

## DOES COVID-19 ENCOURAGE BANKS TO COMMIT FINANCIAL STATEMENT FRAUD? A PENTAGON PERSPECTIVE

Falsa Dzaky Arifian <sup>1\*</sup>, Indira Januarti <sup>2</sup>

<sup>1\*</sup> Accounting Department of Diponegoro University, falsadzakyarifian6320@gmail.com

<sup>2</sup> Accounting Department of Diponegoro University, ienjanuarti@gmail.com

---

### Abstract

The research aims to analyze the effect of liquidity, effective monitoring, external auditor quality, managerial ability, and CEO tenure on fraudulent financial reporting in banking companies. The research was conducted at banking companies listed on the Indonesia Stock Exchange from 2017-2021. This study includes data on the pandemic years, namely 2020 and 2021 to see the impact on changes in banking tendencies to commit financial statement fraud and is explained using the fraud Pentagon theory approach. The observed data in this study were 190. Ordinary least squares were used to examine the relationship between research variables. The regression analysis results show that external auditor quality has a negative effect, managerial ability, and CEO tenure have a positive effect on financial reporting fraud. Meanwhile, liquidity and effective monitoring have no effect on fraudulent financial statements. This research has implications for good audit quality to prevent fraud. Managerial ability and tenure CEOs who commit financial reporting fraud need to be of concern to regulators.

Keywords: Banking, Covid-19, Financial Statement Fraud, Pentagon.

---

### INTRODUCTION

The existence of a financial statement is very important to maintain the efficiency of a country's capital market because financial reports provide important disclosures for assessing the condition of a company. However, sometimes the financial statements are intentionally misstated (Zimbelman et al., 2014). The results of a survey conducted by the Association of Certified Fraud Examiners (ACFE) in Occupational Fraud 2022: A Report to The Nations, show that as many as 9% of fraud cases in the world are financial statement fraud with a total loss of \$593,000 (ACFE, 2022). The financial statement fraud scheme is the scheme that has the lowest number of cases but results in the greatest losses compared to other fraud schemes such as corruption and assets misappropriation. The results of another survey in the 2016 Indonesia Fraud Survey revealed that 2% of fraud in Indonesia is financial statement fraud (ACFE Indonesia Chapter, 2016). This figure increased to 9.2% in the next survey in the 2019 Indonesia Fraud Survey with losses reaching IDR 242.26 billion in 2019 (ACFE Indonesia Chapter, 2020).

The survey results of ACFE (2022) also show that the majority of fraud cases result in losses in the banking and financial services industry sector. Fraud cases in the banking and financial services industry in the world reached 351 cases with a median loss of \$100,000. This condition causes banking to become an industry that has the largest number of fraud cases compared to other industries. Of the 351 cases of fraud in the banking and financial services industry, 11% of them were financial statement fraud (ACFE, 2022). In line with the survey, ACFE Indonesia

Chapter (2020) found that as much as 41.4% of banking and financial services suffered losses due to fraud. Surveys conducted by ACFE (2018, 2020, 2022) in the last five years show an increasing trend of financial statement fraud cases in the banking and financial services industry. The increase in the percentage of financial report fraud cases in the banking and financial services industry can be seen in Figure 1 below.

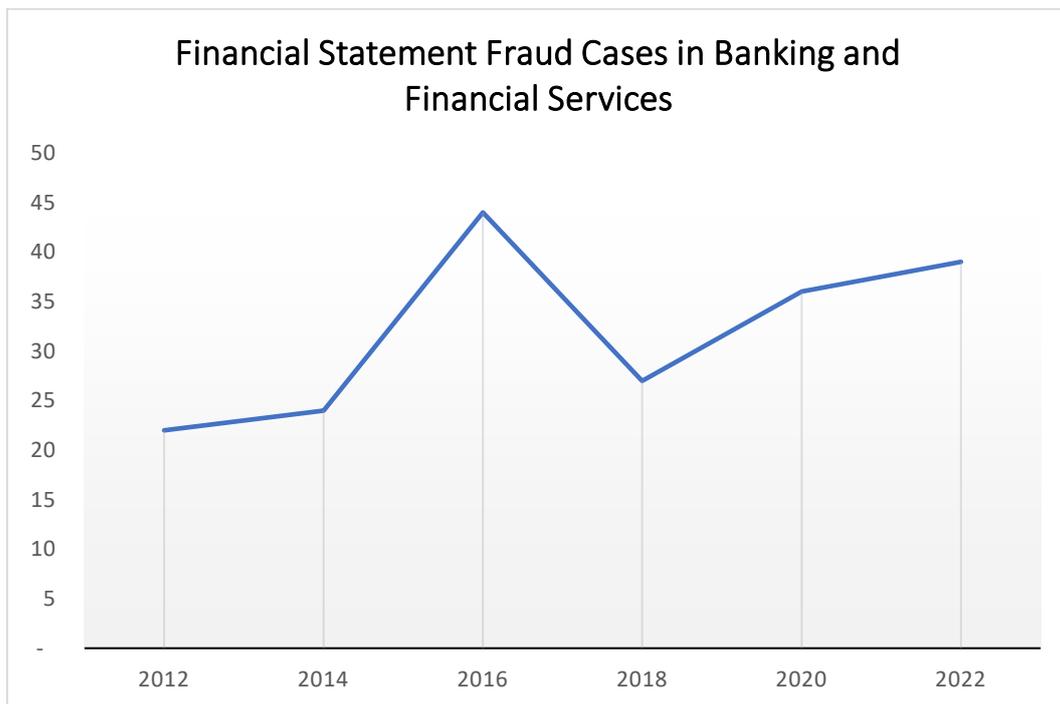


Figure 1. Financial Statement Fraud Cases in Banking and Financial Services

Figure 1 above shows that there has been an increase in the number of fraudulent financial reporting cases in the banking and financial services industry. Even though there was a decrease in the findings of financial statement fraud cases in 2016-2018, the trend of increasing the number of fraud cases occurred again in the following period. This shows that banks are still not free from the magnitude of the fraud risk.

In the period from 2020 to 2021, banking companies will also be faced with the Covid-19 pandemic which will have an impact on many things. The Covid-19 pandemic has caused the credit quality of customers to decline, and interest rates have become low and have continued from year to year (Badan Kebijakan Fiskal Kemenkeu RI, 2021). The pressure to maintain liquidity during deteriorating credit quality has forced banks to work extra hard to keep their business running properly and transparently without fraud.

The Covid-19 pandemic has also forced banking companies to make adjustments that can create loopholes for fraud. This form of adjustment is like switching activities from those that were originally face-to-face to online. This change makes direct supervision more difficult to do so the gap for fraud is getting bigger. A survey by ACFE (2022) shows several changes in activity

during the Covid-19 pandemic to be a factor that encourages someone to commit fraud. The results of the survey show that changes in work systems from offline to online (remote) are the biggest factors causing the fraud loopholes in companies to widen. Data obtained from the financial reports of banking companies on the Indonesia Stock Exchange show an increasing trend of discretionary loan loss provisions which reduced the quality of financial reports during the Covid-19 pandemic, as shown in Figure 2 as follow.

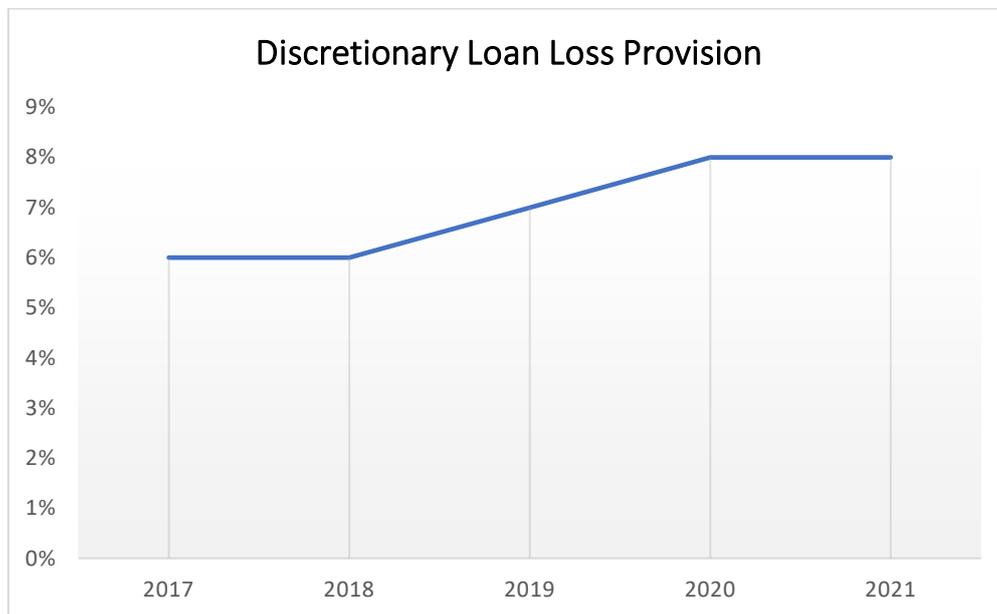


Figure 2. Discretionary Loan Loss Provision

Based on Figure 2 above, the amount of discretionary loan loss provision (DLLP) shows an increase in 2020. In 2018 and 2019 before the Covid-19 pandemic, the DLLP value was at 6% -7%. This figure then rose to 8% in 2020 which was the first year of the Covid-19 pandemic. This shows that during the pandemic there was an increase in the value of DLLP which had implications for a decrease in the quality of financial reports. If the financial statements have low quality, the risk of fraud in the financial statements will be even greater. This condition shows that efforts to prevent and detect fraud during the Covid-19 pandemic should not be ignored.

One approach that can be used to build fraud prevention and detection efforts is to use a fraud theory approach. One of the fraud theories that can be used is the Pentagon fraud theory. The Pentagon theory fraud model has more complete elements and is better able to describe the factors that cause someone to commit fraud compared to previous theories. The elements in the Pentagon theory fraud model require proxies to facilitate measurement in research. Proxies that can be used in research with fraud Pentagon theory include liquidity as a proxy for pressure, effective monitoring as a proxy for opportunity, external auditor quality as a proxy for rationalization, managerial ability as a proxy for competence, and CEO tenure as a proxy for arrogance.

There has not been much research on the dimension of fraud theory that uses liquidity as a proxy for pressure. Therefore, liquidity is a relevant proxy for describing management's motivation for committing fraudulent financial reporting in banking companies. Proxies that are often used include profitability ratios, namely, return on assets (ROA) and solvency ratios, namely the debt to equity ratio (DER) as done by Demetriades & Owusu-Agyei (2022), Khamainy et al. (2022), Nugraheni & Triatmoko (2014). Research conducted by Indarto & Ghazali (2016) on banking companies in Indonesia, shows that banking liquidity has a significant effect on financial statement fraud. Meanwhile, different results are shown by research Adi (2014) which states that banking liquidity has no effect on financial statement fraud.

Effective monitoring that exists within the corporate environment limits management's opportunities to commit fraud. Effective monitoring of the company in accordance with good corporate governance must be carried out by the board of commissioners through an independent commissioner. Therefore, effective monitoring can be a proxy for opportunity elements that are relevant for detecting fraud in banking companies. Research using the Covid-19 pandemic period, not many have seen the effect of effective monitoring on fraudulent financial reporting. Previous research in relation to effective monitoring conducted by Khamainy et al. (2022) shows that effective monitoring has a significant effect on fraudulent financial reporting. The results of research by Fitri et al. (2019), Ghafoor et al. (2022), and Tinambunan & Januarti (2022) proved that a small number of commissioners leads to fraudulent financial reporting. Different results are shown by the study Koharudin & Januarti (2021), Omukaga (2020), and Hasnan et al. (2013), which proved that the independence of the board has no effect on fraudulent financial reporting.

The quality of external auditors as a proxy for rationalization. Management will be more careful using the flexibility of accounting policies. The Covid-19 pandemic has made it possible for auditors to provide greater tolerance for the accounting policies used by management as a result of new things emerging. External auditors who fall into the Big Four category have better human resource capabilities than small public accounting firms. Therefore, auditors from the Big Four are more able to detect fraud. Research conducted by Apriliana & Agustina (2017) shows that the quality of external auditors has a significant effect on fraudulent financial statements. While research Syarif et al. (2021) show different results, namely the quality of external auditors has no effect on fraudulent financial statements.

The managerial ability proxy describes the element of competence. Managerial ability is the ability possessed by management in utilizing input (company resources) to produce output (income) (Hakim et al., 2022). In many studies such as in Demetriades & Owusu-Agyei (2022) and Khamainy et al. (2022), competence is proxied by changes in directors. In this research Managerial ability is used as a proxy for competence because it can be measured for each period. In addition, there has not been much research using the fraud theory approach that uses managerial ability as a proxy for competence.

The last element of the Pentagon theory fraud model is arrogance, shown by CEO tenure which describes how long a person has been CEO of the company. The definition of arrogance Howarth (2011) is an attitude that shows someone's superiority so that there is a feeling that internal control does not apply to him. CEOs who have long tenures have a high position in the company because they are considered senior and have a lot of experience and knowledge about

the ins and outs of the company. Research by Altunbaş et al. (2018) shows that CEOs who have relatively long tenures tend to produce less quality financial reports. Research results from Sumayyah & Ladepi (2020) show that there is a significant positive effect of CEO tenure on earnings management. Meanwhile, research conducted by Cahyadi & Davianti (2020) shows that there is no significant effect of CEO tenure on earnings management. Previous research by Tinambunan & Januarti (2022), Koharudin & Januarti (2021), Septriani & Handayani (2018), Tessa & Harto (2016) has also used more of the number of CEO photos shown in annual reports as a proxy for arrogance with no effect to financial statement fraud.

Previous studies such as research conducted by Hakim et al. (2022), Khamainy et al. (2022), Tinambunan & Januarti (2022), Koharudin & Januarti (2021), Indarto & Ghozali (2016), and Tessa & Harto (2016) have not used the pandemic years, namely 2020 and 2021 as objects in research. Therefore, it is important to test fraudulent financial statements in banking companies until the Covid-19 pandemic. Based on the explanation above, this study aims to test and provide empirical evidence regarding fraudulent banking financial statements by using the Pentagon theory which includes pressure (liquidity), opportunity (effective monitoring), rationalization (external auditor quality), competence (managerial ability), and arrogance (CEO tenure). The differences between this research and previous research include using the time before the Covid-19 pandemic, measuring pressure with liquidity, while previous research used more financial targets or external pressure, arrogance used CEO tenure, while various previous studies used photos of CEOs. For dependent measurements, discretionary loan loss provisions are used, whereas, in previous studies, the Beneish M-Score or F-Score was used. Thus, this research is expected to contribute to developing knowledge, adding new insights, and providing a source of reference for further research on financial report fraud. This research is also expected to assist companies in the financial sector and regulators in developing anti-fraud programs in the form of prevention, detection, and investigation of financial report fraud.

## **LITERATURE REVIEW AND HYPOTHESIS DEVELOPMENT**

Management fraud behavior can be explained through agency theory. In agency theory, there is a relationship between the principal and the agent in a company which is called an agency relationship. This relationship is defined by Jensen et al. (1976) as a contract involving one or more persons called the principal with another person called the agent to perform some services on behalf of the principal which involves delegating some decision-making authority to the agent. In the theory sparked by Jensen et al. (1976), the principal delegates his work to the agent in the hope that the agent will act in accordance with the interests of the principal. However, in this theory, both parties maximize their mutual utility so that the agent will not always act in the best interest of the principal (Jensen et al., 1976). Agents are considered to have opportunistic traits that prioritize their interests over the interests of the principal (Bendickson et al., 2016). This situation triggers a conflict of interest between the principal and the agent. This conflict of interest is referred to as an agency problem. The agent has more complete information regarding the field of work delegated to him, while the principal cannot fully receive all the information in full. This causes an information asymmetry between the principal and the agent. This information asymmetry then causes the possibility that the agent will commit moral hazard to fraud that is detrimental to the principal.

The emergence of a theory that discusses the factors that influence a person to commit fraud begins with the fraud triangle theory put forward by Cressey (1953). The fraud triangle model has been developed several times, as was done by Wolfe & Hermanson (2004) which is known as the fraud diamond theory. This theory adds another component to the fraud triangle namely capability. Apart from Wolfe & Hermanson (2004) fraud diamond theory, another theory that developed the fraud model triangles are fraud the Pentagon theory put forward by Howarth (2011). The Pentagon fraud model adds two elements to the existing elements of the fraud triangle model. The two elements are competence and arrogance. Understanding pressure, opportunity, and rationalization are the same as the fraud model triangle, while the definition of competence in Pentagon fraud has a similar meaning to capability in the fraud model diamonds (Pamungkas et al., 2018). The last element of the fraud Pentagon model is arrogance. According to Howarth (2011), arrogance is an attitude that shows someone's superiority so that there is a feeling that internal control does not apply to him. This arrogant attitude makes fraud perpetrators feel they have more power than others and ignore the internal controls around them. Therefore, arrogance makes someone dare to commit fraud.

ACFE (2022) categorizes fraud into three main categories, namely asset misappropriation, corruption, and financial statement fraud. Within these three categories, each has a different scheme for that to happen. According to Schilit (1993), fraudulent financial statements are actions taken intentionally to conceal or distort the actual financial performance of an entity. Based on the classification of fraud schemes made by ACFE (2022), financial statement fraud can occur through overstated or understated net income schemes. Each of these schemes can be explained in more detail through the same five sub-schemes, namely time differences, fictitious revenue, concealed liabilities and expenses, improper asset valuation, and improper disclosure.

The Covid-19 pandemic has had an impact on all aspects of life, including the emergence of financial statement fraud. The pandemic has created greater pressure and opportunity for banks to increase the risk of fraudulent financial reporting. Hsu & Yang (2022) conducted research by testing the effect of corporate governance on the quality of financial reporting during the Covid-19 pandemic. The results of the study show that the quality of financial reports during the Covid-19 pandemic was reduced compared to the pre-pandemic period. In other words, fraudulent financial reporting increased during the Covid-19 pandemic.

Research by Indarto & Ghozali (2016) shows liquidity has a significant negative effect on fraudulent financial reporting. If you look at the conditions during the Covid-19 pandemic, many banking companies carried out loan restructuring to adjust to the conditions of their customers. The large number of customers who failed to pay due to the Covid-19 pandemic which hampered the receipt of profits in their businesses caused the level of liquidity to decrease during the Covid-19 pandemic. This adds to the burden on banking companies to maintain liquidity according to the requirements in Bank Indonesia regulations so that management will be more motivated to commit fraud during the Covid-19 pandemic. Therefore, the Covid-19 pandemic caused greater liquidity pressure due to a decreased level of liquidity. This will have the opportunity to encourage management to commit fraud.

***H1: Liquidity has a negative effect on fraudulent financial reporting***

In accordance with the Pentagon theory that the more effective monitoring carried out by independent commissioners can reduce management's incentive to commit fraudulent acts. According to the change from ACFE (2022) offline to online work activities during the Covid-19 pandemic, it was the biggest factor that gave management the opportunity to commit fraud. Limited activities due to face-to-face activity restrictions make direct monitoring difficult for management by the board of commissioners, especially independent commissioners, thereby opening up more opportunities for management to commit fraud compared to before the Covid-19 pandemic. Research conducted by Abbott et al. (2000), Pras Maulida (2016), Rengganis et al. (2019) shows that effective monitoring has a significant negative effect on financial statement fraud.

***H2: Effective monitoring has a negative effect on fraudulent financial reporting***

Rationalization, in this study, is proxied by the quality of the external auditor. Companies that use qualified auditors for financial statement audit services such as the Big Four have a lower tendency to commit fraud. This can be caused because the Big Four auditors have more competence in conducting their audits. Therefore management will be more careful in using the flexibility of accounting policies. Research conducted by Apriliana & Agustina (2017) and Izzalqurny et al. (2019) shows the quality of external auditors has a negative influence on fraudulent financial statements.

***H3: External auditor quality has a negative effect on fraudulent financial reporting***

The Pentagon theory also explains that fraud cannot occur if a person does not have knowledge of how to commit fraud. Efficient managers certainly know a lot of information about the company so they can commit fraud without being noticed by stakeholders. Therefore, the more efficient management, the greater incentive to commit fraud. Managerial ability is a skill possessed by management in utilizing input in the form of company resources to produce output in the form of income (Hakim et al., 2022). The more expert management handles the company, the more information management has, so the information asymmetry between management and shareholders can widen. This condition can make it easier for management to carry out a moral hazard to fraudulent behavior. This is supported by research by Hakim et al. (2022) showing that management efficiency has a positive effect on earning management.

***H4: Managerial ability has a positive effect on fraudulent financial reporting***

CEOs who have long experience in the company tend to make high estimates because CEOs are optimistic about the results to be achieved. This sense of optimism comes with increasing experience in managing the company. In addition, because the CEO has long held a high position in the company, an attitude of seniority and superiority can of course emerge as he has a lot of knowledge and experience. According to this attitude Howarth (2011), it will create a sense of arrogance so that the CEO will feel immune to existing internal controls. Arrogance is one of the triggers for cheating in the Pentagon theory. Therefore, this condition will encourage the CEO to commit fraud within the company. Research Altunbaş et al. (2018) and Sumayyah & Ladepi (2020) shows that CEO tenure has a positive effect on the resulting fraudulent financial statements. This shows that the longer the CEO's tenure, the less the quality of the financial reports produced. More specifically Altunbaş et al. (2018) stated that banks can produce financial reports that have low quality if the CEO holds office for a long period of time.

***H5: CEO tenure has a positive effect on financial statement fraud***

## RESEARCH METHOD

The study uses five independent variables in the form of liquidity, effective monitoring, external auditor quality, managerial ability, and CEO tenure on fraudulent financial reporting of banking companies in Indonesia in 2017-2021. Each independent variable represents an element in the fraud model Pentagon. The research design can be seen in Figure 3 below.

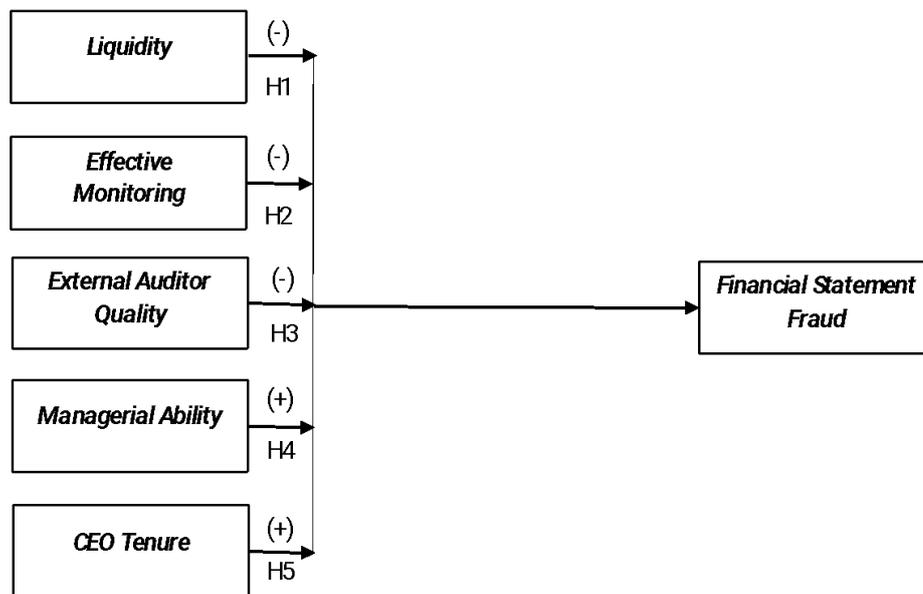


Figure 3. Research Design

The population used is all banking companies outside of Islamic banking that is listed on the Indonesia Stock Exchange (IDX) in 2017-2021. Based on the results of research data exploration, it was found that 47 banking companies were listed on the IDX. From the results of the selection there were 38 companies that could be used as samples. Details of the number of companies and samples used in the study are presented in table 1 below.

Table 1. Research Sample

Description	Company	Sample
Banking listed on the Indonesia Stock Exchange	47	235
Syariah banking	(4)	(20)
Banking that has not been registered since 2017	(3)	(15)
Banking with incomplete data	(2)	(10)
Total (38 x 5)	38	190

Data is collected from annual reports and databases available at the Bloomberg Laboratory, Faculty of Economics and Business, Diponegoro University. Explanation and measurement of each variable can be seen in table 2 below.

Table 2. Variable Measurement

Variable	Measurements	Formulas
		Dependent Variables
Fraud Financial Statements	Discretionary loan loss provisions (DLLP) (Kanagaretnam et al., 2003)	$LLP_{it} = \alpha_0 + \alpha_1 NPL_{it-1} + \alpha_2 CHNPL_{it} + \alpha_3 CHLOAN_{it} + \varepsilon_{it}$ .....(1)
		$DLLP_{it} = \varepsilon_{it}$ .....(2)
		Independent Variables
Liquidity	Loan-to-deposit ratio (Albrecht et al., 2010)	$LDR = \frac{Total\ loans}{Total\ deposits}$ .....(3)
Effective Monitoring	Percentage of Independent Board of commissioners (Abbott et al., 2000)	$BDIN = \frac{Number\ of\ independent\ commissioners}{Total\ number\ of\ board\ of\ commissioners}$ .....(4)
External Auditor Quality	External auditor quality category (DeAngelo, 1981)	DBIG4 = Dummy variable; (1) Big Four Accounting Firms; (0) Non-Big Four Accounting Firms
Managerial Ability	Data envelopment analysis (Demerjian et al., 2011)	$MAB = \frac{\sum_{i=1}^s u_i y_{ik}}{\sum_{j=1}^m v_j x_{jk}}$ .....(5)
CEO Tenure	The number of years (Altunbaş et al., 2018)	TEN = Disclosure of the length of time the CEO held his position

The data analysis method used in this study is the ordinary least square method which is run through the Eviews program. Methods of analysis also include correlation tests, goodness of fit models, classic assumption tests, and hypothesis testing. The parameter estimation model built can be seen in the following regression equation model.

$$FRAUD = \alpha + \beta_1 LDR + \beta_2 BDIN + \beta_3 DBIG4 + \beta_4 MAB + \beta_5 TEN + \varepsilon \text{ .....(6)}$$

## RESULTS AND DISCUSSION

Table 3 shows the results of the descriptive statistical analysis on the average financial statement fraud at 0.068, which means that the average bank increases the estimate of discretionary loan loss provisions by 6.8 % of the value of loan loss provisions (low). The lowest banking discretionary loan loss provision is at -0.098 and the highest at 0.166. This indicates that

the lowest rate for banks to reduce the estimated discretionary loan loss provision is 9.8 % of the loan loss provision value and the highest rate for banks to increase the discretionary loan loss provision figure is 16.6 % of the loan loss provision. The results of descriptive statistical analysis for the variable liquidity show that the average banking liquidity level is at 0.858 (marginal) with the lowest liquidity level of 0.122 and the highest liquidity level of 1.627. The minimum number of commissioners is 2 people and the maximum is 10 people with an average bank having a board of commissioners of 5 people. The effective monitoring variable has an average of 0.587 (low), the lowest is 0.330 and the highest is 1.000 (all boards of commissioners is independent commissioners). The results on the managerial ability variable show that the average banking technical efficiency is at 0.903, which means that the average bank is able to utilize 90.3% of input to produce optimum output (high). The lowest technical efficiency score is 0.440 (44%) and the highest is 1.000 (100%). The CEO tenure variable shows that the average CEO tenure is 5 years, with the longest tenure being 31 years, while the short tenure is 1 year.

Table 3. Descriptive Statistics of Parametric Variables

Variables	N	Min.	Max.	Means	std. Deviation
Financial statement fraud	190	-0.098	0.166	0.068	0.059
Liquidity	190	0.122	1.627	0.858	0.227
Effective monitoring	190	0.333	1.000	0.587	0.120
Managerial abilities	190	0.443	1.000	0.903	0.108
CEO Tenure	190	1.000	31.000	4.937	5.138

Source: Processed data, 2023

Table 4. Additional Descriptive Statistics of Parametric Variables

Variables	Means				
	2017	2018	2019	2020	2021
Financial statement fraud	0.06	0.06	0.07	0.08	0.08
Liquidity	0.86	0.90	0.91	0.85	0.77
Effective monitoring	0.58	0.58	0.60	0.59	0.59
Managerial abilities	0.94	0.90	0.90	0.87	0.91
CEO Tenure	4.63	4.89	4.68	5.11	5.37

Source: Processed data, 2023

Further analysis to see the impact of the Covid-19 pandemic on each variable is carried out as shown in Table 4. The level of financial statement fraud as measured by the magnitude of the discretionary loan loss provision (DLLP) shows an increasing trend in each of the pandemic cut-off years, namely 2019-2020. The increase in the average DLLP shows that during the Covid-19 pandemic, many companies increased their DLLP estimates so that the quality of their financial reports decreased and they were more at risk of financial report fraud. Different things are shown in the variable liquidity, effective monitoring has decreased in 2020-2021 compared to 2019. This shows that the level of banking liquidity has decreased during the Covid-19 pandemic. Whereas supervision carried out during the pandemic has decreased due to restrictions on meeting face-to-face, because all work has shifted to the online system. Furthermore, the decreased managerial ability in the early days of the Covid-19 pandemic in 2020 showed a decrease in the technical efficiency of managers due to changes in operational patterns from offline to online. Managers find it increasingly difficult to manage company input during the Covid-19 pandemic.

However, it managed to rise again after adjusting work patterns in 2021. Tenure CEOs show an upward trend from year to year considering they held this position during the observation period. This shows that there are not many CEO changes so that the CEO's tenure is increasing.

Table 5. Distribution of Frequency of External Auditor Quality

Categories	frequency	%frequency
(1) National	1	0.5%
(2) international	85	44.7%
(3) Big Four	104	54.8%
Total	190	100%

Source: Processed data, 2023

Table 5 shows the results of the frequency distribution showing that 54.8% of banks use Big Four firms as external auditors, 44.7% use national accounting firms affiliated with international accounting firms other than Big Four firms, and only 0.5% of banks use regular national accounting firms.

Table 6. Correlation Test Results

	LDR	BDIN	DBIG4	MAB	TEN
LDR	1,000				
BDIN	-0.072	1,000			
DBIG4	0.296	-0.085	1,000		
MAB	-0.032	0.130	0.130	1,000	
TEN	-0.153	0.017	0.067	-0.086	1,000

Source: Processed data, 2023

The results of the correlation analysis in table 6 show that most of the independent variables are not correlated with other variables. Therefore the model is considered good for use in research. Furthermore, to assess the goodness of fit of the model, it is necessary to calculate the value of the coefficient of determination, the value of the F statistic, and the value of the t statistic. The results of the goodness of fit test can be seen in table 7 below.

Table 7. The Goodness of Fit Test Results

Description	Results	Prob.
Adjusted R-square	0.34	
F-statistics	20,420	0.0000
t-statistics		
- Liquidity	0.034	0.0395
- Effective monitoring	-0.133	0.0000
- External auditor quality	0.037	0.0000
- Managerial abilities	-0.104	0.0019
- CEO Tenure	-0.003	0.0003

Source: Processed data, 2023

The goodness of fit test results shows the adjusted R-square value of 0.340 which indicates that the independent variable is able to explain 34% of the dependent variable. The value of the coefficient of determination of the regression model is still small because it is still below the number 0.8 but this is not a problem because the coefficient of determination is not the only

criterion for a model to be considered good (Ghozali, 2013). Then, the results of the F-statistic test show a significance value of 0.0000 below 0.05 so that the model is considered good or the model is fit.

Testing continued with the classical assumption test. The results of the normality test showed that the Jarque-Bera value is 8,574 with a probability of 0.014 which is still below 0.05 so the residuals are not normally distributed. In order to meet the assumption of normality the dependent variable data is transformed using the natural logarithm approach. The results then obtained the Jarque-Bera value to be 1,974 with a probability of 0,373 so that the residuals were normally distributed (Ghozali & Ratmono, 2017). The results of the heteroscedasticity test with the Glejser test showed a Chi-square probability value of 0.0340 so there were symptoms of heteroscedasticity. To avoid heteroscedasticity symptoms, White's Heteroskedasticity-Consistent Variance and Standard Error calculations are performed in order to correct the parameter values obtained by the OLS method (Ghozali & Ratmono, 2017). Calculation of White's Heteroskedasticity-Consistent Variance and Standard Error has been added to the parameter estimation so that the model is free from heteroscedasticity symptoms. Multicollinearity testing does not show a VIF value above 10 so that the model is free from multicollinearity. The autocorrelation test shows that the Durbin-Watson value is at 1,826. This figure is between dU and 4-dU ( $1.817 < 1.826 < 2.183$ ) so it indicates that the model is not experiencing autocorrelation.

Table 8. Hypothesis Test Results

Variables	Coefficients	t-statistics	Prob.	Description
Liquidity	-0.2310	-1.3546	0.1772	rejected
Effective Monitoring	1.1373	4.4121	0.0000	rejected
External Auditor Quality	-0.4818	-5.7345	0.0000	accepted
Managerial Ability	1.6670	3.5688	0.0005	accepted
CEO Tenure	0.0176	2.3637	0.0191	accepted

Source: Processed data, 2023

The results of hypothesis testing in table 8 show that the liquidity variable has a probability value 0.1772 which is greater than 0.05, so H1 is rejected. Therefore liquidity has no effect on financial report fraud. Even though the data in table 4 shows a decrease in the level of banking liquidity during the Covid-19 pandemic, it turns out that the liquidity factor was not a trigger for financial statement fraud. The decrease in liquidity was not significant so it did not affect the strength of the influence of liquidity on financial report fraud during the Covid-19 pandemic. The average LDR every year for banks is still in the safe corridor between 78% -92% so that it does not put pressure on management. The results of this study support the results of research Adi (2014) which states that liquidity, as measured through LDR, does not have a significant effect on financial distress. Previous research by Devi et al. (2020) stated that there was no significant difference between the liquidity of financial sector companies before and during the Covid-19 pandemic. However, the research results contradict the research Indarto & Ghozali (2016) showing that liquidity has a significant negative effect on fraudulent financial statements.

Testing on effective monitoring gives the result that monitoring is effective even though it has a probability value of 0.0000 or less than 0.05 but the direction of the coefficient is different from the hypothesis that was built, therefore, H2 is rejected. Thus effective monitoring does not have a negative effect on fraudulent financial statements. According to Anderson et al. (2003) even though the number of independent commissioners is large, if it is not supported by good monitoring activities, it will result in ineffective supervision. This was made possible due to work restrictions and changes in work models from offline to online during the pandemic so monitoring activities could not be carried out optimally. The results of this study support the study Hasnan et al. (2013), Aprilia (2017), Omukaga (2020), and Koharudin & Januarti (2021) proved that the independence of the board has no effect on fraudulent financial reporting. However, this study contradicts the results of the study by Hsu & Yang (2022) showing a significant difference between the number of independent commissioners before and during the pandemic on the quality of financial reporting.

Tests on the external auditor quality variable show a negative direction and a probability value of 0.000 or less than 0.05, so H3 is accepted. Thus the external auditor quality negative effect on financial statement fraud. Banks that use the Big Four the most, with the hope that supervision by qualified external auditors will prevent fraudulent financial statements. This is in accordance with the Pentagon theory, that supervision carried out by reputable accounting firms can prevent fraud due to their ability to conduct audits. The results of this study support research Tessa & Harto (2016), Apriliana & Agustina (2017), and Izzalqurny et al. (2019) showing the quality of external auditors have a negative influence on fraudulent financial statements. However, contrary to the results of the study, Syarif et al. (2021) showed different results, namely the quality of external auditors had no effect on fraudulent financial statements.

In Table 8 shows managerial ability has a probability value of 0.0005 or less than 0.05, so H4 is accepted. Thus managerial ability has a positive effect on financial report fraud. A positive coefficient indicates that the higher the ability of management, the more information they know. In agency theory, if management has a lot of information, it can cause a moral hazard to commit fraud. In a common financial crisis, managerial ability is positively correlated with the banking ability to deal with crises (Altunbas et al., 2011). The research results strengthen the research of Hakim et al. (2022) which shows managerial ability has a positive effect on earnings management.

The test results on CEO tenure show a positive direction of influence and a significance value of less than 0.05 (0.0191), thus H5 is accepted. CEO tenure has a positive effect on financial statement fraud. The longer the CEO's tenure, the less the quality of the financial reports produced, because long positions can cause someone's arrogance to appear because they have the power to do so. This is in accordance with the Pentagon theory, that arrogance can lead to cheating. Altunbaş et al. (2018) state that banks will produce lower-quality financial reports if the CEO holds office for a long period of time. During the Covid-19 pandemic, there were not many changes to the directors so the term of office of the previous directors increased. This of course will increase the tendency to commit fraud. The results of this study are in line with the research Altunbaş et al. (2018) and Sumayyah & Ladepi (2020) which show that CEO tenure has a significant positive effect on the quality of the resulting financial reports.

## CONCLUSION

Based on the results of the study, it was concluded that liquidity and effective monitoring have no effect on financial report fraud. Meanwhile, external auditors have a negative effect on fraudulent financial statements and management abilities and tenure CEO has a positive effect on fraudulent financial statements.

The implications of this study indicate that supervision carried out by a qualified accounting firm can prevent fraud. Meanwhile, the management capability and length of office of a CEO can actually trigger financial statement fraud. Therefore, companies need to improve the integrity of the management structure and the need to build anti-fraud program channels. Or improve the implementation of an existing anti-fraud program.

This study has the limitation that there are several banks for which data is not available, thereby reducing the number of observations. Suggestions for future research can add a longer observation year so that more observation data will be obtained.

## REFERENCE

- Abbott, L. J., Park, Y., & Parker, S. (2000). The Effects of Audit Committee Activity and Independence on Corporate Fraud. *Managerial Finance*, 26(11).
- ACFE. (2018). *Report to the NATIONS: 2018 Global Study On Occupational Fraud And Abuse*.
- ACFE. (2020). *Report to the Nations: 2020 Global Study on Occupational Fraud and Abuse*.
- ACFE. (2022). *Occupational Fraud 2022: A Report to the Nations*.
- ACFE Indonesia Chapter. (2016). *Survei Fraud Indonesia 2016*.
- ACFE Indonesia Chapter. (2020). *Survei Fraud Indonesia 2019*.
- Adi, A. B. (2014). Analisis Rasio-Rasio Keuangan untuk Memprediksi Financial Distress Bank Devisa Periode 2006-2011. *Journal of Business and Banking*, 4(1), 105–116.
- Albrecht, C., Turnbull, C., Zhang, Y., & Skousen, C. (2010). The relationship between South Korean chaebols and fraud. *Management Research Review*, 33, 257–268.
- Altunbas, Y., Manganelli, S., & Marques-Ibanez, D. (2011). *Bank Risk During the Financial Crisis Do Business Model Matter?* (No. 1394).
- Altunbaş, Y., Thornton, J., & Uymaz, Y. (2018). CEO Tenure and Corporate Misconduct: Evidence from US Banks. *Finance Research Letters*, 26, 1–8. <https://doi.org/10.1016/j.frl.2017.11.003>
- Anderson, K. L., Deli, D. N., & Gillan, S. L. (2003). *Boards of Directors, Audit Committees, and the Information Content of Earnings* (WP 2003-04).
- Aprilia. (2017). Analisis Pengaruh Fraud Pentagon Terhadap Kecurangan Laporan Keuangan Menggunakan Beneish Model Pada Perusahaan Yang Menerapkan Asean Corporate Governance Scorecard. *Jurnal ASET (Akuntansi Riset)*, 9(1), 101–132.
- Apriliana, S., & Agustina, L. (2017). The Analysis of Fraudulent Financial Reporting Determinant through Fraud Pentagon Approach. *Jurnal Dinamika Akuntansi*, 9(2), 154–165.
- Badan Kebijakan Fiskal Kemenkeu RI. (2021). Meneropong Arah Sektor Keuangan. *Warta Fiskal*, 3–5.
- Bendickson, J., Muldoon, J., Liguori, E., & Davis, P. E. (2016). Agency theory: the times, they are a-changin'. *Management Decision*, 54(1), 174–193. <https://doi.org/10.1108/MD-02-2015-0058>



# INTERNATIONAL STUDENTS' CONFERENCE ON ACCOUNTING & BUSINESS

**FORKOMMSA**  
**Magister Sains Akuntansi**  
**Universitas Jenderal Soedirman**

- Cahyadi, A., & Davianti, A. (2020). Pengaruh Faktor Internal dan Eksternal Perusahaan Terhadap Praktik Manajemen Laba di Perusahaan Publik Sektor Barang Konsumsi Periode 2014-2018. *International Journal of Social Science and Business*, 4(2), 172–181.
- Cressey, D. (1953). *Other People's Money: a Study in the Social Psychology of Embezzlement*. Free Press.
- DeAngelo, L. E. (1981). Auditor size and audit quality. *Journal of Accounting and Economics*, 3(3), 183–199.
- Demetriades, P., & Owusu-Agyei, S. (2022). Fraudulent Financial Reporting: An Application of Fraud Diamond to Toshiba's Accounting Scandal. *Journal of Financial Crime*, 29(2), 729–763. <https://doi.org/10.1108/JFC-05-2021-0108>
- Devi, S., Warasniasih, N. M. S., Masdiantini, P. R., & Musmini, L. S. (2020). The Impact of COVID-19 Pandemic on the Financial Performance of Firms on the Indonesia Stock Exchange. *Journal of Economics, Business, and Accountancy Ventura*, 23(2).
- Fitri, F. A., Syukur, M., & Justisa, G. (2019). Do The Fraud Triangle Components Motivate Fraud In Indonesia? *Australasian Accounting, Business and Finance Journal*, 13(4), 63–72. <https://doi.org/https://doi.org/10.14453/aabfj.v13i4.5>
- Ghafoor, A., Zainudin, R., & Mahdzan, N. S. (2022). Factors Eliciting Corporate Fraud in Emerging Markets: Case of Firms Subject to Enforcement Actions in Malaysia. In K. Martin, K. Shilton, & J. Smith (Eds.), *Business and the Ethical Implications of Technology* (pp. 281–302). Springer Nature Switzerland. [https://doi.org/10.1007/978-3-031-18794-0\\_15](https://doi.org/10.1007/978-3-031-18794-0_15)
- Ghozali, I. (2013). *Aplikasi Analisis Multivariate dengan Program IBM SPSS21 Update PLS Regresi* (7th ed.). Badan Penerbit Universitas Diponegoro.
- Ghozali, I., & Ratmono, D. (2017). *Analisis Multivariat dan Ekonometrika: Teori, Konsep, dan Aplikasi Eviews 10* (2nd ed.). Badan Penerbit Universitas Diponegoro.
- Hakim, L., Rahayu, D., & Endri, E. (2022). Managerial Ability, Corporate Governance, and IFRS Adoption as Determinants of Earnings Management: Evidence from Indonesia. *Problems and Perspectives in Management*, 20(1), 367–378. [https://doi.org/10.21511/ppm.20\(1\).2022.30](https://doi.org/10.21511/ppm.20(1).2022.30)
- Hasnan, S., Rahman, R., & Mahenthiran, S. (2013). Management Motive, Weak Governance, Earnings Management, and Fraudulent Financial Reporting: Malaysian Evidence. *Journal of International Accounting Research*, 12, 1–27. <https://doi.org/10.2308/jiar-50353>
- Howarth, C. (2011). *Why the Fraud Triangle is No Longer Enough*. [www.Crowe.Com](http://www.Crowe.Com).
- Hsu, Y. L., & Yang, Y. C. (2022). Corporate governance and financial reporting quality during the COVID-19 pandemic. *Finance Research Letters*, 47. <https://doi.org/10.1016/j.frl.2022.102778>
- Indarto, S. L., & Ghozali, I. (2016). Fraud Diamond: Detection Analysis on the Fraudulent Financial Reporting. *Risk Governance & Control: Financial Markets & Institutions*, 6(4), 116–123.
- Izzalqurny, T. R., Subroto, B., & Ghofar, A. (2019). Relationship between Financial Ratio and Financial Statement Fraud Risk Moderated by Auditor Quality. *International Journal of Research in Business and Social Science (2147- 4478)*, 8(4), 34–43. <https://doi.org/10.20525/ijrbs.v8i4.281>
- Jensen, M. C., Meckling, W. H., Benston, G., Canes, M., Henderson, D., Leffler, K., Long, J., Smith, C., Thompson, R., Watts, R., & Zimmerman, J. (1976). Theory of the Firm: Managerial

- Behavior, Agency Costs and Ownership Structure. In *Journal of Financial Economics* (Issue 4). Harvard University Press. <http://hupress.harvard.edu/catalog/JENTHF.html>
- Kanagaretnam, K., Lobo, G. J., & Mathieu, R. (2003). Managerial Incentives for Income Smoothing Through Bank Loan Loss Provisions. *Review of Quantitative Finance and Accounting*, 20, 63–80.
- Khamainy, A. H., Ali, M., & Setiawan, M. A. (2022). Detecting Financial Statement Fraud through New Fraud Diamond Model: The Case of Indonesia. *Journal of Financial Crime*, 29(3), 925–941. <https://doi.org/10.1108/JFC-06-2021-0118>
- Koharudin, A., & Januarti, I. (2021). Lack of Financial Reporting Using Crowe's Fraud Pentagon Theory. *Jurnal Dinamika Akuntansi*, 13(2), 148–157. <https://doi.org/10.15294/jda.v13i2.28602>
- Nugraheni, N. K., & Triatmoko, H. (2014). Analisis Faktor-Faktor yang Mempengaruhi Terjadinya Financial Statement Fraud: Perspektif Diamond Fraud Theory. *Jurnal Akuntansi Dan Auditing*, 14(2), 118–143.
- Omukaga, K. O. (2020). Is the Fraud Diamond Perspective Valid in Kenya? *Journal of Financial Crime*, 28(3), 810–840. <https://doi.org/10.1108/JFC-11-2019-0141>
- 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 Economics Sciences*, XIII(2), 549–560.
- Pras Maulida, S. (2016). Financial Statement Fraud Detection Using Perspective of Fraud Triangle Adopted By SAS No. 99. *Asia Pacific Fraud Journal*, 1(2), 317. <https://doi.org/10.21532/apfj.001.16.01.02.24>
- Rengganis, RR. M. Y. D., Sari, M. M. R., Budiasih, I. G. A. N., Wirajaya, I. G. A., & Suprasto, H. B. (2019). The Fraud Diamond: Element in Detecting Financial Statement of Fraud. *International Research Journal of Management, IT & Social Sciences*, 6(3), 1–10.
- Schilit, H. M. (1993). *Financial Shenanigans*. McGraw Hill, Inc.
- Septriani, Y., & Handayani, D. (2018). Mendeteksi Kecurangan Laporan Keuangan dengan Analisis Fraud Pentagon. *Jurnal Akuntansi Keuangan Dan Bisnis*, 11(1), 11–23.
- Sumayyah, & Ladepi, N. (2020). Pengaruh Komite Audit dan CEO Tenure terhadap Kualitas Laporan Keuangan. *Manajemen Dan Akuntansi*, 23(2). <https://doi.org/10.35591/wahana.v23i2>
- Syarif, F., Qorib, A., Siregar, S., & Muda, I. (2021). Factors Affecting Earnings Management Islamic Banking Companies at The Indonesia Stock Exchange Publication Year 2013-2019. *JIA (Jurnal Ilmiah Akuntansi)*, 6(2), 491–515.
- Tessa, C., & Harto, P. (2016). Fraudulent Financial Reporting: Pengujian Teori Fraud Pentagon pada Sektor Keuangan dan Perbankan di Indonesia. *Simposium Nasional Akuntansi XIX*.
- Tinambunan, O. S., & Januarti, I. (2022). Detection Of F-Score Model On Fraudulent Financial Reporting With Fraud Pentagon Theory. *Jurnal Reviu Akuntansi Dan Keuangan*, 12(1), 228–244. <https://doi.org/10.22219/jrak.v12i1.20605>
- Wolfe, D. T., & Hermanson, D. R. (2004). *The Fraud Diamond: Considering the Four Elements of Fraud*. <https://digitalcommons.kennesaw.edu/facpubs>
- Zimbelman, M. F., Albrecht, C. C., Albrecht, W. S., & Albrecht, C. O. (2014). *Forensic Accounting* (4th ed.). Penerbit Salemba Empat.



# INTERNATIONAL STUDENTS' CONFERENCE ON ACCOUNTING & BUSINESS

**FORKOMMSA**  
Magister Sains Akuntansi  
Universitas Jenderal Soedirman

## APPENDIX

### Descriptive Statistics for Parametric Variables

Sample: 1 190

	FRAUD	LDR	BDIN	MAB	TENURE
Mean	0.068064	0.858331	0.586520	0.902953	4.936842
Median	0.073774	0.865722	0.563492	0.954000	3.000000
Maximum	0.165818	1.626807	1.000000	1.000000	31.00000
Minimum	-0.098317	0.122394	0.333333	0.443000	1.000000
Std. Dev.	0.059152	0.226786	0.119949	0.108344	5.137909

### Correlation Test

	LDR	BDIN	DBG4	MAB	TENURE
LDR	1.000000	-0.071538	0.295671	-0.031956	-0.152911
BDIN	-0.071538	1.000000	-0.084573	0.129584	0.017025
DBG4	0.295671	-0.084573	1.000000	-0.129565	-0.066921
MAB	-0.031956	0.129584	-0.129565	1.000000	-0.086510
TENURE	-0.152911	0.017025	-0.066921	-0.086510	1.000000

### Goodness of Fit Test

Dependent Variable: FRAUD

Method: Least Squares

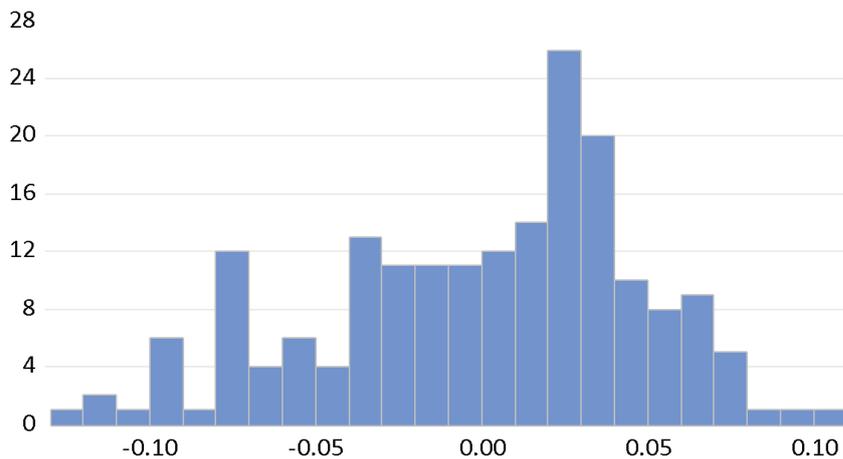
Date: 04/01/23 Time: 13:33

Sample: 1 190

Included observations: 190

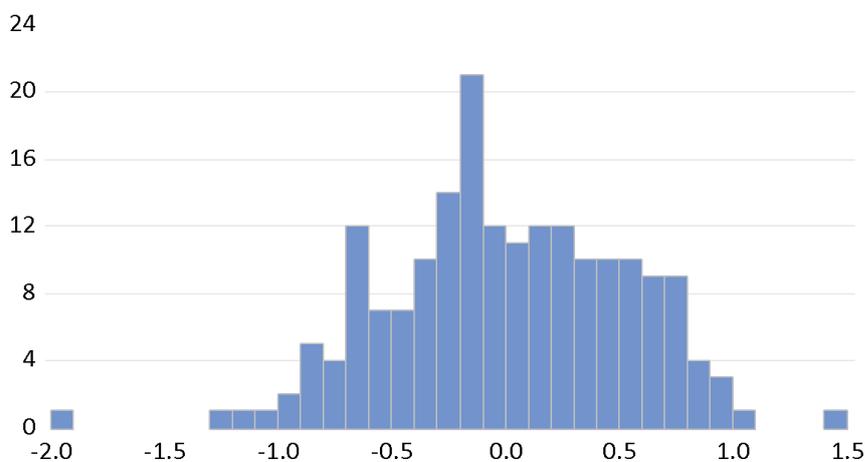
Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	0.203246	0.036827	5.518879	0.0000
LDR	0.033838	0.016321	2.073322	0.0395
BDIN	-0.133166	0.029514	-4.511894	0.0000
DBG4	0.036834	0.007408	4.972120	0.0000
MAB	-0.103854	0.032950	-3.151895	0.0019
TENURE	-0.002534	0.000692	-3.660169	0.0003
R-squared	0.356864	Mean dependent var		0.068064
Adjusted R-squared	0.339388	S.D. dependent var		0.059152
S.E. of regression	0.048078	Akaike info criterion		-3.200917
Sum squared resid	0.425314	Schwarz criterion		-3.098379
Log likelihood	310.0871	Hannan-Quinn criter.		-3.159380
F-statistic	20.41966	Durbin-Watson stat		1.944815
Prob(F-statistic)	0.000000			

### Initial Normality Test



Series: Residuals	
Sample 1 190	
Observations 190	
Mean	-6.72e-18
Median	0.010292
Maximum	0.101272
Minimum	-0.125849
Std. Dev.	0.047438
Skewness	-0.470369
Kurtosis	2.554922
Jarque-Bera	8.574391
Probability	0.013743

### Final Normality Test



Series: Residuals	
Sample 1 190	
Observations 190	
Mean	1.40e-17
Median	-0.017248
Maximum	1.418080
Minimum	-1.940566
Std. Dev.	0.522549
Skewness	-0.235394
Kurtosis	3.166436
Jarque-Bera	1.973962
Probability	0.372700



# INTERNATIONAL STUDENTS' CONFERENCE ON ACCOUNTING & BUSINESS

**FORKOMMSA**  
Magister Sains Akuntansi  
Universitas Jenderal Soedirman

## Heteroskedasticity Test

Heteroskedasticity Test: Glejser  
Null hypothesis: Homoskedasticity

F-statistic	2.494457	Prob. F(5,184)	0.0326
Obs*R-squared	12.06142	Prob. Chi-Square(5)	0.0340
Scaled explained SS	10.27865	Prob. Chi-Square(5)	0.0677

Huber-White-Hinkley (HC1) heteroskedasticity consistent standard errors  
and covariance

Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	-4.207521	0.473073	-8.894021	0.0000
LDR	-0.230964	0.170509	-1.354557	0.1772
BDIN	1.137275	0.257765	4.412061	0.0000
DBIG4	-0.481817	0.084021	-5.734459	0.0000
MAB	1.666965	0.467094	3.568803	0.0005
TENURE	0.017611	0.007451	2.363669	0.0191

## Multicollinearity Test

Variance Inflation Factors  
Date: 04/01/23 Time: 13:58  
Sample: 1 190  
Included observations: 190

Variable	Coefficient Variance	Uncentered VIF	Centered VIF
C	0.089991	166.0493	NA
LDR	0.013056	19.47350	1.179804
BDIN	0.030292	20.23663	1.080516
DBIG4	0.002960	2.527752	1.287843
MAB	0.088084	141.2017	1.201081
TENURE	2.70E-05	2.305446	1.123855



# INTERNATIONAL STUDENTS' CONFERENCE ON ACCOUNTING & BUSINESS

**FORKOMMSA**  
Magister Sains Akuntansi  
Universitas Jenderal Soedirman

## Final Ordinary Least Square Results

Dependent Variable: LNFRAUD

Method: Least Squares

Date: 04/01/23 Time: 15:55

Sample: 1 190

Included observations: 190

Huber-White-Hinkley (HC1) heteroskedasticity consistent standard errors  
and covariance

Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	-4.207521	0.473073	-8.894021	0.0000
LDR	-0.230964	0.170509	-1.354557	0.1772
BDIN	1.137275	0.257765	4.412061	0.0000
DBIG4	-0.481817	0.084021	-5.734459	0.0000
MAB	1.666965	0.467094	3.568803	0.0005
TENURE	0.017611	0.007451	2.363669	0.0191
R-squared	0.360898	Mean dependent var	-2.410328	
Adjusted R-squared	0.343531	S.D. dependent var	0.653646	
S.E. of regression	0.529602	Akaike info criterion	1.597686	
Sum squared resid	51.60794	Schwarz criterion	1.700224	
Log likelihood	-145.7802	Hannan-Quinn criter.	1.639223	
F-statistic	20.78082	Durbin-Watson stat	1.825586	
Prob(F-statistic)	0.000000	Wald F-statistic	23.38533	
Prob(Wald F-statistic)	0.000000			