variables above is extracted by year. Third, exploratory factor analysis was conducted and the weights of each of the seven variables were obtained. Next, the corporate governance variable is obtained from the sum of the factors multiplied by the numerical value of the relevant factors. To control the undesirable influence of several disturbing variables, several control variables are used as follows:

**Internal Control Effectiveness:** If the auditor's report shows weaknesses in the company's internal controls, the number is one, if not zero (Salehi M. et al, 2021)

**Income Smoothing:** To measure income smoothing the Eckel index will be used as follows:

$$IS = (I_t - I_{t-1}) / (S_t - S_{t-1}) = \Delta I / \Delta S$$

Where:  $\Delta I$  = Changes in income during a period; And  
 $\Delta S$  = Changes in sales during a period.

If a company's equity index is < 1, then the company is considered to be carrying out income smoothing, and if > 1, then the company is considered not to be carrying out income smoothing.

Size : This is obtained from the logarithm of company assets

LEV : This results from dividing a company's liabilities by its total assets at the end of the financial period.

Busy : Fictitious fiscal end variable, if the fictitious fiscal year end is March 31, the number is one, otherwise the number is zero.

Loss : If the company in the fiscal year under review is a loss making company, the amount is one, otherwise zero.

Age : This is measured by the years that have passed since the year the company entered the stock market.

## RESEARCH RESULTS AND DISCUSSION

### Description of Research Objects

The annual reports of companies listed on the IDX for the period 2016 – 2021 are used as research objects. Systematic random sampling technique was used to determine the research sample. It is a probability sampling technique by selecting sample members randomly from a mass population at fixed intervals. This fixed interval is called sampling interval which can be calculated by ascertaining the required sample size and dividing it by the population size. This technique is systematic because there is a fixed process in taking each sample element from the population using interval numbers. This technique is also random because the researcher starts with random numbers within the desired sample size range. Mathematically the sample size can be defined as follows:

$$Ukuran\ sampel\ (n) = N \times \frac{\frac{Z^2 \times p \times (1 - p)}{e^2}}{\left[ N - 1 + \frac{Z^2 \times p \times (1 - p)}{e^2} \right]}$$

Where:

$N$  = population size

$Z$  = critical value of the normal distribution at the required confidence level

$p$  = sample proportion

$e$  = margin of error

Table 1 Sample Selection

No	Particular	Value
1.	All companies listed on the Indonesian Stock Exchange as of 2022 ( $N$ )	888
2.	Critical Value (95% confidence level) ( $Z$ )	1.96
3.	Margin of error ( $e$ )	0.05
4.	Sample Proportion ( $p$ )	0.05
5.	Companies listed on the Indonesian Stock Exchange were selected as sample conditions ( $n$ )	68
6.	Companies listed on the Indonesian Stock Exchange that do not contain data on several research variables	(20)
<b>Total research sample (40 x 6)</b>		<b>240</b>

Based on Table 1 above, the total number of companies used as research samples was 40 companies over a six year period. Thus, the total research sample totaled 240.

### Descriptive Analysis

To provide an overview of the statistical population and to identify the majority of research data, Table 2 and Table 3 in the study contain statistics related to central index and dispersion.

Table 2. Descriptive Statistics of Quantitative Variables

Variable	Number of observations	Total Mean	SD	Min	Max
Corporate governance	240	0,010	4,555	-7,5	14,59
Board Independence	240	0,762	0,351	0,285	2
Board Remuneration	240	401.649	227.768	100.064	991.419
Scope of Board Efforts	240	6,154	3,065	1	25
Managerial ownership	240	0,416	1,431	0	9,56
<i>Income Smoothing</i>	240	0,388	7,034	-85,254	36,933
<i>Age</i>	240	17,5	9,662	-2	39
LEV	240	1,196	4,420	0,077	43,47
<i>Size</i>	240	12,283	1,903	7,959	16,010

Source: Stata 17 output, secondary data processed 2023

Table 3. Descriptive Statistics of Qualitative Variables

Variable	Number of observations	Total Mean	SD	Number of zeros	The number of digits is one
<i>Fraud</i>	229	0,209	0,407	181	48
Managerial Financial Skills	234	0,388	0,488	143	91
Management Industry Expertise	234	0,440	0,497	131	103
Board Financial Expertise	228	0,807	0,395	44	184
Industry Expertise Board	234	0,658	0,475	80	154
Loss	240	0,245	0,431	181	59
Busy	240	0,875	0,331	30	210
Internal control effectiveness	240	0,05	0,218	228	12

Source: Stata 17 output, secondary data processed 2023

### Normality Test

The Kolmogorov Smirnov test was carried out to test the normality of the residuals and the results are shown in Table 4. Referring to the results of the normality test, it can be seen that all research variables apart from AGE and Board Remuneration are normally distributed.

Table 4. Normality Test

Test	Variable	Level	Variable	Level
<i>Kolmogorov-Smirnov test</i>	AGE	0.000	Corporate governance	0.125
	Board Independence	0.147	Efektivitas Pengendalian Internal	0.865
	Board Remuneration	0.010	Income Smoothing	0.852
	Industry Expertise Board	1.000	Size	0.079
	Scope of Board Efforts	0.174	LEV	0.234
	Managerial Financial Skills	0.999	Busy	1.000
	Management Industry Expertise	1.000	Loss	1.000
	Board Financial Expertise	1.000	Managerial ownership	0.755
	Fraud	1.000		

Source: Stata 17 output, secondary data processed 2023

### Multicollinearity Test

To test the linearity between the independent variables of the two research models, a multicollinearity test was carried out. Table 5 and Table 6 show that the volume of variance inflation factor is slightly higher than one, which indicates weak linearity between the research independent variables so that it can be concluded that there is no linearity in the research regression model.



Table 5. Model 1 Multicollinearity Test

Test	Variable	VIF	1/VIF	Variable	VIF	1/VIF
Multicollinearity Test	LEV	1,19	0,839	Busy	1,06	0,942
	LOSS	1,14	0,877	Size	1,21	0,826
	Income Smoothing	1,02	0,979	AGE	1,09	0,917
	Internal control effectiveness	1,06	0,944			
	Corporate governance	1,14	0,880			
	Mean VIF	1.11				

Source: Stata 17 output, secondary data processed 2023

Table 6. Model 2 Multicollinearity Test

Test	Variable	VIF	1/VIF	Variable	VIF	1/VIF
Multicollinearity Test	Management Industry Expertise	1,60	0,626	BIND	1,29	0,776
	Managerial Financial Skills	1,97	0,506	Size	1,50	0,665
	Industry Expertise Board	1,53	0,655	LEV	1,40	0,714
	Board Financial Expertise	1,56	0,641	LOSS	1,17	0,853
	Management Ownership	1,08	0,929	Scope	1,20	0,830
	Internal control effectiveness	1,22	0,821	Busy	1,23	0,814
	Board Remuneration	1,10	0,906	AGE	1.21	0.825
	Income Smoothing	1,08	0,928			
	Mean VIF	1.34				

Source: Stata 17 output, secondary data processed 2023

### F-Limer and Hausman test

The F-Limer and Hausman tests have been carried out to select the most suitable regression model to test the hypothesis. The test results in Table 7 show that the probability of the F test statistic in both research models is smaller than the 5% error rate. Therefore, using the panel data method is more appropriate for both research models. Also the Hausman test results show that the probability of the statistical test is greater than the 5% error rate, so the use of the random effects model (re) was chosen as the most appropriate model to suit the first and second models.

Table 7. F-Limer and Hausman test

Test		Statistic test	Probability Levels	Results
F-Limer	Model 1	6,76	0,0000	Using panel data
	Model 2	5,46	0,0000	Using panel data
Hausman	Model 1	9,48	0,2202	Using random effects (RE) method
	Model 2	8,26	0,8263	Using random effects (RE) method

Source: Stata 17 output, secondary data processed 2023

### Heteroscedasticity Test

To test the heterogeneous variance of the disturbance components, the Breusch Pagan test was used. The results presented in Table 8 show that the significance level for the first and second models of the study is less than 5%. Therefore, the disturbance components of the variance of the first and second models are heterogeneous.

Tabel 8. Uji Heterokedastisitas

Test		Statistics $X^2$	P-value
Pagan Breusch Test	Model 1	57,66	0,0000
	Model 2	117,43	0,0000

Source: Stata 17 output, secondary data processed 2023

### Serial Autocorrelation Test

The Wooldridge test was used to test the serial correlation of the perturbing components of the model. The results presented in Table 9 show that there is no correlation in the first and second models of the study.

Table 9. Serial Autocorrelation Test

Test		Statistics $X^2$	P-value
Wooldridge Test	Model 1	1,276	0,2658
	Model 2	0,206	0,6524

Source: Stata 17 output, secondary data processed 2023

### Regression Specification Error Test

To confirm the functional form of the written model, the Ramsey RESET test was used. The test results in Table 10 indicate that there were no variables deleted in the first and second models.

Table 10. Regression Specification Error Test

Test		F statistic	P-value
Ramsey RESET Test	Model 1	0,6876	0,7023
	Model 2	0,6793	0,8034

Source: Stata 17 output, secondary data processed 2023

### Estimating the First Model and Interpreting the Results

The results of testing the first hypothesis are presented in accordance with Table 11. Using the random effects method, the table results indicate that with a 95% confidence level, the coefficient of the corporate governance variable is -0.0077. Thus, corporate governance and fraudulent financial reporting have a negative and significant relationship. Therefore, H1 is accepted. Among the company control variables with a 95% confidence level, the coefficients for the income smoothing and age variables are equal to -0.0014 and -0.0013, respectively. So, there is a negative and significant relationship with fraudulent company financial reporting. There is no significant relationship between other control variables and fraudulent financial reporting.

Table 11. First Model Estimation Results using the RE Method

Variable	Coefficient	t-statistic	P-value
Constanta	0,597	1,65	0,100
Corporate governance	-0,0077	-1,98	0,048
Internal control effectiveness	0,3389	0,37	0,715
Income Smoothing	0,0014	-2,18	0,029
Size	-0,0311	-1,17	0,241
LEV	-0,0009	-1,51	0,131
Busy	0,038	0,20	0,842
Loss	-0,004	-0,19	0,850
Age	-0,001	-2,13	0,033
Obs	229		
$R^2$	0,02		
Wald test	8,04	P-value	0,4292

Source: Stata 17 output, secondary data processed 2023

### Estimating the Second Model and Interpreting the Results

The test results for H2 – H9 are presented in Table 12.

The results from Table 12 using the random effects method indicate that with a 99% confidence level, the coefficients of board independence and managerial industry expertise are equal to -0.0053 and -0.0038, respectively, so that these variables and fraudulent financial reporting have a negative relationship and significant. Therefore H2 is accepted. Likewise, H5 is accepted. Meanwhile, with a confidence level of 95%, the coefficients of management financial expertise, board financial expertise, board industry expertise, board effort coverage, and managerial ownership are respectively -0.0218, -0.0448, -0.1734, -0.0055 and -0.0066. Therefore, the effect of this variable on fraudulent financial reporting is negative and significant. Thus, H4, H6, H7 and H8 and H9 are also accepted. However, the coefficient of board remuneration is equal to 7.52e-09 therefore H3 is rejected. Meanwhile, among the research control variables with a 99% confidence level, the coefficient of income smoothing is -0.0000, so there is a negative and significant relationship between this variable and fraudulent financial reporting. There is no significant relationship between other control variables and fraudulent company financial reporting.

Table 12. Second Model Estimation Results using the RE Method

Variable	Coefficient	t-statistic	P-value
Constanta	0,1023	-2,11	0,034
Board Independence	-0,0053	-2,25	0,024
Board Remuneration	7,52e-07	1,87	0,060
Managerial Financial Skills	-0,0218	-2,56	0,010
Management Industry Expertise	-0,0038	-2,36	0,018
Board Financial Expertise	-0,0448	-1,97	0,048
Industry Expertise Board	-0,1734	-2,47	0,013
Scope of Board Efforts	-0,0558	-2,16	0,030
Managerial ownership	-0,0066	-2,78	0,005
Internal control effectiveness	0,0610	0,89	0,374
Income Smoothing	-0,0000	-2,20	0,027
Size	0,0047	0,54	0,589
LEV	-0,0031	0,87	0,383
Busy	-0,0165	-0,32	0,747
Loss	0,0598	1,79	0,074
Age	-0,0015	0,98	0,327
Obs	229		
$R^2$	0,04		
Wald test	8,74	P-value	0,8907

Source: Stata 17 output, secondary data processed 2023

### CONCLUSIONS, LIMITATIONS AND RECOMMENDATIONS

Referring to the test results in Tables 11 and 12, here are several conclusions we can make. First, corporate governance and fraudulent financial reporting have a significant negative relationship. Corporate governance is a concept rooted in agency theory and refers to the relationship between the company and shareholders who determine and control the strategic direction and performance of the company (Ahmed, Ullah, Ahmed & Rahman, 2016). Agency theory attempts to align the interests of the principal and agent and ensure that the performance of company managers is carried out in the interests of shareholders (Dharmastuti & Wahyudi, 2013). The results of this test are consistent with the findings of (Rostami & Rezaei, 2022), which state that a strong corporate governance system reduces agency costs and adverse consequences from conflicts of interest between managers and owners, such as abuse of power. Strengthening the culture of accountability, integrity, and trust in managers to improve the quality of information and transparency, reducing the tendency for financial reporting to lead to fraud.

Second, a negative and significant relationship exists between board independence and fraudulent corporate financial reporting. By increasing the number of members of the board of commissioners, who, unlike managers, are independent from company management, external supervision and control over members of the board of directors becomes stronger. Conflicts of interest between shareholders and managers and fraudulent financial reporting are less likely to occur in companies with higher ratios. This is in line with findings (Razali & Arshad, 2014), which show that the effectiveness of corporate governance structures reduces the tendency for fraudulent financial reporting. Also, this is in line with the findings of (Akeju & Babatunde, 2017), which show that corporate governance mechanisms have a significant and positive effect on the quality of company financial reporting.

Third, there is a negative and significant relationship between management's financial expertise and fraudulent corporate financial reporting. President directors with financial knowledge, who are familiar with accounting policies and standards, will pay more attention to accounting and internal audit and pay more attention to the disclosure of financial information. In addition, the ability to analyze financial information will lead to transparency and quality of financial reporting and ultimately reduce fraudulent financial reporting. These results are consistent with findings (Matsunaga, Wang, & Yeung, 2013) documenting improvements in the quality of corporate reporting and disclosure following the appointment of a CEO with CFO experience. Fourth, there is a negative and significant relationship between managerial industry expertise and fraudulent corporate financial reporting. President directors who specialize in the industry have better skills to solve problems in financial reporting because they can identify and

handle specific problems from that industry. This result is consistent with the findings of (Wang, Chen, Chin & Zheng, 2017), which state that increased managerial ability leads to less fraudulent financial reporting.

Fifth, a negative and significant relationship exists between the board's financial expertise and fraudulent corporate financial reporting. The board of commissioners is the main factor in controlling and supervising company management and protecting shareholder resources. It appears that commissioners with financial or accounting expertise will be better able to detect problems in financial reporting. In addition, having at least one financial expert on the board of commissioners will make other members more sensitive to the quality and transparency of financial reporting. This aligns with the findings of (Alzoubi & Selamat, 2012), which state that companies with board financial expertise are inversely related to earnings management.

Sixth, a negative and significant relationship exists between board industry expertise and fraudulent corporate financial reporting. This finding is consistent with the results of (Rostami & Rezaei, 2022), which state that with professional expertise and perspective, the company's board of commissioners, the legal power needed to supervise and make decisions, as a strong corporate governance mechanism makes financial information more accurate and of higher quality. Good.

Seventh, there is a negative and significant relationship between the scope of board efforts and fraudulent corporate financial reporting. The number of board meetings reflects the board's awareness of the company's activities and their ability to monitor the quality of the information contained in the financial statements. This finding is in line with the results (Salleh and Othman, 2016) which state that there is a significant influence between the frequency of board meetings and corporate fraud. Eighth, there is a negative and significant relationship between managerial ownership and fraudulent corporate financial reporting. This finding is in line with research (Rostami & Rezaei, 2022) which states that increasing management ownership helps reduce managers' motivation to increase personal interests by ignoring the interests of shareholders.

Lastly, board remuneration and fraudulent financial reporting have a positive and insignificant relationship. Board remuneration is a form of intensive scheme which is expected to reduce agency costs. According to the fraud triangle theory, motivation or pressure, opportunity and justification are three factors of fraud (Kassem & Higson, 2012). When linked to the fraud triangle theory, if on the one hand board remuneration is expected to reduce agency costs, on the other hand board remuneration actually has the potential to be an opportunity for management. In fact, management may use remuneration as a motivation for cheating in order to inflate company profits, thereby increasing the amount of remuneration they will receive. This finding is consistent with the results of (Rostami & Rezaei, 2022) which did not find a negative and significant relationship between board remuneration and fraudulent corporate financial reporting.

This research has a number of limitations, namely, firstly, not all companies listed on the IDX are under observation. This is related to the sampling technique used. Systematic Random Sampling applied in the research used a sample proportion ( $p$ ) value of 0.05 which resulted in a sample condition of 68 companies. Second, not all companies have the information needed to be tested. This resulted in reducing the number of research samples to 40 companies. Third, one of the eight variables used as indicators to determine corporate governance variables (board remuneration) used in this research is not representative enough to be used as an element of corporate governance practices.

The suggestions that the author can give refer to the research dependencies that have been explained. First and second, future research can use a larger sample proportion ( $p$ ) value such as 0.5 to increase the sample conditions. Increasing sample conditions is able to overcome the risk of incomplete company data required for testing which has the potential to reduce the sample size. Perhaps, by increasing the sample size the results will better explain the influence of corporate governance on fraudulent financial reporting. Third, future researchers can add the number of variables to corporate governance or change the control variables. So, don't just rely on the variables that have been tested in this research. For example, future researchers can change variables that are proven to be insignificant to serve as a mechanism for determining the influence of corporate governance on fraudulent financial reporting.

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