

THE ROLE OF FINANCIAL RATIOS AND CORPORATE GOVERNANCE MECHANISMS IN PREDICTING FRAUDULENT FINANCIAL REPORTING

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ABSTRACT

This study examines the relationship between financial ratios, corporate governance and fraudulent financial reporting (FFR) and whether corporate governance moderates the relationship between financial ratios and FFR of Malaysian public listed companies (PLCs). Twenty FFR companies are selected from the Securities Commission Enforcement Release (SCER) listed by Malaysia's Securities Commission for furnishing false statements from 2000 to 2021, and twenty non-FFR companies as a control sample based on similar industries, periods, and sizes. The panel logistic regression model was adopted to analyse the research hypotheses. The total number of observations over four years is 160 companies. FFR companies are found to have a higher asset composition ratio, more frequently change their auditors, and are less competitive in generating sales from their total assets than non-FFR companies. In terms of moderation, board independence as a moderating variable weakens the effects of leverage on FFR while strengthening the effects of asset composition on FFR, and change in auditor weakens the relationship between capital turnover and FFR. The study highlights alarming signs for FFR prediction, providing policy implications for regulators, auditors, managers, and investors. It contributes academically by combining signalling and agency theories.

Keywords: Financial ratios, Corporate governance, Fraudulent financial reporting, Malaysia

1.0 INTRODUCTION

Financial reporting scandals have gained global attention due to the fall of big firms like Enron, Adelphia and WorldCom (Anning & Adusei, 2020; Doan & Ta, 2023; Indiraswari et al., 2025; Rahmatika et al., 2019). Malaysian companies Transmile Group Berhad, Megan Media and 1MDB are associated with fraudulent financial reporting (FFR), revealing uncertainties about the financial statements credibility and affecting public and investor confidence (Campos, 2018; Doan & Ta, 2023; Novita et al., 2025; Omar et al., 2017; Wicahyanti et al., 2025; Zainudin & Hashim, 2016). Figure 1 shows that FFR caused the most significant financial impact, with the highest median loss of \$4,250,000 in 2002 and the lowest in 2022, compared to higher losses of corruption and asset misappropriation. Financial statements are crucial for investors in the capital market. Thus, they should be transparent, fair, and free from misleading information (P. V. S. Devi, 2024; Mohamed, 2013a). However, rising FFR cases in the market may undermine public trust in the reliability of financial reporting. Detecting fraud early is

crucial, but it requires knowledge about the fraud nature and concealment (Aghghaleh et al., 2016; Hossain et al., 2024; Kassem & Higson, 2012; Khan et al., 2022).

Financial ratios are effective tools for business failure forecasting, fraud detection, and performance evaluation due to their ability to provide financial information to users (Aghghaleh et al., 2016; Arifin & Prasetyo, 2018; Dalnial et al., 2014a; Persons, 1995; Wicahyanti et al., 2025; Zainudin & Hashim, 2016). In the event of adverse or poor performance, companies may resort to fraud to maintain market confidence and survival (Ferdinand & Santosa, 2018; Mohamed, 2013b). However, there are debates about the most effective ratios for determining fraud in financial reporting. Besides, ineffective corporate governance mechanisms and inadequate oversight by the board of directors could result in financial statements misleading (Abri et al., 2019; Arifin & Prasetyo, 2018; P. V. S. Devi, 2024; Girau et al., 2022; Indiraswari et al., 2025; Nasir et al., 2019; Nasir & Hashim, 2021).



Fig. 1 Median Losses of Occupational Fraud by Categories, 2002-2022 (ACFE, 2022)

Despite the various studies on detecting FFR, there is a dearth of studies that combine financial ratios and corporate governance as a detection mechanism of FFR, specifically in Malaysian public listed firms. Therefore, this study examines the role of financial ratios and corporate governance mechanisms in predicting. Since this study contributes practically by highlighting the predicting factors of FFR and academically examining the signalling and agency theories, it is essential to boost the credibility of the company's financial disclosures and improve confidence in Malaysia's capital markets. The remainder of this study is organized as follows: a discussion of the Literature Review and Hypotheses Development in the next section; the research methodology; the analysis of the findings, discussions and implications; and the final section concludes the study.

2.0 LITERATURE REVIEW AND HYPOTHESIS DEVELOPMENT

Fraudulent Financial Reporting (FFR) involves inaccuracies or exclusion of significant essential data in a company's financial report, often by an employee, causing harm to investors and creditors (ACFE, 2022). Such cases can lead to significant financial market losses and stakeholder damage (Campos, 2018). When financial ratios have deteriorated, they can prompt companies to commit fraud to preserve market confidence and ensure survival (Mohamed, 2013b). Several prior studies adopted financial ratios in seeing the fraud occurrence in their research, with various categories of financial ratios being used (e.g., Arifin & Prasetyo, 2018; Arshad et al., 2015; Dalnial et al., 2014b; Nia, 2015; Normah et al., 2014; Persons, 1995; Zainudin & Hashim, 2016).

Directors are statutorily obligated to prepare and submit financial statements (Companies Act, 2016), that are audited by independent auditors in compliance with regulations and

auditing standards (Ibadin & Ehigie, 2019). Nevertheless, frauds are often difficult to detect due to their concealment (Aghghaleh et al., 2016). The lack of oversight by the audit committee and board of directors' monitoring can lead to fraud (Arifin & Prasetyo, 2018). Hence, corporate governance is a crucial mechanism to ensure transparency and fairness in a company (Abdullah et al., 2019; Ortega, 2021) since it minimises opportunistic behavior (Girau et al., 2022; Martins & Júnior, 2020) and manages conflicts between principals and agents, reducing the risk of FFR caused by agency conflict (Nasir et al., 2019; Uwuigbe et al., 2019).

Malaysia is one of the top three countries in the Asia-Pacific area with the most instances of occupational fraud, according to Table 1, indicating a fraud crisis in FFR (ACFE, 2022). The collapse of several Malaysian firms, such as Transmile Berhad, Welli Multi Corp Berhad, and Megan Media Holdings Berhad, has exacerbated the rise in FFR cases (Nasir et al., 2018; Normah et al., 2014).

Table 1. Number of Occupational Fraud Cases of Countries in The Asia Pacific Region by Ranking (ACFE, 2018, 2020, 2022)

Rank	2018		2020		2022	
	Country	Number of cases	Country	Number of cases	Country	Number of cases
1	China	49	Indonesia	36	Australia	38
2	Australia	38	China	33	China	33
3	Indonesia	29	Australia	29	Malaysia	25
4	Philippines	25	Philippines	24	Indonesia	23
5	Singapore	17	Malaysia	19	Hong Kong	13
6	Malaysia	14	Singapore	17	Singapore	13
7	Hong Kong	10	Hong Kong	11	Philippines	12
8	New Zealand	8	Japan	8	Thailand	9
9	South Korea	6	Thailand	6	Vietnam	8
10	Taiwan	6	New Zealand	6	New Zealand	6
11	Vietnam	5	Taiwan	3	Taiwan	3
12	Japan	4	South Korea	5	Papua New Guinea	3
13	Thailand	3	New Zealand	3	South Korea	2
14	Cambodia	2	Taiwan	2	American Samoa	2
15	East Timor	1	Vietnam	2	Fiji	1
16	Macau	1	Laos	1	Laos	1
17	Myanmar (Burma)	1	Macau	1	Micronesia	1
18	Papua New Guinea	1	Myanmar (Burma)	1	Solomon Islands	1

2.1 Underpinning Theories

2.1.1 Signalling Theory

Signalling theory suggests that information users, such as investors or stakeholders, lack sufficient information from owners, leading to asymmetric information (Anfusina &

Mappanyukki, 2020; Connelly et al., 2011; Spence, 1973). Even leaders of companies with weak financials might communicate positive developments to uphold favourable ratings with investors. Conversely, executives at firms facing negative news may choose to disclose such information to uphold their credibility and stay competitive in the risk capital market. This theory potentially forecasts the occurrence of misleading financial reporting, which could be affected by financial ratios analysis. Poor or negative financial ratios could indicate FFR, prompting companies to commit fraud to maintain market confidence and survival.

2.1.2 Agency Theory

Jensen and Meckling (1976) established agency theory to explain the relationship between the agent and the principal. The agency theory states that agency conflicts or problems would arise since it often that management (agents) would act opportunistically against the interests of shareholders (principals) (Widiyatmoko, 2021). The reason is that the shareholders seek a substantial profit from what they have invested, while the managers wish for increased compensation. The differential interests may lead to conflict, where management would prioritize personal goals over maximising the value of shareholders (Ferdinand & Santosa, 2018; Rahmatika et al., 2019). Therefore, the theory posits that this principal-agent conflict creates the necessity for good corporate governance to supervise and govern management activities (Girau et al., 2022). This is because the agency problem, which could lead to FFR, could be reduced when there is continuous oversight of management (Velte, 2021).

2.2 Hypotheses Development

2.2.1 Leverage and Fraudulent Financial Reporting

Leverage involves external or debt financing in the company's capital structure and is usually viewed as raising additional funds through borrowing to operate the business. Businesses should establish an ideal capital structure that harmonises debt and equity financing to function effectively and profitably (Dechow et al., 1996). According to Christian and Eddy (2020), companies with a high proportion of debt tend to have a high risk of bankruptcy if they cannot pay the debt obligation. This aligns with Otieno (2016), who states that financial difficulties may motivate companies to engage in fraudulent activities. It also signals a negative performance to the investors and the public since an increase in leverage may increase interest payment, which reduces the dividend distribution among shareholders (Dalnial et al., 2014b). Consistent with signalling theory, high leverage ratios may trigger outsiders to commit FFR to preserve market confidence and ensure survival. Accordingly:
H1: There is a positive relationship between the leverage ratio and FFR.

2.2.2 Profitability and Fraudulent Financial Reporting

Profitability may be one factor that influences a company to commit fraud. Since the prime objective of a firm's management is to maximise the shareholders' wealth, working diligently to achieve that objective motivates the manipulation of the accounting records (Elsayed, 2017b). The profitability ratio can be manipulated, which results in fraudulent financial reporting (Zainudin & Hashim, 2016). Managers may be motivated to overstate revenue in the case of a lower profit margin, which cannot achieve the earnings benchmark (Arifin & Prasetyo, 2018; Nasir et al., 2018). In contrast, some prior studies demonstrated a positive link between profitability and FFR (Meiryani et al., 2020; Otieno, 2016; Supri et al., 2018). They argued that profitability proxied by Return on Assets (ROA) is frequently used as a target that management or directors, including bonuses and other incentive considerations, must meet. Signaling theory suggests that a company's profitability ratio indicates its financial health, and low profitability may be considered bad news that signals a company's poor performance. Hence, it is hypothesised that:

H2: There is a negative relationship between the profitability ratio and FFR.

2.2.3 Asset Composition and Fraudulent Financial Reporting

The asset composition ratio measures the proportion of current assets to total assets, the proportion of receivables to total assets, and the proportion of inventory to total assets (Persons, 1995). Inventory and accounts receivable help evaluate accounting fraud risk because a company may conduct fraudulent accounting activities by altering inventory and accounts receivable (Kaminski et al., 2004). A study by Spathis (2002) discovered that the exaggeration of receivables and current assets constitutes approximately seventy-five per cent of SEC enforcement cases. In line with Zainudin & Hashim (2016), an examination of FFR suggests that most of the company's current assets consist of receivables and inventory. Persons (1995) stated that inventories and accounts receivable are the most frequently manipulated accounts. Aligned with the signalling theory, high asset composition may signal FFR, as companies often falsify inventory and accounts receivable to maintain performance and market confidence. A positive link is expected between asset composition and FFR.

H3: There is a positive relationship between the asset composition ratio and FFR.

2.2.4 Liquidity and Fraudulent Financial Reporting

The liquidity ratio is the short-term working capital ratio to assess a company's capacity to meet its short-term liabilities (Zainudin & Hashim, 2016). Kanapickiene and Grundiene (2015) mentioned that it could be measured by working capital to total assets, current assets to current liabilities (current ratio), and motivation for fraud. Results found by Dalnial et al. (2014a), Ferdinand and Santosa (2018), and Zainudin & Hashim (2016) reveal that companies tend to manipulate their accounting records if the company has low liquidity. This study used liquidity ratios measured by working capital to total assets and found that low liquidity showed that companies were in financial distress and could not meet financial obligations (Dalnial et al., 2014a). Signalling theory suggests that companies with low liquidity often indicate poor performance. This could lead to companies committing FFR to appear good to investors, and potentially, liquidity affects the FFR negatively.

H4: There is a negative relationship between liquidity ratio and FFR.

2.2.5 Capital Turnover and Fraudulent Financial Reporting

The capital turnover ratio measures the company's capability to generate sales by utilising the company's assets. In other words, it signifies the revenue-generating capabilities of a company's assets. Organisations that are involved in fraud might demonstrate lower competitiveness than non-fraudulent firms in utilising assets to create sales (Persons, 1995). Aligned with Arifin and Prasetyo (2018), Dalnial et al. (2014a), Serly and Eddy (2020) and Zainudin & Hashim (2016) argued that the capital turnover proxy by revenue to total assets had a significant and negative influence on the occurrence of FFR. Following the application of the signalling theory, a low capital turnover ratio could be seen as a signal of fraud, considering this situation as a bad sign indicating the company's poor performance, thus triggering the company to commit fraud. A negative relationship between capital turnover and FFR is expected.

H5: There is a negative relationship between the capital turnover ratio and FFR.

2.2.6 Board Independence and Fraudulent Financial Reporting

The Malaysian Code of Corporate Governance (MCCG) defines it as independence from management and significant shareholders in order for the board to monitor the managers effectively (Girau et al., 2022). Therefore, independent directors monitor the unethical behaviour of management Girau et al. (2022) by ensuring the policies and structures are in

place to mitigate the potential conflict of interest between management and the shareholders (Abri et al., 2019). In preparing the financial report, the board independence mechanism function ensures it has been prepared with complete honesty and integrity (Abri et al., 2019). In this study, board independence is vital in reducing the FFR. This is consistent with Dechow et al. (1996) and Kyere and Ausloos (2021), who stated that fraud is unlikely to occur in the presence of a non-executive director on the board of directors. The involvement of external members on the board of directors minimises the frequency of fraud (Amara et al., 2013). Aligning with agency theory, as good corporate governance can mitigate issues like conflict of interest and information asymmetry. Therefore, this study expected that board independence negatively influences FFR.

H6: There is a negative relationship between board independence and FFR.

2.2.7 Institutional Ownership and Fraudulent Financial Reporting

Institutional ownership signifies the number of shares institutional investors own (Putra, 2019). According to De La Cruz et al. (2019), a high proportion of institutional investors considered the companies practising effective good corporate governance efficiently to reduce and decrease the probability of misleading financial reporting. It is due to their voting power since they hold significant stakes in public companies. Since institutional investors are very active in monitoring the company, they can effectively control its actions, thus maximising shareholders' value (Putra, 2019). According to Pamungkas et al. (2018), their ability to control management through effective monitoring could probably reduce FFR committed by management and minimise opportunistic management behaviour since supervision has encouraged management to prioritise the company's performance. A negative linkage between institutional ownership and FFR is expected.

H7: There is a negative relationship between institutional ownership and FFR.

2.2.8 Change in Auditor and Fraudulent Financial Reporting

The role of an auditor is crucial; they act as a supervisor with a certain qualification in conducting audits of the company's financial statement (Supri et al., 2018). Auditors could reveal fraud committed by the company since they are considered to have independent attitudes (Devi et al., 2021). The change in auditor has been perceived as an attempt to remove the previous audit's discovery of fraud (Widiyatmoko, 2021). Thus, auditor turnover seems to be associated with FFR (Putra, 2019), suggesting that increased auditor turnover correlates with a heightened incidence of accounting fraud. The agency theory suggests frequent auditor changes may increase the likelihood of FFR, suggesting a company's intention to avoid auditor trace. Hence, the hypothesis is as below.

H8: There is a positive relationship between change in auditor and FFR.

2.2.9 Board Independence as a Moderating Variable

This study examines whether corporate governance could moderate the relationship between financial ratios and FFR. In line with Rainigtyas et al. (2021), good corporate governance practices by a company would simultaneously enhance the organisation's performance, fiscal stability, governance, internal oversight, and regulatory adherence to attain greater transparency in corporate management. In implementing good corporate governance, board independence is a strategic position in supervisory functions. Therefore, board independence would be used to predict the moderating role in this study. This is due to its crucial function in increasing the management monitoring effectiveness and reducing the agency problem presented in a company (Girau et al., 2022; Jensen & Meckling, 1976). High board independence can weaken the company's tendency to be involved in FFR, aligning with signalling and agency theory. Low board independence strengthens the signal of fraud and enhances the impact of financial ratios on FFR occurrence.

H9a: Board independence moderates the relationship between the leverage ratio and FFR.

- H9b: Board independence moderates the relationship between the profitability ratio and FFR.
H9c: Board independence moderates the relationship between the asset composition ratio and FFR.
H9d: Board independence moderates the relationship between the liquidity ratio and FFR.
H9e: Board independence moderates the relationship between the capital turnover ratio and FFR.

2.2.10 Institutional Ownership as a Moderating Variable

Institutional ownership involves several shares institutional investors own (Putra, 2019). It plays the function of oversight and regulation of the company to maximise the shareholder's wealth (Putra, 2019). As a result, the existence of institutional investors increases the management monitoring effectiveness, reducing the presence of agency problems in a company (Girau et al., 2022; Jensen & Meckling, 1976). This situation indicates better corporate governance practices through an institutional ownership mechanism that might mitigate the practice of FFR (Pamungkas et al., 2018). Because institutional investors are capable of directly reviewing financial statements and overseeing management more effectively than other investors (Pamungkas et al., 2018), this has led management to prioritise the company's performance, thereby minimising opportunistic behaviors (Yusniarti et al., 2021). The signalling and agency theory suggests that effective corporate governance, assessed through institutional ownership, can reduce fraud signals and agency conflict between management and investors.

- H10a: Institutional ownership moderates the relationship between leverage ratio and FFR.
H10b: Institutional ownership moderates the relationship between profitability ratio and FFR.
H10c: Institutional ownership moderates the relationship between asset composition ratio and FFR.
H10d: Institutional ownership moderates the relationship between liquidity ratio and FFR.
H10e: Institutional ownership moderates the relationship between the capital turnover ratio and FFR.

2.2.11 Change in Auditor as a Moderating Variable

In a moderating aspect, change in auditor would be the proxy of corporate governance in examining whether it moderates the relationship between financial ratios and fraudulent financial reporting. Change in auditor or auditor turnover has been perceived as an attempt to remove the audit trail regarding the previous audit's discovery of fraud (Widiyatmoko, 2021). Auditors play a vital role in conducting a company's financial statement audit due to specific qualifications (Supri et al., 2018). Therefore, a change in auditor might be associated with the occurrence of FFR (Putra, 2019) since companies that frequently switch auditors are suspected of being involved in FFR (Harman & Bernawati, 2021). According to Pusphita and Yassa (2018), termination of audit engagement conveys the intention of eliminating the traces of fraud committed since it has limited them to access the information and understanding management behaviour. Consistent with the signalling and agency theory, suggesting that good corporate governance can weaken the FFR effect by financial ratios, while frequent auditor changes strengthen the relationship.

- H11a: Change in auditor moderates the relationship between the leverage ratio and FFR.
H11b: Change in auditor moderates the relationship between the profitability ratio and FFR.
H11c: Change in auditor moderates the relationship between the asset composition ratio and FFR.
H11d: Change in auditor moderates the relationship between the liquidity ratio and FFR.
H11e: Change in auditor moderates the relationship between the capital turnover ratio and FFR.

Figure 2 demonstrates the research framework of this study constructed from the previous hypotheses development discussed earlier.

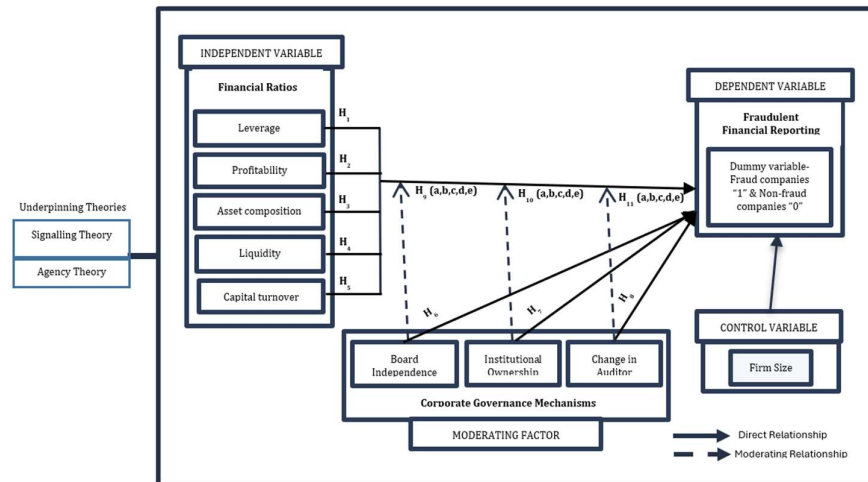


Fig. 2 Research Framework

3.0 RESEARCH METHODOLOGY

This study focuses on Malaysian PLCs involved in fraudulent financial reporting from 2000 to 2021 using a purposive sampling approach. The sample includes 20 FFR companies and 20 non-FFR companies. Secondary data collection is adopted by extracting the existing datasets from the annual financial report (manually) and through Eikon DataStream (database). The data is analysed using logistic regression analysis via E-views software following several prior studies like Kaminski et al. (2004), Spathis (2002) and Zainudin & Hashim (2016).

3.1 Sample Selection

This study examines fraudulent financial reporting companies accused of giving false information to the Securities Commission of Malaysia listed in the Securities Commission Enforcement Releases (SCER) from 2000 to 2021, as verified cases of fraudulent financial reporting from the Securities Commission Malaysia are available starting in 2000. The year 2021 is the latest for which complete financial and corporate governance data are available for both fraudulent and non-fraudulent firms and also exclude the impact of regulatory changes and post-pandemic reporting practices that emerged after 2021.

Data from the three preceding years is collected as fraudulent organisations participate in earnings management activities three years prior to the fraud year of occurrence. The number of fraudulent companies is explained in Table 2.

Table 2. Sampling Size for Fraudulent Financial Reporting Companies

Description	No. of samples
Total number of companies in the SCER list implicated in the submission of fraudulent statement	45
Total number of companies pending listing on Bursa Malaysia with incomplete observation	6
Total number of companies with incomplete observation due to unavailability of Annual Report	19
Total number of companies with four complete years of observations	20
Observation year count (n)	4 years
Total number of Fraudulent Financial Reporting Companies	80

This study uses purposive sampling to compare fraudulent companies with non-fraudulent companies. The non-fraudulent companies are selected based on similar industries, sizes, and periods. The number of observations consists of 160 companies. The independent samples t-test confirms that the non-fraudulent companies are matched in size against the fraud companies. The results are presented in Table 3.

Table 3. Independent Samples T-test of Total Assets for Fraudulent and non-Fraudulent Companies

Statistics	Total assets for FFRC	Total assets for non-FFRC
Mean	622493409	553386038
Variance	1.9516	1.1594
t-values (p-value)	0.175 (0.700)	
Number of observations	20	20

Notes: The values in parentheses are p-values. The ***, **, and * signs indicate rejecting the null hypothesis at 1%, 5%, and 10%, respectively.

Table 3 shows that the analysis failed to reject the null hypothesis, indicating no significant difference in total assets between fraudulent and non-fraudulent companies, suggesting that non-fraudulent observations could be paired with fraudulent ones.

3.2 Regression Model

The logistic model estimates variables related to FFR using financial ratios and corporate governance mechanisms, unveiling significant factors influencing FFR using fraudulent and non-fraudulent companies' data sets. The empirical model is presented as follows:

$$\begin{aligned}
 FFR_{it} = & \beta_0 + \beta_1 LEV_{it} + \beta_2 PROF_{it} + \beta_3 AC_{it} + \beta_4 LIQ_{it} + \beta_5 CT_{it} + \\
 & \beta_6 BIND_{it} + \beta_7 INSTOWN_{it} + \beta_8 AUDCHANGE_{it} + \\
 & \beta_9 LEV \times BIND_{it} + \beta_{10} PROF \times BIND_{it} + \beta_{11} AC \times BIND_{it} + \\
 & \beta_{12} LIQ \times BIND_{it} + \beta_{13} CT \times BIND_{it} + \beta_{14} LEV \times INSTOWN_{it} \\
 & + \beta_{15} PROF \times INSTOWN_{it} + \beta_{16} AC \times INSTOWN_{it} + \beta_{17} LIQ \times INSTOWN_{it} \\
 & + \beta_{18} CT \times INSTOWN_{it} + \beta_{19} LEV \times AUDCHANGE_{it} + \beta_{20} PROF \times AUDCHANGE_{it} \\
 & + \beta_{21} AC \times AUDCHANGE_{it} + \beta_{22} LIQ \times AUDCHANGE_{it} + \beta_{23} CT \times AUDCHANGE_{it} + \beta_{24} SIZE_{it} + \varepsilon_{it}
 \end{aligned}$$

Where:

FFR = Dummy variable where 1 indicates companies engage in fraudulent financial reporting while 0 signifies companies with non-fraudulent financial reporting

LEV = Total Debt/Total Equity

PROF = Net Profit/Total Asset

AC = Account Receivables/Total Assets

LIQ = Current Assets/Current Liabilities

CT = Sales/Total Assets

BIND = (Number of Independent Board/Total Number of Board Directors)

INSTOWN = Number of Institutional Shares/Number of Shares Outstanding

AUDCHANGE = Code 1 if there is an auditor change and code 0 if otherwise

SIZE = Total assets at the end of the fiscal year

x = denotes the moderation (example: LEV \times BIND)

ε_{it} = Error terms of the regression model

4.0 FINDINGS AND DISCUSSION

4.1 Descriptive Statistic and Multi-Collinearity Test

Table 4 presents the descriptive statistics for the variables examined in both fraudulent and non-fraudulent financial reporting companies, offering a summary of the mean, maximum, minimum, and standard deviation values. Based on the results, FFRC shows a higher value of leverage (LEV) mean value than non-FFRC, which is 1.5131 and 0.9870, respectively, indicating that FFRC has more average debt to total equity than NFFRC. Regarding profitability (PROF), the FFRC has a 0.0033 mean value, which is lower than non-FFRC, which has 0.0482. It shows that non-FFRC has a more average value of assets to be generated into net income than FFRC. Based on asset composition (AC), FFRC has a 0.2901 mean value, while non-FFRC shows a slightly lower value which is 0.2571. According to liquidity (LIQ), non-FFRC has a lower mean value of 1.7967 than FFRC's mean value of 2.8226. Regarding capital turnover (CT), the mean value of FFRC, 0.6404, is smaller than non-FFRC, 0.9246, since most of the FFRC cannot deal with the competitive situation in generating sales from the total assets.

Based on board independence (BIND), the mean is quite the same between FFRC and non-FFRC, which is 0.3937 and 0.3961, respectively. This indicates that most of the BIND proportion of the companies selected in this study is not sufficient as required by the Malaysian Code of Corporate Governance (MCCG), which is more than 50% or 2/3 of the independent board of directors on the board. Besides, in accordance with institutional ownership (INSTOWN), FFRC has a slightly higher institutional ownership mean value than non-FFRC at 0.5731 and 0.5210, respectively. Regarding the change in auditor (AUDCHANGE), Table 4 shows that the descriptive statistic is not applicable or available since it is measured through a dummy variable of 1 and 0. In terms of SIZE as a control variable, which is measured by the total assets, the mean of FFRC size is more than non-FFRC, which is RM640,330,216 and RM553,386,037, respectively. FFRC has a higher maximum size value than non-FFRC. In comparison, the minimum value is lower than non-FFRC, indicating that FFRC has the highest maximum value and the lowest minimum value of size in total assets. There appears to be no multi-collinearity concern among the variables as shown in Table 5.

Table 4. Descriptive Statistics of Fraudulent Financial Reporting Companies (FFRC) and Non-Fraudulent Financial Reporting Companies

Variables	Mean		Maximum		Minimum		Standard Deviation	
	FFRC	Non-FFRC	FFRC	Non-FFRC	FFRC	Non-FFRC	FFRC	Non-FFRC
LEV	1.513128	0.987048	59.38115	7.783925	-14.42601	-7.85636	7.032777	1.420846
PROF	0.003314	0.048227	1.72659	0.331223	2.722781	0.177729	0.448142	0.089365
AC	0.290139	0.257063	0.807908	0.744400	0.004089	0.000142	0.180614	0.168230
LIQ	2.822565	1.796723	28.55502	6.277294	0.033434	0.473251	4.455257	1.088641
CT	0.640378	0.924608	2.420718	2.695526	0.001429	0.087991	0.475357	0.571988
BIND	0.393716	0.396130	0.800000	0.777778	0.090909	0.200000	0.129687	0.130835
INSTOWN	0.573081	0.521018	0.997604	1.190586	0.053796	0.078169	0.243854	0.225000
AUDCHANGE	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
SIZE	640330216	553386037	772847800	565209500	1373000	2197000	1399050637	1088779112
	Number of companies (n)							
(FFRC)	Fraudulent companies		20					
(non-FFRC)	Non-fraudulent companies		20					
	Number of years (t)		4					
(N)	Total number of observations		160					

Notes: FFRC= fraudulent financial reporting companies, LEV= total debt/total equity, PROF= net profit/total asset, AC= account receivables/total assets, LIQ= current assets/current liabilities, CT= sales/total assets, BIND= (number of independent board/total number of board director) x 100, INSTOWN= number of institutional shares/number of shares outstanding, AUDCHANGE= code 1 if there is an auditor change and code 0 if there is no auditor change, SIZE= total assets at the end of the fiscal year. The descriptive statistic of AUDCHANGE is not available (N/A) since the variable's value is dichotomous.

4.2 Empirical Results

Table 5. Correlation Test Results

LOGLEV	LOGPROF	AC	LOGLIQ	CT	BIND	INSTOWN	AUDCHANGE	LOGSIZE
1								
0.048	1							
0.299***	-0.014	1						
-0.363***	-0.278***	0.081	1					
0.220***	-0.140*	0.160**	-0.103	1				
-0.103	-0.129	-0.059	0.073	0.152*	1			
0.129	-0.170**	-0.147*	-0.030	0.241***	-0.305***	1		
-0.095	0.152*	-0.011	-0.149*	0.038	0.158**	0.055	1	
0.291***	-0.142*	-0.160**	0.113	0.003	0.119	0.043	-0.241***	1

Notes: Values in parentheses represent p-values. The ***, **, and * symbols indicate significance levels of 1%, 5%, and 10% respectively. Where: FFR: 1 for the subject of FFR; Otherwise, 0.

Table 6. Panel Logit Regression Results

Independent Variable	Dependent Variable: FFR	
	Coefficient	Z-Statistic
LOGLEV	-0.2219	-0.9099
LOGPROF	0.0961	1.4271
AC	3.5760***	2.8077
LOGLIQ	-0.3089	-1.2966
CT	-1.8515***	-4.0752
BIND	2.0956	1.3095
INSTOWN	3.1954***	3.2539
AUDCHANGE	1.2797***	2.6771
LEV_BIND	-8.0137**	-2.1896
PROF_BIND	2.7596	2.5312
AC_BIND	35.0274***	1.5793
LIQ_BIND	2.2716	0.8185
CT_BIND	3.2052	0.5589
LEV_INSTOWN	-1.8104	-1.1652
PROF_INSTOWN	0.2776	0.6383
AC_INSTOWN	12.7850*	1.7099
LIQ_INSTOWN	0.2348	0.1911
CT_INSTOWN	1.8719	0.5752
LEV_AUDCHANGE	0.3245	0.4826
PROF_AUDCHANGE	-0.0266	-0.1176
AC_AUDCHANGE	3.6050	0.7679
LIQ_AUDCHANGE	-1.3425	-1.5394
CT_AUDCHANGE	5.6682***	2.9817

LOGSIZE	0.2796	1.6369
CONSTANT	-2.5443	-0.4434
McFadden R-squared	0.3605	
Likelihood Ratio statistic	79.9573	
Prob (LR statistic)	0.0000	
Number of observations	160	

Notes: Values in parentheses are p-values. The ***, **, and * sign denotes significance at 1, 5, and 10%, respectively. LOGLEV, LOGPROF, LOGLIQ, and LOGSIZE are denoted after the log transformation. Where: FFR = Dummy variable where 1 signifies fraudulent financial reporting companies while 0 represents the non-fraudulent financial reporting firm.

4.3 Hypotheses Testing Results

The study analysed the relationship between leverage ratio (LEV), profitability (PROF), asset composition (AC), liquidity ratio (LIQ), capital turnover (CT), board independence (BIND), institutional ownership (INSTOWN), and change in auditor (AUDCHANGE) in Malaysian public listed companies. The results showed that a one-unit increase in LEV was associated with a decrease in the log-odd or logit of the FFR by approximately -0.2219 units, while a one-unit increase in PROF increased the log-odd or logit of the FFR by approximately 0.0961 units; however, the result indicates that the relationship is insignificant. The relationship between asset composition (AC) and FFR was positive and statistically significant, showing that companies with greater asset composition ratios are more prone to engage in misleading financial reporting. The liquidity ratio did not correlate with the possibility of fraudulent financial reporting in the analysed datasets. The coefficient of capital turnover (CT) showed a negative sign at -1.8515, suggesting that companies with lower CT are more likely to be involved in FFR. The board independence (BIND) coefficient was positive at 2.0956, indicating that a one-unit increase in BIND was associated with a 2.0956-unit increase in log-odd or logit of the FFR, with insignificant results. In contrast, there exists a statistically significant positive correlation between INSTOWN and FFR, which shows 0.0011 of the p-value. The coefficient of change in auditor (AUDCHANGE) showed a positive sign at 1.2797, indicating that FFR engagement increases when a company has higher auditor switching compared to a company with a low auditor change.

Board independence (BIND) is found to moderate the relationship between LEV and FFR, while AC_BIND strengthens the relationship between AC and FFR. However, BIND has no significant moderating influence on the correlation between profitability, liquidity, and capital turnover. Institutional ownership (INSTOWN) does not significantly moderate the association between financial ratios and FFR, suggesting that INSTOWN does not significantly strengthen or weaken the relationship. Change in auditor (AUDCHANGE) also moderates the relationship between CT and FFR, with AUDCHANGE strengthening the relationship between CT and FFR. However, other financial ratios that interact with AUDCHANGE are not significant, indicating that AUDCHANGE does not significantly influence the relationship between financial ratios (except CT) and fraudulent financial reporting.

4.4 Discussion

This research offers valuable perspectives for Malaysian regulators, policymakers, and accounting practices to enhance the clarity of financial reporting and maintain trust in the capital market. It assists Securities Commissions and Bursa Malaysia in tightening rules as it serves as a guideline for combating corporate fraud. It enables them to monitor listed

companies more effectively, improving compliance with Bursa Malaysia's Listing Requirements. By focusing on publicly available information such as financial ratios and corporate governance, investors can minimise losses by identifying firms with high fraud risk, guiding informed decisions about a company's financial health. The findings support the contention of signalling and agency theories on the role of financial ratios and corporate governance in detecting fraudulent financial reporting. Asset composition positively impacts fraudulent financial reporting (FFR), and capital turnover ratio negatively influences the likelihood of FFR. Companies with a higher level of asset composition in account receivables exhibit an increased inclination to participate in FFR. The study suggests that regulators, managers, and investors should pay more attention to companies with a higher proportion of accounts receivable in their total assets and increase monitoring and control mechanisms to reduce the risk of FFR. Companies with a low capital turnover ratio may be at a higher risk of fraudulent activities and should be monitored intensely. The relationship between leverage (LEV), profitability (PROF), liquidity (LIQ) and FFR is insignificant, indicating that these ratios do not signal fraud because shareholders do not consider these factors as representing the companies' overall performance.

The study examines the relationship between corporate governance mechanisms and FFR. It finds that institutional ownership and change in auditor significantly impact FFR. A larger proportion of institutional ownership, such as mutual funds or pension funds, increases the likelihood of FFR. This suggests that institutional investors need to exercise greater due diligence to protect their investments and beneficiaries. Change in auditors also has a positive impact on FFR, as companies that frequently change auditors are more prone to engage in financial statement fraud. However, board independence (BIND) is not significantly associated with FFR occurrence.

The research additionally investigates the moderating effects of these mechanisms on the relationship between financial ratios and FFR. Board independence plays a crucial role in mitigating FFR influence by leverage ratio, while higher board independence composition strengthens the relationship between asset composition and FFR. Change in auditor strengthens the effect of capital turnover on FFR, implying that companies with low capital turnover, which is less competitive, exhibit a higher tendency for engaging in FFR in the presence of a change in auditor. The implication is that companies should be cautious during the auditor change especially when experiencing a low capital turnover ratio. However, institutional ownership cannot moderate the relationship between financial ratios towards FFR. Understanding the diverse objectives of institutional investors is essential for assessing how different market participants contribute to detecting and preventing fraudulent financial reporting.

5.0 CONCLUSION

This research explores the link between financial ratios and fraudulent financial reporting (FFR), the role of corporate governance mechanisms in relation to FFR, and whether these corporate governance mechanisms (board independence, institutional ownership, and change in auditors) moderate the relationship between financial ratios on FFR of Malaysian public listed companies. Results show that asset composition ratio, institutional ownership, and change in auditor are positively related to FFR, while a negative relationship is evidenced for capital turnover ratio. Board independence moderates the effects of leverage ratio and asset composition on FFR, while the change in auditor moderates the relationship between capital turnover and FFR. The results implicate that strong governance, like board independence and

change in auditor, can mitigate the risk of FFR. Regarding the implication for theory, the findings lend support to the contention of signalling and agency theories on the role of financial ratios and corporate governance in deterring FFR. The findings of this study may add to the body of knowledge and contribute to the recent academic literature by documenting a link between financial ratios, corporate governance, and FFR.

While this study has many strengths, it also has its limitations. The first limitation is that this study has a small sample size. The sample selection in this study involves identifying the public listed companies that are listed in the Securities Commission Enforcement Release (SCER) for furnishing false statements charged by Malaysia's Securities Commission. Future research can include those the Bursa Malaysia charges in the Bursa Malaysia Media Centre. Furthermore, the data can be improved by enhancing the data on a quarterly basis, thus increasing the number of observations. In terms of covering the entire industries of Malaysian public listed companies, future researchers are suggested to measure the fraudulent financial reporting using other proxies like the Beneish M-score model, Altman Z-score, and Dechow F-score model. In terms of measurement selection, this study is limited to a selection of several proxies of financial ratios and corporate governance mechanisms. Future research can adopt multiple proxies for capturing different aspects or dimensions of the variable. Indeed, this study may benefit policymakers, auditors, managers, investors, and academics in mitigating fraudulent financial reporting to avoid more harm. Finally, this study can be used as a reference for future researchers in the field of fraudulent financial reporting.

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REFERENCES

- Abdullah, W. N., Said, R., & Caliyurt, K. (2019). The effect of internal governance on corporate financial crime of companies in Malaysia. *Journal of Governance and Integrity*, 2(2), 53–64.
- Abri, A. F., Arumugam, D., & Balasingam, S. (2019). Impact of the Corporate governance on the financial statement fraud: A study focused on companies in Tanzania. *International Journal of Recent Technology and Engineering*, 7(5S), 336–341.
- ACFE. (2018). *Report to the Nations 2018 Global Study on Occupational Fraud and Abuse*.
- ACFE. (2020). *Report to the Nations on Occupational Fraud and Abuse: 2020 Global Fraud Study*. In *Association of Certified Fraud Examiners*.
- ACFE. (2022). *Occupational Fraud 2022: A Report to the Nations*.
- Aghghaleh, S. F., Mohamed, Z. M., & Rahmat, M. M. (2016). Detecting Financial statement frauds in Malaysia: Comparing the abilities of Beneish and Dechow Models. *Asian Journal of Accounting and Governance*, 7, 57–65.
- Amara, I., Amar, A. Ben, & Jarboui, A. (2013). Detection of fraud in financial statements: french companies as a case study. *International Journal of Academic Research in Accounting, Finance and Management Sciences*, 3(3), 40–51.
- Anfusina, M. S., & Mappanyukki, R. (2020). The effect of morality, compensation, and professional commitment to fraudulent financial statements with rationalization as an intervening variable empirical study on SKPD South Tangerang City. *International*

- Journal of Asian Social Science*, 10(9), 521–534.
- Anning, A. A., & Adusei, M. (2020). An analysis of financial statement manipulation among listed manufacturing and trading firms in Ghana. *Journal of African Business*, 1–15.
- Arifin, M. B., & Prasetyo, A. B. (2018). Factors influencing in the fraudulent financial reporting. *Jurnal Dinamika Akuntansi*, 10(2), 99–113.
- Arshad, R., Iqbal, S. M., & Omar, N. (2015). Prediction of business failure and fraudulent financial reporting: Evidence from Malaysia. *Indian Journal of Corporate Governance*, 8(1), 34–53.
- Campos, J. F. A. (2018). *Financial Statement Fraud in Europe*.
- Christian, N., & Eddy. (2020). The effect of financial ratio's in detecting fraudulent company listed on the Indonesia Stock Exchange. *International Journal of Economics and Management Studies*, 7(4), 105–115.
- Companies Act, (2016). *Companies Act 2016 (Act 777)*. [https://www.ssm.com.my/Pages/Legal_Framework/Document/Companies%20Act%202016_Akta%20777_BI%20\(1.8.2022\).pdf](https://www.ssm.com.my/Pages/Legal_Framework/Document/Companies%20Act%202016_Akta%20777_BI%20(1.8.2022).pdf)
- Connelly, B. L., Certo, S. T., Ireland, R. D., & Reutzel, C. R. (2011). Signaling theory: A review and assessment. *Journal of Management*, 37(1), 39–67.
- Dalnial, H., Kamaluddin, A., Sanusi, Z. M., & Khairuddin, K. S. (2014a). Accountability in financial reporting: detecting fraudulent firms. *Procedia - Social and Behavioral Sciences*, 145, 61–69.
- Dalnial, H., Kamaluddin, A., Sanusi, Z. M., & Khairuddin, K. S. (2014b). Detecting Fraudulent financial reporting through financial statement analysis. *Journal of Advanced Management Science*, 2(1), 17–22.
- De La Cruz, A., Medina, A., & Tang, Y. (2019). *Owners of the World's Listed Companies*, *OECD Capital Market Series, Paris*. <https://www.oecd.org/corporate/Owners-of-the-Worlds-Listed-Companies.htm>
- Dechow, P. M., Sloan, R. G., & Sweeney, A. P. (1996). Causes and consequences of earnings manipulation: an analysis of firms subject to enforcement actions by the SEC. *Contemporary Accounting Research*, 13(1), 1–36.
- Devi, P. N. C., Widanaputra, A. A. G. P., Budiasih, I. G. A. N., & Rasmini, N. K. (2021). The effect of fraud pentagon theory on financial statements: Empirical evidence from Indonesia. *Journal of Asian Finance, Economics and Business*, 8(3), 1163–1169.
- Devi, P. V. S. (2024). Corporate governance as a detector of financial statement fraud: systematic. *Asia Pacific Fraud Journal*, 9(1), 37–47.
- Doan, T. N., & Ta, T. T. (2023). Factors of fraud triangle affecting the likelihood of material misstatements in financial statements: An empirical study. *Journal of Governance and Regulation*, 12(1), 82–92.
- Elsayed, A. A. (2017a). *Fraud Theories: Explanation of Financial Statement Fraud*. 1–12.
- Elsayed, A. A. (2017b). *Indicators of the Financial Statement Fraud (Red Flags)*. 1–20.
- Ferdinand, R., & Santosa, S. (2018). Factors that Influence fraudulent financial statements in retail companies - Indonesia. *JAAF (Journal of Applied Accounting and Finance)*, 2(2), 99–109.
- Girau, E. A., Bujang, I., Paulus Jidwin, A., & Said, J. (2022). Corporate governance challenges and opportunities in mitigating corporate fraud in Malaysia. *Journal of Financial Crime*, 29(2), 620–638.
- Harman, S. A., & Bernawati, Y. (2021). Determinant of Financial statement fraud: Fraud Pentagon perspective in manufacturing companies. *Review of International Geographical Education Online*, 11(4), 554–566.
- Hossain, M. Z., Raja, M. R., & Hasan, L. (2024). Developing predictive models for detecting financial statement fraud: A Machine learning approach. *European Journal of Theoretical and Applied Science*, 2(6), 271–290.
- Ibadin, P. O., & Ehigie, A. H. (2019). Beneish model, corporate governance and financial statements manipulation. *Asian Journal of Accounting and Governance*, 12, 51–64.
- Iberahim, S. (2013). *The Association Between Audit Firm Characteristics and Fraudulent Financial Reporting: Malaysian Fraud Cases*.

- Indiraswari, S. D., Subroto, B., Rosidi, R., & Subekti, I. (2025). Corporate governance and financial statement fraud: Evidence on the moderating influence of financial distress. *Problems and Perspectives in Management*, 23(2), 785–795. [https://doi.org/10.21511/ppm.23\(2\).2025.57](https://doi.org/10.21511/ppm.23(2).2025.57)
- Jensen, M., & Meckling, W. (1976). Theory of the firm: Managerial behavior, agency costs and ownership structure. *Journal of Financial Economics*, 3(4), 305–360.
- Kaminski, K. A., Sterling Wetzel, T., & Guan, L. (2004). Can financial ratios detect fraudulent financial reporting? *Managerial Auditing Journal*, 19(1), 15–28.
- Kanapickiene, R., & Grundiene, Z. (2015). The model of fraud detection in financial statements by means of financial ratios. *Procedia - Social and Behavioral Sciences*, 213, 321–327.
- Kassem, R., & Higson, A. (2012). The new fraud triangle model. *Journal of Emerging Trends in Economics and Management Sciences (JETEMS)*, 3(3), 191–195.
- Khan, N. I., Aqila, A., & Hapiz, M. (2022). *Financial Statement Fraud: Evidence from Malaysian Public Listed Companies*. 17(1), 181–194.
- Kyere, M., & Ausloos, M. (2021). Corporate governance and firms financial performance in the United Kingdom. *International Journal of Finance and Economics*, 26(2), 1871–1885.
- Martins, O. S., & Júnior, R. V. (2020). The influence of corporate governance on the mitigation of fraudulent financial reporting. *Review of Business Management*, 22(1), 65–84.
- Meiryani, Amri, M. A., Sudrajat, J., & Riantono, I. E. (2020). The Effect of financial target and financial stability on fraudulent financial statements. *Journal of Critical Reviews*, 7(6), 692–699.
- Mohamed, N. (2013a). Financial statement fraud control: Audit Testing and internal auditing expectation gap. *International Proceedings of Economics Development and Research*, 65(13), 62–67.
- Mohamed, N. (2013b). Financial Statements fraud control: exploring internal control strategies in two Malaysian public interest entities'. In *Norazida Mohamed*. Teesside University, Middlesbrough, United Kingdom.
- Nasir, N. A. M., Ali, M. J., & Ahmed, K. (2019). Corporate governance, board ethnicity and financial statement fraud: evidence from Malaysia. *Accounting Research Journal*, 32(3), 514–531.
- Nasir, N. A. M., Ali, M. J., Razzaque, R. M. R., & Ahmed, K. (2018). Real earnings management and financial statement fraud: evidence from Malaysia. *International Journal of Accounting and Information Management*, 26(4), 508–526.
- Nasir, N. A. M., & Hashim, H. A. (2021). Corporate governance performance and financial statement fraud: evidence from Malaysia. *Journal of Financial Crime*, 28(3), 797–809.
- Nia, E. H., & Said, J. (2015). Assessing fraud risk factors of assets misappropriation: Evidences from Iranian Banks. *Procedia Economics and Finance*, 31(15), 919–924. [https://doi.org/10.1016/s2212-5671\(15\)01194-6](https://doi.org/10.1016/s2212-5671(15)01194-6)
- Nia, S. H. (2015). Financial ratios between fraudulent and non-fraudulent firms: Evidence from Tehran Stock Exchange. *Journal of Accounting and Taxation*, 7(3), 38–44.
- Normah, O., Zuraidah, M. S., Amirah, J., & Intan Salwani, M. (2014). Predicting financial stress and earning management using ratio analysis. *Advances in Natural and Applied Sciences*, 8(8), 183–189. www.aensiweb.com/ANAS
- Novita, S., Widyastuti, T., & Darmansyah. (2025). The determinants of fraudulent financial Reporting: A Systematic literature review. *International Journal of Research and Innovation in Social Science*, 4(3), 1042–1055.
- Omar, N., Johari, Z. A., & Smith, M. (2017). Predicting fraudulent financial reporting using artificial neural network. *Journal of Financial Crime*, 24(2), 362–387.
- Ortega, S. (2021). *Impact of Corporate Governance on Financial Reporting and Profitability of Banking*.
- Otieno, O. D. (2016). The power of financial ratios in detecting fraudulent financial reporting at the nairobi securities exchange. In *University of Nairobi, School of Business* (August).
- Pamungkas, I. D., Ghozali, I., & Achmad, T. (2018). A pilot study of corporate governance and accounting fraud: The fraud diamond model. *Journal of Business and Retail Management Research*, 12(2), 253–261.

- Pamungkas, I. D., Ghozali, I., Achmad, T., Khaddafi, M., & Hidayah, R. (2018). Corporate governance mechanisms in preventing accounting fraud: A study of fraud Pentagon Model. *Journal of Applied Economic Sciences*.
- Persons, O. S. (1995). Using financial statement data to identify factors associated with fraudulent financial reporting. *Journal of Applied Business Research*, 11(3), 38–46.
- Pusphita, M. Y., & Yassa, G. W. (2018). Fraud pentagon analysis in detecting fraudulent financial reporting: Study on Indonesian capital market). *International Journal of Sciences: Basic and Applied Research (IJSBAR)*, 42(5), 93–109.
- Putra, W. M. (2019). Analysis of financial fraud using the fraud diamond model with corporate governance as the moderating variable. *Advances in Economics, Business and Management Research*, 102, 163–169.
- Rahmatika, D. N., Kartikasari, M. D., Indriasih, D., Sari, I. A., & Mulia, A. (2019). Detection of fraudulent financial statement; can perspective of fraud diamond theory be applied to property, real estate, and building construction companies in Indonesia? *European Journal of Business and Management Research*, 4(6), 1–9.
- Rainingtyas, A. S., Umar, H., & Indriani, A. (2021). The Influence of financial distress and audit committee on fraudulent financial reporting moderating by good corporate governance. *International Journal of Economics and Management Studies*, 8(7), 59–70.
- Ross, S. A. (1977). Determination of financial structure: Tthe incentive-signalling approach. *Bell J Econ*, 8(1), 23–40. <https://doi.org/10.2307/3003485>
- Serly, & Eddy, E. (2020). The effect of financial ratios in detecting fraudulent company listed on the Indonesia stock exchange. *Global Financial Accounting Journal*, 4(2), 39.
- Spathis, C. T. (2002). Detecting false financial statements using published data: some evidence from Greece. *Managerial Auditing Journal*, 17(4), 179–191.
- Spence, M. (1973). Job market signaling. *The Quarterly Journal of Economics*, 87(3), 355–374.
- Supri, Z., Rura, Y., & Pontoh, G. T. (2018). Detection of fraudulent financial statements with fraud diamond. *Journal of Research in Business and Management*, 6(5), 39–45.
- Uwuigbe, O. R., Olorunshe, O., Uwuigbe, U., Ozordi, E., Asiriwa, O., Asaolu, T., & Erin, O. (2019). Corporate governance and financial statement fraud among listed firms in Nigeria. *IOP Conference Series: Earth and Environmental Science*, 331(1).
- Velte, P. (2021). The link between corporate governance and corporate financial misconduct. A review of archival studies and implications for future research. In *Management Review Quarterly*. Springer International Publishing.
- Wicahyanti, R., Rosidi, & Lisa, O. (2025). Detection of fraudulent financial statement using financial ratios and textual information: Moderating of corporate governance. *Journal of Economics, Finance and Management Studies*, 8(3), 1612–1620.
- Widiyatmoko, M. A. (2021). *Analysis of determinants that influence financial statement fraud empirical study on mining companies listed in indonesia stock exchange (BEI)*.
- Yusniarti, V., Mulyati, H., & Amrizal. (2021). Analysis of The influence of pentagon fraud in detecting financial statement fraud using method F-Score: Empirical study on manufacturing companies listed on stock exchange Indonesia 2015-2019 Period. *Procedia of Social Sciences and Humanities*, 40–56.
- Zainudin, E. F., & Hashim, H. A. (2016). Detecting fraudulent financial reporting using financial ratio. *Journal of Financial Reporting and Accounting*, 14(2), 266–278.