



# The Influence of the Fraud Pentagon on Financial Statement Fraud: Evidence from Financial and Banking Companies Listed on the Indonesia Stock Exchange from 2021 to 2024

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## ABSTRACT

This study aims to identify the factors influencing fraudulent financial statements based on the fraud pentagon theory, proxied by financial target, ineffective monitoring, total accruals, director turnover, and political connections. Fraudulent financial statements are measured using the F-Score model. The sample consists of 396 observations from financial and banking sector companies listed on the Indonesia Stock Exchange during the 2021–2024 period. Data were analyzed using panel data regression with STATA 17. The results indicate that financial target, ineffective monitoring, total accruals, and political connections do not have a significant effect on fraudulent financial statements. Meanwhile, director turnover has a negative and significant effect on fraudulent financial statements



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## INTRODUCTION

Financial statements are the primary source of information used by investors, creditors, and regulators to assess a company's financial condition and serve as a basis for economic decision-making. Therefore, financial statements should be prepared in a reliable, transparent manner and in accordance with applicable accounting principles to accurately reflect the company's actual financial condition. However, in practice, cases of fraudulent financial statements still occur, involving the intentional misrepresentation of financial information that does not reflect the company's true condition, thereby misleading users of financial statements (Andriani et al., 2022).

According to the 2019 Indonesia Fraud Survey, the most prevalent type of fraud in Indonesia was corruption, accounting for 64.4% of all reported fraud cases. This was followed by asset misappropriation, which represented 28.9% of cases. In contrast, financial statement fraud was the least frequently reported type, accounting

for only 6.7% of total fraud cases. This phenomenon may be attributed to the extensive media coverage of corruption cases, leading the public to perceive corruption as the most common form of fraud in Indonesia. However, when assessed in terms of financial losses, financial statement fraud ranks first among all fraud schemes. According to the Association of Certified Fraud Examiners (ACFE) in 2024, financial statement fraud resulted in the highest median loss, amounting to US\$766,000, which exceeded the median losses caused by corruption and asset misappropriation. These findings indicate that although financial statement fraud occurs less frequently, its financial impact is considerably more severe. The financial and banking sector is one of the industries most vulnerable to fraudulent financial reporting practices. One notable case involved alleged credit fraud at PT Bank Woori Saudara Indonesia 1906 Tbk, which was disclosed in 2024 with an estimated value of IDR 1.28 trillion. The case highlighted weaknesses in internal controls and the potential manipulation of financial information that did not accurately reflect the company's actual condition, thereby affecting the quality and reliability of its financial statements (Tempo.com, 2025).

According to the Association of Certified Fraud Examiners (ACFE), financial statement fraud refers to intentional acts committed by employees that result in material misstatements or omissions in a company's financial statements. Financial statement fraud may be carried out through the deliberate manipulation, falsification, or alteration of accounting records and supporting documents used in the preparation of financial statements, as well as through the intentional misapplication of accounting principles related to the amounts, classifications, presentation, or disclosure of financial information (Suryadi et al., 2017). In this study, financial statement fraud is measured using the F-Score model. The F-Score model primarily relies on accrual-based financial accounts by assessing accrual quality through the RSST accrual measure and financial performance indicators. This model defines all non-cash and non-equity changes in a company's balance sheet as accruals and distinguishes the reliability characteristics of working capital accruals, non-current operating accruals, and financial accruals, as well as the accrual components of assets and liabilities (Ratnasari & Rofi, 2020).

This study employs the Fraud Pentagon Theory as its theoretical foundation because it provides a comprehensive framework for explaining the factors that drive financial statement fraud through five key elements: pressure, opportunity, rationalization, competence, and arrogance. These elements are proxied by financial targets, ineffective monitoring, total accruals, changes in directors, and political connections, respectively. The selection of the Fraud Pentagon model is based on its relevance in identifying fraud-related factors and its consistency with prior empirical studies. This study is expected to contribute both theoretically and practically. From a theoretical perspective, it enriches the accounting literature by extending the application of Fraud Pentagon Theory in detecting risk factors associated with financial statement fraud. From a practical perspective, the findings may serve as a reference for stakeholders in decision-making processes and provide valuable information for investors in assessing a company's condition before making investment decisions.

The pressure variable, proxied by financial targets, represents internal pressure imposed by the company on management to achieve predetermined performance



objectives. Financial targets can be reflected in the level of profitability generated by the company, as profitability serves as an important indicator of management's financial performance. High corporate earnings tend to attract investor attention, which may subsequently increase pressure on management to maintain or improve financial performance. Such pressure can encourage earnings management practices, causing published financial statements to appear favorable even when they do not accurately reflect the company's actual performance. In this study, financial targets are measured using the Return on Assets (ROA) ratio as an indicator of corporate performance. ROA reflects a company's ability to generate profits from its total assets. Since ROA is commonly used as a benchmark for evaluating managerial performance, determining bonuses, and salary increases, management may be motivated to engage in fraudulent financial reporting when the company's reported ROA is perceived as unsatisfactory or below expectations.

The opportunity variable is proxied by ineffective monitoring. Opportunities for fraud often arise when monitoring mechanisms within a company fail to function effectively. Ineffective monitoring may occur due to the dominance of certain individuals or small groups within management without adequate oversight, insufficient supervision by the board of directors and audit committee over the financial reporting process, and weaknesses in the company's internal control system. Furthermore, the failure to establish appropriate procedures for detecting fraudulent activities increases the likelihood of fraud occurrence. Opportunity is a fundamental element of fraud that can emerge at any time; therefore, effective oversight throughout the organizational structure is essential. Organizations should establish robust processes, procedures, and internal controls and assign employees to positions that minimize opportunities for fraudulent behavior while enhancing the detection of fraud, as emphasized in Statement on Auditing Standards (SAS) No. 99. Consequently, reducing the risk of financial statement fraud requires the implementation of more effective monitoring mechanisms. In this study, ineffective monitoring is measured using the BDOU ratio, which is calculated as the proportion of independent commissioners to the total number of commissioners. The BDOU ratio is employed because it reflects the effectiveness of corporate governance and oversight mechanisms. Independent commissioners are responsible for monitoring management activities and representing the interests of minority shareholders. Therefore, the presence of independent commissioners plays a crucial role in determining the effectiveness of corporate monitoring and, consequently, in mitigating the risk of financial statement fraud.

The rationalization variable is proxied by total accruals. Accrual accounting is a concept in which revenues and expenses are recognized when transactions occur rather than when cash is received or paid. According to Skousen (2009), the total accrual ratio can be used to represent rationalization associated with management's use of the accrual basis of accounting. The application of accrual accounting principles may create opportunities for management to engage in opportunistic behavior, such as recognizing fictitious revenues to achieve desired financial reporting outcomes. Total Accruals to Total Assets (TATA) reflects the overall accrual activities of a company. A higher level of accruals, particularly discretionary accruals, increases the opportunity for management to manipulate earnings. For example, management may

recognize revenue before cash is received in order to meet targeted financial performance objectives. Such subjective decision-making processes are consistent with the rationalization element of fraud, whereby individuals justify manipulative actions as acceptable or necessary. Consequently, these practices may constitute financial statement fraud because they result in financial reports that do not accurately represent the company's actual financial condition and performance.

The competence variable is proxied by changes in directors. The board of directors is a corporate organ responsible for managing the company, including the preparation of financial statements and the formulation of strategic decisions. Therefore, directors are expected to possess adequate competencies in managerial functions, oversight responsibilities, and corporate governance practices. Competent directors are more likely to effectively supervise management activities, strengthen internal control systems, and ensure that financial statements accurately reflect the company's actual financial condition and performance. Conversely, inadequate competence among directors may increase the likelihood of financial statement manipulation due to weak oversight of managerial actions. Since competence is difficult to measure directly, changes in directors are commonly used as a proxy. Changes in directors refer to alterations in the composition of the board resulting from appointments, dismissals, resignations, or the expiration of directors' terms of office. Directors play a crucial role in shaping corporate policies and strategic decisions. Companies may undertake changes in directors as an effort to improve the performance of the existing board and appoint new directors who are considered more capable and competent. Such changes are expected to enhance corporate governance and organizational effectiveness, thereby reducing the risk of fraudulent financial reporting (Septriani & Handayani, 2018).

The arrogance variable is proxied by political connections. Companies with strong political connections generally enjoy various competitive advantages. These advantages include easier access to bank financing, greater opportunities to obtain government contracts, favorable tax treatment, and financial assistance during periods of financial distress. Through the dual roles held by directors or commissioners and their extensive networks, political connections can significantly influence the efficiency and continuity of a company's business operations. However, such circumstances may also foster arrogance among corporate leaders. Individuals exhibiting arrogance often perceive themselves as superior and believe that corporate rules and internal control mechanisms do not apply to them. This sense of power, influence, and extensive political networks may encourage efforts to conceal fraudulent activities. Chief Executive Officers (CEOs) and other top executives may believe that the company's success and growth are primarily attributable to their personal influence and leadership. Consequently, they may rationalize unethical actions, including the manipulation of financial information, in order to maintain their reputation, authority, and public image. In the context of the Fraud Pentagon Theory, political connections may strengthen the arrogance element by creating a perception of immunity from oversight and accountability. As a result, politically connected executives may be more inclined to engage in fraudulent financial reporting when they perceive that their position, influence, or relationships can protect them from potential consequences.

Based on the foregoing discussion, this study employs financial targets (ROA) as a proxy for the pressure variable, ineffective monitoring (BDOUT) as a proxy for the opportunity variable, total accruals (TATA) as a proxy for the rationalization variable, changes in directors (dummy variable) as a proxy for the capability variable, and political connections (dummy variable) as a proxy for the arrogance variable. These proxies are used to examine the determinants of financial statement fraud within the framework of the Fraud Pentagon Theory. Accordingly, the research questions of this study are formulated as follows:

1. Does pressure have a significant effect on financial statement fraud?
2. Does opportunity have a significant effect on financial statement fraud?
3. Does rationalization have a significant effect on financial statement fraud?
4. Does capability have a significant effect on financial statement fraud?
5. Does arrogance have a significant effect on financial statement fraud?

### **RESEARCH METHOD (10 PT)**

This study employs a quantitative research approach by analyzing the data collected from the selected sample. The population consists of banking companies listed on the Indonesia Stock Exchange (IDX) during the 2021–2024 period. The financial and banking sector was chosen because, according to data published by the Association of Certified Fraud Examiners (ACFE) in 2019, this sector ranked first in terms of the prevalence of fraud cases compared to other industries. The sample was selected using a purposive sampling technique. This method was employed to ensure that the selected companies met specific criteria relevant to the objectives of the study. The sampling criteria are as follows:

1. Financial and banking companies listed on the Indonesia Stock Exchange (IDX) during the 2021–2024 period.
2. Financial and banking companies that were not delisted from the Indonesia Stock Exchange (IDX) during the 2021–2024 period.
3. Financial and banking companies that published both annual reports and financial statements consecutively during the 2021–2024 period.
4. Financial and banking companies that published complete annual reports and financial statements and disclosed sufficient information related to all variables examined in this study.

The data analysis in this study was conducted using STATA version 17 (Statistical Software for Data Science). The study employed a panel data regression approach, which combines cross-sectional data (companies) and time-series data (observation periods). The analysis began with descriptive statistical analysis to provide an overview of the characteristics of the data for each research variable. To test the proposed hypotheses, this study utilized a regression model estimated using the Ordinary Least Squares (OLS) method. Given that the dataset consists of panel data and may be subject to heteroskedasticity and autocorrelation issues, the analysis

employed Cluster-Robust Standard Errors at the firm level to obtain more reliable statistical inferences. This approach allows the standard errors to remain robust in the presence of within-firm correlation over time and heteroskedastic disturbances. Furthermore, year fixed effects were incorporated into the regression model to control for macroeconomic and other time-specific factors that may simultaneously affect all firms within the sample during a particular period. By controlling for year-specific effects, the model is better able to isolate the relationship between the Fraud Pentagon variables and financial statement fraud.

## RESULTS AND DISCUSSIONS

**Table 1. Descriptive Statistics**

Variable	Obs	Mean	Std. dev.	Min	Max
TK	396	-.007803	.2455052	-3.431	.686
KEP	396	.499947	.1487495	0	.75
TA	396	.0015253	.1830926	-2.332	.681
PD	396	.4116162	.4927489	0	1
KP	396	.3585859	.480192	0	1
KLK	396	.5462727	1.174863	-.984	3.761

Based on the results of the descriptive statistical analysis, a total of 396 firm-year observations from financial and banking companies listed on the Indonesia Stock Exchange (IDX) were obtained during the four-year observation period from 2021 to 2024. The financial target variable, measured by Return on Assets (ROA), has a mean value of -0.007 and a standard deviation of 0.245. The ineffective monitoring variable has a mean of 0.499 and a standard deviation of 0.148, while the total accruals variable has a mean value of 0.0015 and a standard deviation of 0.183. The changes in directors and political connections variables, which are measured using dummy variables, have mean values of 0.4116 and 0.3586, respectively. These figures indicate that approximately 41.16% of the sample companies experienced changes in directors, while 35.86% of the companies had political connections during the observation period. Meanwhile, the financial statement fraud variable, measured using the F-Score model, has a mean value of 0.5462 and a standard deviation of 1.1748. This finding suggests the existence of variation in the level of financial statement fraud risk among the companies included in the sample.

**Table 2. Regression Results**

HDFE Linear regression		Number of obs =		396		
Absorbing 1 HDFE group		F( 5, 98) =		6.60		
Statistics robust to heteroskedasticity		Prob > F =		0.0000		
		R-squared =		0.0888		
		Adj R-squared =		0.0700		
		Within R-sq. =		0.0849		
Number of clusters (perusahaan) =		99		Root MSE =		
				1.1330		
(Std. err. adjusted for 99 clusters in perusahaan)						
KLK	Coefficient	Robust std. err.	t	P> t	[95% conf. interval]	
TK	.4286526	.3030325	1.41	0.160	-.1727055	1.030011
KEP	-.0961557	.4950139	-0.19	0.846	-1.078495	.8861833
TA	-.002234	.6011912	-0.00	0.997	-1.195278	1.19081
PD	-.316316	.1166788	-2.71	0.008	-.5478612	-.0847707
KP	-.5640022	.1780693	-3.17	0.002	-.917375	-.2106294
_cons	.9301376	.217062	4.29	0.000	.4993851	1.36089

Based on the results of the t-test, the financial target, ineffective monitoring, and total accruals variables do not have a significant effect on financial statement fraud, as their respective significance values exceed the 0.05 threshold. In contrast, the changes in directors variable has a negative and statistically significant effect on financial statement fraud, with a coefficient value of -0.3163 and a significance level of 0.008. This result indicates that companies experiencing changes in directors tend to exhibit lower levels of financial statement fraud. Furthermore, political connections also have a negative and statistically significant effect on financial statement fraud, with a coefficient value of -0.5640 and a significance level of 0.002. This finding suggests that politically connected firms are associated with a lower likelihood of engaging in financial statement fraud during the observation period.

The results of the hypothesis testing indicate that financial targets, proxied by Return on Assets (ROA), have a coefficient value of 0.4286 with a significance level of 0.160 ( $> 0.05$ ). Therefore, H1 is rejected. This finding suggests that financial targets do not have a significant effect on financial statement fraud. The result indicates that pressure to achieve financial targets does not necessarily encourage management to engage in fraudulent financial reporting. Companies may prefer to improve their operational performance in order to meet financial objectives rather than manipulating financial statements. In addition, the presence of adequate monitoring and governance mechanisms may limit management's ability to commit financial statement fraud despite the existence of performance-related pressures. This finding is consistent with the studies conducted by Nizarudin et al. (2023) and Azizah et al. (2024), which also reported that financial targets do not significantly influence financial statement fraud. These results suggest that financial performance targets alone are insufficient to motivate fraudulent behavior when effective corporate governance and internal control mechanisms are in place.

The results of the hypothesis testing indicate that ineffective monitoring, proxied by the BDOU ratio, has a coefficient value of -0.9615 with a significance level of 0.846 ( $> 0.05$ ). Therefore, H2 is rejected. This finding suggests that ineffective monitoring does not have a significant effect on financial statement fraud. The results indicate that the proportion of independent commissioners does not necessarily reflect the effectiveness of corporate monitoring. Effective oversight depends not only on the number of independent commissioners but also on their competence, independence, experience, and active involvement in monitoring managerial activities and the financial reporting process. Consequently, a higher proportion of independent commissioners may not automatically reduce or increase the likelihood of financial statement fraud if the quality of oversight remains inadequate. This finding is consistent with the studies conducted by Thamlim (2023) and Restiana Nanda et al. (2023), which also found that ineffective monitoring does not significantly affect financial statement fraud. These results suggest that board composition alone may be insufficient to explain fraudulent financial reporting behavior, as other governance mechanisms and organizational factors may play a more substantial role in preventing or detecting fraud.

The results of the hypothesis testing indicate that total accruals (TATA), as a proxy for rationalization, have a coefficient value of -0.0022 with a significance level of 0.997 ( $> 0.05$ ). Therefore, H3 is rejected. This finding suggests that total accruals do not have a significant effect on financial statement fraud. The results indicate that the magnitude of a company's accruals does not necessarily reflect the existence of fraudulent financial reporting. The use of accrual accounting is a normal and essential component of financial reporting under generally accepted accounting principles and may arise from legitimate operational activities. Consequently, higher accrual levels do not automatically indicate fraudulent behavior, as accruals may simply reflect differences in the timing of revenue recognition, expense recognition, and other routine business transactions. Furthermore, total accruals may not adequately capture the rationalization element of the Fraud Pentagon Theory because rationalization is inherently a psychological process involving the justification of unethical behavior. Therefore, financial measures such as total accruals may be insufficient to directly represent management's rationalization for committing fraud. This finding is consistent with the studies conducted by Thamlim (2023) and Restiana Nanda et al. (2023), which also reported that total accruals do not significantly affect financial statement fraud. These results suggest that accrual-based measures alone may not be reliable indicators of fraudulent financial reporting within the financial and banking sector.

The results of the hypothesis testing indicate that changes in directors, as a proxy for capability, have a coefficient value of -0.3163 with a significance level of 0.008 ( $< 0.05$ ). Therefore, H4 is accepted. This finding suggests that changes in directors have a negative and statistically significant effect on financial statement

fraud. The negative relationship indicates that companies experiencing changes in directors tend to have a lower risk of financial statement fraud. This finding implies that changes in directors may serve as a mechanism for improving corporate governance by enhancing the quality of oversight, strengthening internal control systems, and improving the reliability of financial reporting processes. The appointment of new directors may introduce fresh perspectives, stronger ethical standards, and more effective managerial practices, thereby reducing opportunities for fraudulent financial reporting. Furthermore, changes in directors may reflect a company's commitment to improving organizational performance and addressing weaknesses in previous management practices. As a result, the transition in leadership can contribute to greater transparency and accountability, which ultimately lowers the likelihood of financial statement fraud. This finding is consistent with the studies conducted by Sari et al. (2022) and Lamadoken (2021), which also found that changes in directors have a significant negative effect on financial statement fraud.

The results of the hypothesis testing indicate that political connections, as a proxy for arrogance, have a coefficient value of -0.5640 with a significance level of 0.002 ( $< 0.05$ ). Although the effect is statistically significant, the relationship is negative; therefore, H5 is rejected. This finding suggests that political connections are associated with a lower likelihood of financial statement fraud. One possible explanation is that politically connected firms are subject to greater external scrutiny from regulators, investors, government institutions, and the public. As a result, these firms may be more motivated to maintain their reputation and legitimacy, thereby reducing the incentive to engage in fraudulent financial reporting. Furthermore, political connections may provide firms with access to valuable resources, regulatory support, and financial stability, which can alleviate pressures that might otherwise encourage fraudulent behavior. Consequently, politically connected companies may have less need to manipulate financial statements in order to achieve desired financial outcomes. This finding differs from the studies conducted by Wibowo and Putra (2023) and Rizqi and Purwanto (2022), which reported that political connections do not have a significant effect on financial statement fraud. The discrepancy may be attributed to differences in research periods, sample characteristics, industry sectors, or the measurement of political connections and financial statement fraud across studies.

## **CONCLUSION**

This study investigates the effect of the Fraud Pentagon factors on financial statement fraud among financial and banking companies listed on the Indonesia Stock Exchange (IDX) from 2021 to 2024. Based on the empirical results, the following conclusions are drawn:

Pressure, proxied by Financial Targets, has a positive but statistically insignificant effect on Financial Statement Fraud. This result indicates that higher financial targets established by companies do not necessarily increase the likelihood of financial

statement fraud. Therefore, the first hypothesis (H1), which states that Financial Targets have a positive effect on Financial Statement Fraud, is rejected.

Opportunity, proxied by ineffective monitoring, has a negative but statistically insignificant effect on financial statement fraud. This result indicates that ineffective monitoring, as measured by the proportion of independent commissioners, is unable to explain the occurrence of financial statement fraud. Therefore, the second hypothesis (H2), which states that ineffective monitoring has a positive effect on financial statement fraud, is rejected.

Rationalization, proxied by Total Accruals (TATA), has a negative but statistically insignificant effect on financial statement fraud. This result indicates that the level of accruals cannot be used as a determining factor in explaining the occurrence of financial statement fraud among the sample companies. Therefore, the third hypothesis (H3), which states that Total Accruals have a positive effect on financial statement fraud, is rejected.

Capability, proxied by changes in directors, has a negative and statistically significant effect on financial statement fraud. This result indicates that changes in directors can improve the quality of corporate oversight and governance, thereby reducing the likelihood of financial statement fraud. Therefore, the fourth hypothesis (H4), which states that changes in directors have a negative effect on financial statement fraud, is accepted.

Arrogance, proxied by political connections, has a negative and statistically significant effect on financial statement fraud. This result indicates that companies with political connections tend to exhibit lower levels of financial statement fraud. However, because the direction of the relationship is contrary to that predicted by the proposed hypothesis, the fifth hypothesis (H5), which states that political connections have a positive effect on financial statement fraud, is rejected.

## **RECOMMENDATIONS**

For future research, it is recommended to include additional variables that may affect financial statement fraud to enhance the explanatory power of the model. Moreover, expanding the scope of the study to other industry sectors may provide more comprehensive insights and improve the generalizability of the findings.

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