

Journal of Contemporary Accounting

Volume 5 | Issue 2

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Article History:

Received : 2023-06-09

Revised : 2023-09-04

Accepted : 2023-09-04

Published: 2023-09-04

JEL Classification:

D73, M40

Keywords:

Covid-19 Fraud; Fraudulent financial statement; Auditing; Fraud hexagon

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DOI:

[10.20885/jca.vol5.iss2.art4](https://doi.org/10.20885/jca.vol5.iss2.art4)

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Abstract

This study investigates the impact of fraud hexagons on financial statement fraud in property and real estate sector companies listed on the Indonesian stock exchange before and after the covid-19 outbreak. The study's sample size was 168 data points. To evaluate the hypothesis, the data analysis approach employs logistic regression, as well as sample paired t-tests and the McNemar test. The findings revealed that financial statement fraud was influenced by pressure, rationalization, and capability. Meanwhile, chance, arrogance, and collaboration have little effect on financial statement fraud. The disparity in values between before and during the covid-19 epidemic had a substantial impact on financial stability. Other factors, on the other hand, indicate no significant differences in value when comparing before and after the Covid-19 epidemic. This study has consequences for stakeholders, the government, and the general public in terms of being aware of the likelihood of fraud when a phenomenon such as the covid-19 epidemic occurs.

Introduction

Financial statements contain information external and internal parties use to make company business decisions. Financial statements must be presented in a “true”, objective state and describe the company's financial condition. However, deliberate actions to change financial reports often occur (Dimitrijevic et al., 2020). One of the causes that can lead to misleading financial statements is the company's desire to show the public its best side. Moreover, the covid-19 pandemic at the beginning of 2020 caused disruptions in international financial markets, increasing the risk of financial fraud vulnerability (Karpoff, 2021).

Fraud in the Wake of Covid-19: Benchmarking Report (2020), Association of Certified Fraud Examiners (ACFE) states that fraud increased after covid-19. In November 2020, 79% of respondents reported an increase in overall fraud levels, a 77% rise from August 2020 and a 68% increase from May 2020. According to ACFE (2018), this figure has reduced since the covid-19 pandemic in 2018, when it reached 10% with a loss of USD 800,000. PwC, one of the Accounting Firms, claimed that fraud frequently occurs during downturns and crises, both of which occurred during the Covid-19 outbreak. When there is pressure on people, businesses, and the economy, fraudsters will be motivated to act (PwC, 2022).

This study will observe property sector companies. The property sector can provide a multiplier effect on companies in Indonesia because it is one of the leading sectors (Maharani &

Putra, 2022). The widespread influence makes the impact on the financial sector significant and indirectly makes employment increase significantly (Coordinating Ministry for Economic Affairs of the Republic of Indonesia, 2022). The Covid-19 pandemic entered Indonesia in 2020. The property and real estate industries are among those affected by the covid-19 epidemic. However, quarterly data taken from Bank Indonesia in 2020 shows that total residential property sales in 2020 experienced growth in the second and third quarters of 7.87%, so it can be interpreted that in the covid-19 pandemic, public interest in the property industry increased. Meanwhile, according to data from the Central Bureau of Statistics, the second quarter of 2020 witnessed a 5.32% fall, and Indonesia's economic growth in the first semester of 2020 compared to the first semester of 2019 shrunk by 1.26%. Along with these contributions, fraudulent financial statements are possible when economic conditions decline, but the sales volume in the property sector increases. From the various cases, it can be seen that various parties in the company have committed fraudulent financial statements. Various financial statement fraud measurements have been conducted, such as using the Data Mining approach (Herawati, 2017), Altman Z-Score (Maccarthy, 2017), Fraud Score Model (Putra & Dinarjito, 2021), Beneish M-Score (Beneish et al., 2012).

Several theories have been used to indicate fraud. Existing research has generally concentrated on certain components of fraud, such as the Fraud Triangle, which focuses on the factors of opportunity, pressure, and rationalization. While this model has made major contributions to understanding fraud dynamics, it falls short of capturing the broader range of circumstances that contribute to fraudulent behavior. The Hexagon of Fraud, with its added dimensions of capability and motivation, has received little attention in terms of individual and combined effects on fraud occurrence. Vousinas (2019) coined the phrase “development of the fraud triangle theory into a fraud hexagon theory”. Several studies, including research by Aprilia et al. (2022), Kusumosari and Solikhah (2021), Sagala and Siagian (2021), Sari and Nugroho (2021), and Tanuwijaya et al. (2022) employ the fraud hexagon hypothesis to detect fraudulent financial statements. Vousinas (2019) in fraud hexagon theory adds collusion as one of the fraud theory frameworks and refines the previous theory to include pressure, opportunity, rationalization, capability, arrogance, and collusion. Vousinas (2019), in his findings, revealed that fraud could occur when actors group or collude. However, there are still some things that could be improved in this theory because it has yet to provide precise measurements of how to measure collusion by managers and is only conceptual research (Nugroho & Diyanty, 2022). The Beneish M-Score approach will be used to assess fraudulent financial reporting in this study. The Beneish M-Score is a statistical calculation methodology that uses financial comparisons computed from corporate accounting data to determine whether or not a corporation has manipulated its profits (Dinasmara & Adiwibowo, 2020). This strategy is employed since the model properly identifies 71% of well-known fraud cases in the projected testing period (Beneish et al., 2012).

The COVID-19 pandemic has caused enormous losses for all business sectors. Many frauds occur in financial fraud (ACFE, 2020). To examine how the hexagon fraud component is tested before and during the covid-19 epidemic, prevention actions with hexagon fraud detection might be made. The purpose of this study is to look at how the components of the fraud hexagon affect financial statement fraud before and after the Covid-19 outbreak. This study adds to raising stakeholder and public knowledge of the occurrence of fraudulent financial statements that arise when there is an event, incident, or outbreak, considering particulars of these circumstances may lead to deception. This study demonstrates a disparity in the intrinsic worth of each element, allowing the value of the element to be compared prior to and throughout the covid-19 pandemic.

Literature Review

Fraud Hexagon

According to Sagala and Siagian (2021), the fraud hexagon is a theory that describes the factors of a company/organization committing fraud. The hypothesis, which evolved from Cressey (1953) fraud

triangle theory, incorporates components of pressure, opportunity, and rationalization. The idea is then expanded by Wolfe and Hermason (2004) by including a new element, namely capability, and is known as the fraud diamond hypothesis. Crowe (2011) provided a new perspective by including the element of hubris to complete what is known as the fraud pentagon. Vousinas (2019) devised and coined a more complicated theory in fraud detection by including collusion as the last factor.

Pressure's Effects on Financial Statement Fraud in the Years Before and During the Covid-19 Pandemic

Pressure is a condition that requires someone to act fraudulently. These conditions can arise due to several factors, including lifestyle, economic pressure, and other things that are included in financial and non-financial (Bawekes et al., 2018). According to Skousen et al. (2008), pressure can be stimulated when the company's performance collapses or falls below the entity's average performance. Companies are more inclined to tamper with financial statements when their financial stability is jeopardized by economic conditions (Himawan & Karjono, 2019). The covid-19 pandemic is one of the risk factors that allow companies to commit fraud as a result of an uncertain economy, and it has an impact on company income. According to the AICPA's Statement on Auditing Standards: SAS No.99, financial capacity leads to asset growth. Company assets demonstrate the amount of wealth owned by the company and serve as a tool for determining the company's financial situation. If the comparison of total assets from the previous year to the research year is unstable, it indicates the possibility of falsified financial statements. The increase in assets may indicate that the company is attempting to conceal its true financial situation (Suryawan & Budiasih, 2021). According to this study, the pressure described using financial stability has a positive impact on financial statement fraud. This prediction is based on the findings of Nurardi and Wijayanti (2021), Omukaga (2021), and Situngkir and Triyanto (2020).

H₁: Pressure has an effect on financial statement fraud in the years before and during the covid-19 pandemic.

Opportunity's Effects on Financial Statement Fraud in the Years Before and During the Covid-19 Pandemic

A situation in which a fraudster can commit fraud is referred to as an opportunity. Criminal acts require an opportunity to act (Sujeewa et al., 2018). Opportunities that occur not only hold a position of trust but also see the opportunity to convert funds that are entrusted and used for themselves. Weak internal controls can trigger opportunities for fraud (Lederman, 2021). The SAS No.99 statement on auditing standards regulates various conditions connected to the possibility of committing financial statement fraud, one of which being the nature of the industry. According to SAS No. 99, the nature of the industry is a risk that can occur when operational operations are dependent on estimates. This assessment will have an impact on the company's exposure to fraud. Estimated cost reduction is often carried out to lower costs associated with accounts receivable and sales (Narsa et al., 2023). Sales costs are sometimes altered in order to persuade investors that the company is profitable (Beneish, 1999). Management can utilize the account to perpetrate financial statement fraud due to the subjective judgment in calculating the value (Octani et al., 2021). According to the findings of this study, the opportunity represented by the nature of the industry has a positive impact on misleading financial statements. This forecast is based on research by Mintara and Hapsari (2021), and Sasongko and Wijyantika (2019).

H₂: Opportunity has an effect on financial statement fraud in the years before and during the covid-19 pandemic.

Rationalization's Effects on Financial Statement Fraud in the Years Before and During the Covid-19 Pandemic

Rationalization is the attitude of a person that excuses the deception they do (Cressey, 1953;

Dellaportas, 2013; Skousen et al., 2009). Rationalization is needed to convince the fraudster's actions so that the perpetrator feels confident and that they are doing what everyone would do if there were a change (Aiman et al., 2022). The company's control over this justification greatly influences the rationalization that causes fraud (Bujaki et al., 2019). Total accrual to total assets rationalization can be shown because the accrual concept can record/record a transaction even if there is no cash out/in, allowing management to simply perpetrate fraud (Sabatian & Hutabarat, 2020). Total accrual to total assets can reveal the amount to which cash can be used as the basis for the profit presented/reported, hence a considerable growth in non-cash working capital can indicate that manipulation is taking place in the company (Ramírez-Orellana et al., 2017). According to this study, rationalization outlined using total accrual to total assets has a positive impact on financial statement fraud. This prediction is based on the findings of Aviantara (2023), Komang et al. (2019), and Evana et al. (2019).

H₃: Rationalization has an effect on financial statement fraud in the years before and during the covid-19 pandemic.

Capability's Effects on Financial Statement Fraud in the Years Before and During the Covid-19 Pandemic

According to Wolfe and Hermanson (2004), one of the factors that can contribute to fraud is capability, because corporate fraud cannot occur unless someone has the ability to commit it. Fraudsters must be able to see the opportunities that exist so that the fraud can be carried out with the right trick (Christian et al., 2019). Capability denotes a fraudster's ability to influence the existence of fraud (Smith et al., 2021; Vousinas, 2019; Wolfe & Hermanson, 2004). The change of directors can be used to cover up fraud perpetrated by previous directors in office, and it can also reflect political motives in replacing the previous directors (Mukaromah & Budiwitjaksono, 2021). According to Wolfe & Hermanson (2004), the change of directors represents a conflict of interest. This move could be an attempt to cover up or dismiss directors who are suspected of fraud (Putra, 2019). This study predicts that capability defined by the change of directors has a beneficial effect on financial statement fraud. This prediction is based on the findings of Larum et al. (2021) and Pamungkas et al. (2018).

H₄: Capability has an effect on financial statement fraud in the years before and during the covid-19 pandemic.

Arrogance's Effects on Financial Statement Fraud in the Years Before and During the Covid-19 Pandemic

Arrogance is the nature of a person who thinks he has power over everything by ignoring internal control in the company, manipulating strategies, and seeing environmental situations to benefit himself (Crowe, 2011). The presence of CEO duality can indicate arrogance. CEO duality is the dominance of the power of the CEO who holds other positions (such as chairman of the board directors), which can indicate the board of directors' independence (Sasongko & Wijyantika, 2019). The CEO's dual role will cause agency problems (Core et al., 1999). This can indicate fraud when there is CEO duality because this attitude will make someone feel authorized to do something and think that internal control in the company is not a barrier to fraud (Dewi & Anisykurlillah, 2021). This study predicts that arrogance as represented by CEO dualism has a positive effect on financial statement fraud. This prediction is based on the findings of Amirah et al. (2020), Kusumosari and Solikhah (2021), and Widyatama and Setiawati (2020).

H₅: Arrogance has an effect on financial statement fraud in the years before and during the covid-19 pandemic.

Collusion's Effects on Financial Statement Fraud in the Years Before and During the Covid-19 Pandemic

Collusion is a condition where two or more people make agreements and cooperate with wrong goals so that these actions can create losses and fraud by other parties (Vousinas, 2019). The

political connection between two people, namely the company and the government, will increase the gap in committing financial statement fraud freely (Sabrina et al., 2020). This attitude can degrade corporate governance and contribute to the high level of financial statement fraud (Christian & Visakha, 2021). This is further supported by Chaney et al. (2011) research, which claims that political connections can drive the creation of misleading business financial statements. According to this study, collusion described through political links has a positive impact on financial statement fraud. This forecast is based on the findings of Nadzilyah and Primasari (2022), Nurchoirunanisa et al. (2020), and Wang et al. (2022).

H₆: Collusion has an effect on financial statement fraud in the years before and during the covid-19 pandemic.

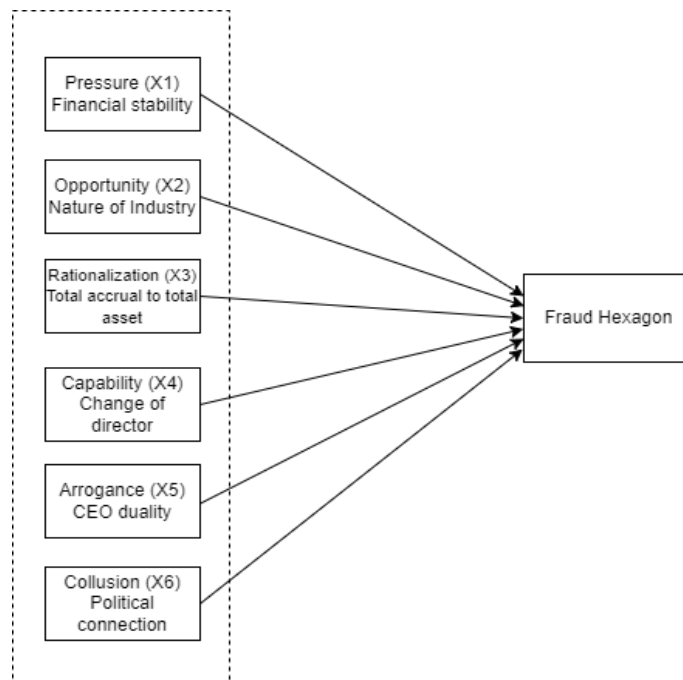


Figure 1. Conceptual Framework

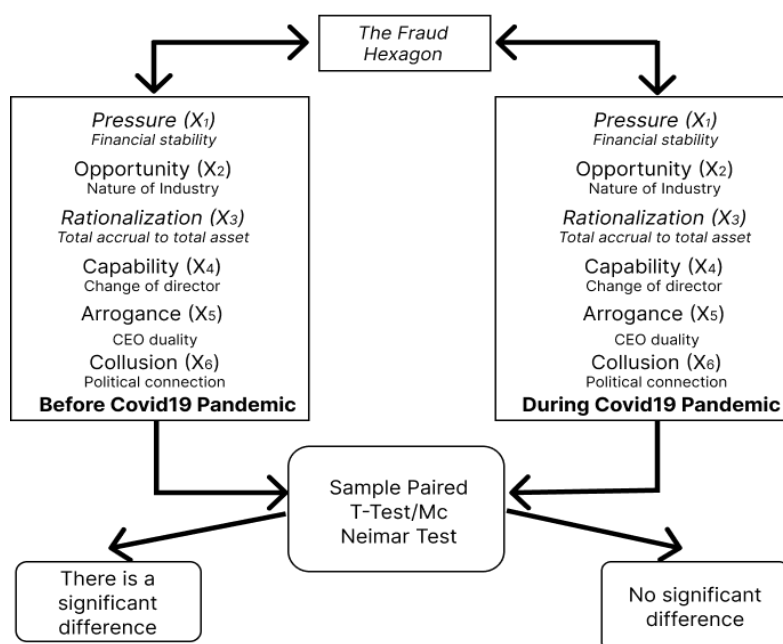


Figure 2. Mc Nemar and Sample Paired T-Test Framework

Research Method

This research is quantitative because it analyzes based on scientific and statistical methods. The fraud hexagon is the independent variable, and financial statement fraud is the dependent variable. Table 1 shows the research instrument.

Table 1. Research Instrument

Variable		Measurement
Fraudulent Financial Reporting (FRAUD)	Beneish M-Score (Beneish, 1999)	$-4,84 + 0,528 * GMI + 0,920 * DSR + 0404 * AQI + 0892 * SGI + 4,697 * ACCRUALS - 0,327 * LEVI + 0,115 * DEPI - 0,172 * SGAI$ If the m-score value is greater than 2.22, the company is likelihood to commit financial statement fraud. If the m-score is less than 2.22, the company is unlikely to commit financial statement fraud.
Pressure (ACHANGE)	Financial Stability (Nurardi & Wijayanti, 2021)	$\frac{Total\ Assets_t - Total\ Assets_{t-1}}{Total\ Assets_t}$
Opportunity (RECEIV)	Nature of industry (Octani et al., 2021)	$\frac{Receivable_t + Receivable_{t-1}}{Sales_t + Sales_{t-1}}$
Rationalization (TATA)	Total accrual to total asset (Made Irma Lestari & Florensi, 2022)	$\frac{Income\ Before\ Extraordinary\ items - Cash\ From\ Operation}{Total\ Asset}$
Capability (DCHANGE)	Change of director (Purwaningtyas & Ayem, 2021)	1 = If there is change of director 0 = If there is no change of director
Arrogance (CEODUAL)	CEO duality (Tanuwijaya et al., 2022)	1 = If there is CEO duality 0 = If there is no CEO duality
Collusion (POLL)	Political connection (Kusumosari & Solikhah, 2021)	1 = If there is political connection 0 = If there is no political connection

In this study, the population is the property and real estate industry listed on the Indonesia Stock Exchange. This study included 42 companies throughout the course of four (four) years, from 2018 to 2021. Purposive sampling is used, and various requirements are established. The sample selection process is detailed in Table 2, which shows the final sample of 42 companies for four years, with a total of 168 firm-year observations.

Table 2. Purposive Sampling

Description	Firm	Firm years
Companies in the property and real estate sectors that are listed on the Indonesia Stock Exchange for the year 2018-2021.	84	336
Excluded		
Companies in the property and real estate sectors that are not continuously listed on the Indonesia Stock Exchange and have not published audited financial statements for the 2018-2021 fiscal year.	39	156
The study requires property and real estate industry organizations that require accurate data.	3	12
Final sample	42	168

This sample selection technique is based on the year preceding the covid-19 pandemic (2018-2019) and the year the covid-19 pandemic first occurred in Indonesia (2020-2021). All variables are predicted to have a positive and statistically significant impact. This research performed two models using logistic regression statistical analysis and two different tests (paired sample t-test & Mc Nemar). To determine how the independent variable affects the dependent variable, logistic regression analysis was employed. T-test using paired sample t-test for variables that use ratio indicators and Mc Nemar for variables that use nominal indicators. This t-test was used to determine how the fraud relationship's results altered before and during the covid-19 pandemic. For logistic regression statistical analysis, the equation can be written as:

$$\frac{FRAUD}{1 - FRAUD} = \beta_0 + \beta_1ACHANGE + \beta_2RECEIV + \beta_3TATA + \beta_4DCHANGE + \beta_5CEODUAL + \beta_6POLL$$

The formula $-4.84 + 0.920 * DSR + 0.528 * GMI + 0.0404 * AQI + 0.0892 * SGI + 0.115 * DEPI - 0.172 * SGAI + 4.697 * ACCRUALS - 0.327 * LEVI$ is used to calculate the Beneish m-score. When or where: Days The Sales In Receivable Index (DSR) is the ratio of the difference between receivables and revenue growth. Gross Margin Index (GMI) is the ratio of the difference in gross margin in year t-1 to gross profit in year t. When the result is more than one, profit is reduced; Asset Quality Index (AQI) is the ratio of non-current assets other than property, plant, and equipment to total assets. The Asset Quality Index (AQI) compares asset quality in year t to asset quality in year t-1; the Sales Growth Index (SGI) compares sales in year t to sales in year t-1. SGI is used to regulate growth perception. If the company's growth experiences a big drop in stock price, signalling a slowdown, the company will be under pressure to manipulate results. The Depreciation Index (DEPI) compares the depreciation rate in year t-1 to that in year t; the Sales General and Administrative Expense Index (SGAI) compares sales, general, and administrative expenses in year t to the corresponding measure in year t-1. Reduced administrative efficiency (more fixed SGA expenses) increases the likelihood of earnings manipulation; The leverage index (LVGI) is calculated by comparing the ratio of total debt to total assets in year t to the ratio in year t-1. When LVGI exceeds one, it implies an increase in leverage. Total Accruals to Total Assets (TATA) is determined as the change in working capital accounts other than cashless depreciation; LVGI is added to examine the incentives in debt covenants to manipulate profitability. Total accruals and partitions of total accruals are both used to investigate the extent to which managers employ discretionary accounting decisions to change earnings. This ratio indicates when cash earnings do not match accounting earnings (Beneish et al., 2012).

Result and Discussion

Descriptive Statistic

The descriptive statistical analysis for all variables is shown in Table 3 and 4. The mean, median, standard deviation, lowest, and maximum values are all displayed. Over the course of four years, approximately 56% of organizations indicated fraud, while the remaining 42% did not. It can be noted that 49% of corporations had political ties, while only 14% of enterprises changed their board of directors throughout the observation year. There is also a high CEO duality in property and real estate companies, with 62%. In the analysis, the data displayed vary except for the arrogance indicated by CEO duality. The mean (median) is 0.62 (1.00). This shows that in descriptive statistics, variables except arrogance have varied data. This happens because the variation in property and real estate companies is significantly different.

Table 3. Descriptive Statistic of Ratio Variable

	Minimum	Maximum	Mean	Std. Deviation
ACHANGE	0.0012	10.0354	0.3320	1.4192
RECEIV	0.0001	5.5344	0.3229	0.5577
TATA	0.0000	0.6562	0.0509	0.0866

Table 4. Descriptive Statistic of Nominal Variable

	Valid 1				Valid 0			
	Freq	Percentage	Valid (%)	Cumulative (%)	Freq	Percentage	Valid (%)	Cumulative %
FRAUD	96	56.8	57.1	57.1	72	42.6	42.9	100
DCHANGE	24	14.2	14.3	100	144	85.2	85.7	85.7
CEODUAL	105	62.1	62.5	100	63	37.3	37.5	37.5
POLL	83	49.1	49.4	100	85	50.3	50.6	50.6

Hosmer and Lemeshow Test

This test is used to check whether the regression model is feasible. If the probability is greater than 0.05, the model is viable since there is no difference between the anticipated and observed classifications. It is acceptable because the data can predict observations. Table 5 shows the data has a significant value of 0.81, indicating that the data is good.

Table 5. Hosmer and Lemeshow Testing

Step	Chi-Square	Significance
1	4.454	0.814

Overall Model Fit Testing

Table 6 compares the initial -2Log Likelihood at block number 0 to the final -2Log Likelihood at block number 1. The first -2Log Likelihood of block number = 0 is 228.333, and the last -2Log Likelihood of block number = 1 is 208.441. This decrease in -2Log Likelihood indicates that the hexagon fraud variable fits with the data when the model is entered.

Table 6. Overall Model Fit Testing

Overall Model Fit Testing	
-2LogL Block Number at 0	228.334
-2LogL Block Number at 1	208.441

Coefficient of Determination

The coefficient of determination test results show that the value of Nagelkerke R Square is 0.15, or 15%. This demonstrates that the fraud hexagon variable (pressure, opportunity, rationalization, capability, arrogance, and collusion) may explain 15% of the variance in financial statement fraud. The remaining 85% is explained by factors not investigated in this study. Table 7 shows the coefficient of determination.

Table 7. Coefficient Determination

Cox & Snell R Suare	-2 Log Likelihood	Nagelkerke Square	R
0.112	208.411	0.151	

Omnibus Model Coefficient Tests

The Omnibus test of the Model Coefficient demonstrates simultaneous testing in logistic regression. According to Table 8, the significance value is 0.003 or less than 0.05. Significant results less than 0.05 show that the independent variables (pressure, opportunity, rationalization, capability, arrogance, and collusion) influence financial statement fraud concurrently.

Table 8. Omnibus Tests

		Chi-square	Sig.	df
Step 1	Step	19.923	0.003	6
	Block	19.923	0.003	6
	Model	19.923	0.003	6

Hypothesis Testing

The hypothesis testing in this study is divided into two parts: testing the effect of the fraud hexagon (pressure, opportunity, rationalization, capability, arrogance, and collusion) on financial statement fraud and t-testing the difference in fraud hexagon during the pre-pandemic (2018-2019) and pandemic (2020-2021) periods. The logistic regression hypothesis test is used to see the effect, whereas the paired sample t-test and McNemar hypothesis test is used to see differences in the value of the fraud hexagon before and during the epidemic.

Table 9. Hypothesis Result

Variable	Coefficient	Sig.	Description
ACHANGE	-0.920	0.033	Rejected
RECEIV	0.165	0.642	Rejected
TATA	9.690	0.010	Accepted
DCHANGE	1.048	0.040	Accepted
CEODUAL	-0.022	0.951	Rejected
POLL	-0.111	0.753	Rejected

Additional Testing

Sample Paired T-Test & Mc Nemar

Table 10. Sample Paired T-Test

	Pre_FRAUD & During_FRAU D	Pre_DCHANGE & During_DCHANG E	Pre_CEODUAL & During_CEODUA L	Pre_POLL & During_POL L
Chi-Suare	0.000			
Asymp. Sig.	1.000			
Exact Sig. (2-tailed)	1.00	1.00	0.302	0.648

Table 11. McNemar Test

		t	Sig. (2-tailed)
Pair 1	Pre_ACHANGE & During_ACHANGE	2.468	0.016
Pair 2	Pre_RECEIV & During_RECEIV	0.270	0.788
Pair 3	Pre_TATA & During_TATA	0.965	0.489

Pressure's Effects on Financial Statement Fraud in the Years Before and During the Covid-19 Pandemic

With a significant value of 0.033, the results suggest that the pressure described by financial stability affects misleading financial statements. However, while the findings have an impact on financial statement fraud, this variable does not support the research hypothesis because it has a constant result of -0.920, indicating that pressure has a negative effect. The findings of this research indicate that the company's solid financial status will lower the danger of misleading financial statements. When the company's financial situation is steady, it can operate its business effectively. Furthermore, when the company's financial situation is fragile, the risk of misleading financial

statements increases (Afiah & Aulia, 2020). These findings are consistent with those of Felicia and Tanusdjaja (2020), Aprilia and Furqani (2021), and Riskiani and Yanto (2020), but not with those of Nurardi and Wijayanti (2021), Omukaga (2021), and Situngkir and Triyanto (2020).

In this study, a paired t-test sample was utilized to determine the pressure value before the pandemic (2018-2019) and during the pandemic (2020-2021) using the financial stability proxy. The results revealed a significant level of 0.016. The significant level of 0.05 implies that there is a significant difference in the importance of financial stability prior to and during the Covid-19 outbreak. The considerable difference in the value of financial stability compared to the co-19 pandemic was caused by the Indonesian economic slump, which affected all industries. As a result, when a pandemic strikes Indonesia and has a large impact on the property and real estate sectors listed on the Indonesia Stock Exchange, it results in financial difficulties. This strengthens the existence of fraudulent financial statements when the covid-19 epidemic begins.

Opportunity's Effects on Financial Statement Fraud in the Years Before and During the Covid-19 Pandemic

The findings reveal that the potential described by the industry's nature has no effect on financial statement fraud. A significant value of 0.62 or 0.05 indicates this. As a result, the opportunity variable contradicts the research hypothesis. The profitable accounts receivable percentage did not cause corporate management to commit financial statement fraud during the observation period. Personal accounts receivable assessment is only occasionally a location for management to commit fraud. This is according to agency theory (Jensen & Meckling, 1976). Management is an agency, while shareholders are the principal, as shareholders trust management to manage. As a result, in order to maintain trust, management will take steps to improve the company's financial situation. The research data show that using the accounts receivable ratio, industrial situations are not used as possibilities for agents (management) to perpetrate fraud. Similarly, favorable industrial conditions will limit the possibility of financial statement fraud (Ijudien, 2018). This study is consistent with that of Kayoi and Fuad (2019), Octani et al. (2021), and Tiapandewi et al. (2020), but not in line with that of Mintara and Hapsari (2021), Omukaga (2021), Sasongko and Wijyantika (2019) because the study said that the opportunity proxied by receivable has an effect on fraudulent financial statements.

In this study, a paired t-test sample was used to determine the worth of prospects before the pandemic (2018-2019) and during the pandemic (2020-2021) using the nature of industry as a proxy. The significance level was calculated to be 0.78. The significance level of 0.05 shows that there is no significant variation in the value of the industry's nature before and after the Covid-19 pandemic. The existence of a pandemic does not indicate management's desire to commit fraud because the turnover of receivables in property and real estate companies is quite long, plus the covid-19 condition which causes some companies to make concessions to customers by delaying the payment. As a result, property and real estate sector enterprises do not take advantage of the existence of covid-19 to establish optimal industrial conditions by subjective assessments or account receivable manipulations.

Rationalization's Effects on Financial Statement Fraud in the Years Before and During the Covid-19 Pandemic

The findings indicate that total accrual to total assets rationalization affects fraudulent financial statements. A significant value of 0.01 or 0.05 and a constant of 9.69 show that rationalization has a favorable effect on misleading financial statements. Companies that record accruals are more prone to distort financial statements because management can record when transactions occur even though cash has not been received; this is done to seem to shareholders as having a high income. This is according to Jensen and Meckling (1976) Johnson's agency hypothesis. This study is

consistent with that of Komang et al. (2019), Evana et al. (2019), and Suryani and Fajri (2022), but not in line with that of Faradiza (2019), Mukaromah and Budiwitjaksono (2021), and Sari and Rofi (2020).

Utilizing the total accrual to total assets proxy, additional test research was undertaken utilizing the paired t-test sample to determine the utility of rationalization prior to the covid-19 pandemic (2018-2019) and during the covid-19 pandemic (2020-2021). The results revealed a significant level of 0.48. When the covid-19 pandemic does not increase or decrease management's desire to increase or decrease total accruals to total assets, the significance result > 0.05 shows that there is no significant difference in the company's total accrual value to total assets before and during the covid-19 pandemic. Because total accruals to total assets also represent the amount of working capital that is derived from sources other than cash changes, while cash declines during the covid-19 epidemic. As a result, there is no discernible change in the covid-19 epidemic.

Capability's Effects on Financial Statement Fraud in the Years Before and During the Covid-19 Pandemic

The findings indicate that capability, as proxied by a change in directors, influences financial statement fraud. This is indicated by a significance value of 0.04 or 0.05 and a constant value of 1.04, indicating that the capability has a positive effect on fraudulent financial statements—changing the board of directors to cover up the fraud that occurred and get rid of directors who already know about the company's fraud. Political motivations for removing directors will make it simpler to perpetrate fraud. This research is consistent with that of Larum et al. (2021), Pamungkas et al. (2018), and Triyanto (2019), but not in line with that of Hendrianto et al. (2023), Mintara and Hapsari (2021), and Khairunnisa and Setiawati (2022).

The McNemar test was used in the study to determine the value of the capability prior to the covid-19 pandemic (2018-2019) and during the covid-19 pandemic (2020-2021) by using the proxy for changing directors. The significance level was set at 1.00. The significance level of 0.05 implies that there is no significant difference in the value of the company's change of directors prior to and during the covid-19 epidemic. The value of the change in directors prior to and during the pandemic reduced by 1.1%. Despite dwindling finances and sales, the company continues to operate due to the covid-19 epidemic. Rather than modifying the firm structure, the company concentrates on stabilizing financial conditions. When covid-19 entered Indonesia, there were no alterations in circumstances, save for the frequency of changes in directors, which could imply financial statement fraud.

Arrogance's Effects on Financial Statement Fraud in the Years Before and During the Covid-19 Pandemic

The findings reveal that arrogance, as represented by CEO duality, has no effect on financial statement fraud. A significant value of 0.95 or greater than 0.05 indicates this. As a result, the arrogance variable does not support the research hypothesis; possibly organizations who use CEO duality believe the CEO has excellent intellectual ability and is trusted to boost corporate success by designating him CEO despite holding two responsibilities. This research is consistent with that of Preicilia et al. (2022), Sasongko and Wijyantika (2019), and Tanuwijaya et al. (2022), but not in line with that of Amirah et al. (2020), Kusumosarin and Solikhah (2021), and Widyatama and Setiawati (2020).

The Mc Nemar test was utilized in the study to determine the value of arrogance prior to the covid-19 pandemic (2018-2019) and during the covid-19 pandemic (2020-2021) using the CEO duality proxy. The results revealed a significant level of 0.30. The significance level of 0.05 shows that there is no significant difference in the value of the company's CEO duality prior to and during the covid-19 epidemic. The difference in the value of CEO duality between before and after the

epidemic grew by only 0.9%. There is no notable difference or rise in organizations implementing CEO duality because, despite the covid-19 pandemic, top management checks and balances are adequate, therefore CEO duality is unnecessary.

Collusions Effects on Financial Statement Fraud in the Years Before and During the Covid-19 Pandemic

The findings reveal that collusion as mediated by political connections has no effect on financial statement fraud. A significant value of 0.75 or greater than 0.05 indicates this. As a result, the collusion variable contradicts the research hypothesis. Because the government directly regulates the enterprise, the existence of political links may improve its performance (Utamaningsi, 2020). The company's political connections will make it simpler to obtain financing and contracts (Kartikawati et al., 2020). The corporation uses this to assist its financial activity, not to perpetrate financial statement fraud. This research is consistent with that of Isalati et al. (2023), Rizqi and Purwanto (2022), Setyono et al. (2023), but not in line with that of Nadziliyah and Primasari (2022), Nurchoirunanisa et al. (2020), and Wang et al. (2022).

The Mc Nemar test was employed in this study to assess the value of collusion prior to the covid-19 pandemic (2018-2019) and during the covid-19 pandemic (2020-2021) using the political link proxy. The significance level was calculated to be 0.64. The significance level of 0.05 suggests that there is no statistically significant difference in the value of business ties before and after the covid-19 epidemic. The value of political relationships before and after the epidemic declined by 1.0%. Because political/government conditions have also decreased, there is no substantial difference in the drop or increase of politically related companies. During the covid-19 pandemic, the primary focus is not on investing or even assisting firms, but on expanding health-care businesses. As a result, there is little or no substantial variation in the extent of collaboration in property and real estate sector enterprises during and after the Covid-19 pandemic.

Conclusion

As stated in the introduction, the purpose of this study is to investigate the impact of fraud hexagons on financial statement fraud in property and real estate sector companies listed on the Indonesia Stock Exchange before and after the covid-19 pandemic. The ACFE survey, which shows that the covid-19 pandemic is progressively creating fraud, supports the need of comparing before and during the pandemic. The findings of this study show that pressure has a negative impact on financial statement fraud, and financial competence is notably different from before the covid-19 pandemic (2018-2019). Financial statement fraud is reduced via rationalization and capacity. Meanwhile, chance, arrogance, and collaboration have little effect on financial statement fraud according to the paired sample t-test and Mc Nemar test, the value of the opportunity, rationalization, capability, arrogance, and collusion did not alter substantially before and during the covid-19 pandemic. During the Covid-19 pandemic, only financial capability made an enormous difference.

This study contributes to forensic accounting by demonstrating how the fraud hexagon, with its influence on financial statement fraud, can be added to additional tests in the form of a different test, adding a reference if the value of the fraud hexagon is compared before and during the covid-19 pandemic in property and real estate sector companies. This study further broadens the range of results obtained in prior studies that did not include a t-test on the value of the fraud hexagon. This study has implications for preventing and informing the public, shareholders, and other stakeholders about fraud that may occur when an event/phenomenon such as covid-19 occurs. Furthermore, it is always necessary to raise awareness of the company's financial management in order to avoid losses to management and other stakeholders.

There are some drawbacks to this study. First, the sample is limited to a single industry,

property and real estate, which is traded on the Indonesian stock exchange. Future study could broaden and improve the fraud hexagon's association with financial statement fraud. Second, because the McNemar t-test is employed to evaluate the difference in nominal variables, the results are less significant than using parametric statistics. A t-test with all variables utilizing ratios can be used in future study to perform a more significant parametric statistical difference test.

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