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Research Article

Pentagon Fraud's Determinants on Fraudulent Financial Statement: Whistleblowing as Moderating Variable in Soes

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Abstract: This study examines the impact of Pentagon Fraud factors on FSF, with WBS as a moderation variable, focusing on Indonesian State-Owned Enterprises (SOEs) from 2021 to 2024. The Pentagon's Fraud Theory encompasses five key elements: pressure, opportunity, rationalization, competence, and arrogance, each of which is represented by financial stability, ineffective monitoring, the quality of auditors, the experience of directors, and CEO pictures. This study aims to determine how these factors affect financial reporting that contains fraud, and whether WBS can strengthen or weaken the relationship between the two. Using a quantitative approach with secondary data from the annual reports of 104 SOEs, thisi study applied panel data regression method. FSF was measured using the Beneish M-Score, while the effect of moderation was tested through moderated regression analysis. The results of this study are expected to provide deeper insights into the dynamics of fraud in the public sector and highlight the importance of WBS as a governance tool in reducing the risk of fraud. The study contributes to the previous literature by integrating a comprehensive fraud framework and testing it with moderation mechanisms, while also focusing on specific institutional contexts (SOEs), which have not been explicity explored in previous studies.

Keywords: Audit Quality; Director's Experience; Financial Statements Fraud; Pentagon Fraud; Whistleblowing System

1. Introduction

Financial statements provide an overview of a company's financial condition during a specific period, which is compiled through an accounting process and includes balance sheet statements, income statements, cash flow statements, and equity change reports (Mohammed & Juboori, 2023). In general, companies prepare financial statements in an honest manner and describe the company's condition in a reasonable manner. However, there are times when the financial statements presented contain mispresentations (Dewi & Anisykurlillah, 2021). According to Association of Certified Fraud Examiners (ACFE), (2022) Financial reporting fraud is an act that is deliberately committed by the company's internal parties with the aim of manipulating or hiding important information in the financial report. This action is intended to create a perception that is not in accordance with the company's financial reality in the eyes of interested parties.

Based on the results of the survey conducted by oIeh Association of Certified Fraud Examiners (ACFE), (2022) Indonesia occupies the fourth position in the Asia-Pacific region as the country with the highest number of fraud cases. There are 23 cases Fraud which was recorded, with the largest form of fraud in the form of corruption at 64%, followed by misuse of state-owned and corporate assets at 28.9%, and financial mismanagement at 6.7% (LamonganNetwork.com, 2023). This happens because the lack of transparency of financial statements and weak supervision systems cause high numbers Fraud in Indonesia. In 2021, the KPK conducted an investigation into alleged LNG corruption at PT Pertamina. Karen Agustiawan as President Director of PT Pertamina in 2011-2014 was designated by the KPK as a suspect in the case of alleged corruption in procurement Liquefied Natural Gas (LNG) at PT Pertamina for the period 2011 to 2021. The action taken by the train caused and had

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an impact on state financial losses of approximately Rp2.1 trillion (KPK, 2023). In 2023, PT Indofarma Tbk was entangled in an accounting crime scandal involving manipulation of financial statements. The company records inventory that is higher than the actual value so that the assets look larger and profits increase fictitiously, the engineering of sales transactions, as well as the recording of income or non-existent assets. This case has a huge impact, including the state suffered a loss of IDR 371.83 billion, Indofarma Tbk has the potential to lose market share (CNBC Indonesia, 2024).

Financial statements that contain elements of fraud but are not disclosed can cause losses to the parties who use the information. Marks (2012), developing a Theory Fraud Pentagon in 2010. Marks developed the theory, by adding two new elements, competence and arrogance, to the three previous elements of the Theory Fraud Triangle. The purpose of this addition is to provide a more comprehensive picture or condition related to various factors that have the potential to encourage fraud in the presentation of financial statements.

This study shows that pressure is represented by the operational variables of financial stability. Nurul & Fitria (2023) indicates that the financial stability condition of a company has the potential to affect the possibility of manipulation in financial reporting. Meanwhile, Honesty et al. (2024) Finding financial stability has no effect on financial statement fraud. The opportunity aspect is measured through ineffective monitoring indicators. In this case, Raihan et al. (2024) concludes that ineffective monitoring has no effect on practice Fraud. While different results are shown by Andriani et al. (2022) which found that ineffective monitoring actually has a negative influence on the occurrence of financial statement fraud. Then there is rationalization represented by the quality of auditors. Wulandari et al. (2023) shows that the quality of the auditor does not affect the fraud of the financial statements. But Fitrianti et al. (2024) showed that the auditor quality has an effect on FSF. Competence is proxied by the director's experience. On research Ebaid (2023), the experience of directors has an influence on FSF. While Dewi & Anisykurlillah (2021), indicating that the director's experience has no effect on the fraud of financial statements. Arrogance measured by CEO picture. Dean (2020), indicating that the CEO picture has a positive influence on financial statement fraud. While Mayla Alyani et al. (2023), indicating that the CEO picture does not have an influence on the occurrence of fraud in financial reporting. The misalignment of the findings in the previous study prompted the researcher to add a moderation variable, namely Whistleblowing System with the hope of being able to strengthen or weaken independent and dependent variables against the occurrence of fraud in financial reporting in this study.

This study was prompted by gaps identified in the previous literature and is based on the Fraud Pentagon Factors. First, concerns whether determinants, specifically financial stability, ineffective monitoring, auditor quality, director's experience, and CEO pictures, have significant influence on FSF in State-Owned Enterprises. Second, explores the role of WBS in moderating relationship between Fraud Pentagon Factors and FSF. Furthermore, this study explores the extent to which the implementation of WBS mechanisms contributes to strengthening fraud prevention in SOEs, especially in the 2021-2024 period, which is marked by increasing demands for public accountability and governance reforms.

As a novelty, this study offers a significant contribution to the existing body of literature by incorporating the Fraud Pentagon Factors with the moderating role of WBS within the context of Indonesian State-Owned Enterprises (SOEs). Distinct from previous studies that predominantly examined only the direct effects of fraud determinants, this research provides a novel perspective by analyzing the interaction between key Fraud Pentagon Factors and WBS. Furthermore, by focusing on SOEs during the 2021-2024 period, this study presents new institutional evidence that has been relatively unexplored in previous studies. The main objective of this study is to analyze how the basic elements of Pentagon Fraud are related to FSF, while evaluating the role of WBS mechanisms as factors that can strengthen or weaken this relationship in the context of State-Owned Enterprises. The similarities with previous research are found in independent and dependent variables. Previous research also discussed the Pentagon's fraud factor against financial reporting fraud.

2. Literature Review

Agency Theory

Agency theory (Agency Theory) describes the binding agreement between two parties, namely the principal (the owner or the authorizing party) and the agent (the manager or authorized party) (Jensen & Meckling, 1976). Agency theory addresses two main problems in the relationship between agents and principals, namely conflicts of interest that arise when the goals of the two are not aligned and the principal finds it difficult to verify the agent's actions, and differences in risk preferences that lead to disagreements in decision-making (Eisenhardt, 1989). Therefore, when the company suffers losses, agents tend to manipulate data on financial statements to attract investors or shareholders in providing funding through

share ownership. The use of Agency Theory is important in this study because it provides a strong conceptual foundation for understanding why FSF occurs in SOEs. The theory highlight issues of information asymmetry and opportunistic behavior, which are reflected in the independent variables of this research. This variables represent conditions that can intensify agency conflicts and increase the risk of FSF.

Fraud Pentagon Theory

The pentagon theory was developed by Marks (2012) is the result of an expansion of the previous theory of triangular cheating (Fraud Triangle Theory) and Diamond Fraud. Marks considers that the three main components in the previous theory, namely pressure (Pressure), opportunity (Opportunity), and rationalization (Rationalization) has not been able to fully explain the occurrence of a fraud. Therefore, he added two new elements that are considered very important in detecting fraud, namely competence (Competence) and arrogance (Arrogance) to provide a broader view of the causes of fraud. The use of this theory is important because it provides a more comprehensive perspective that not only explains structural and financial pressures but also incorporates behavioral aspects, particularly arrogance which are often overlooked in earlier frameworks. This broader scope makes the Fraud Pentagon especially relevant in the context of SOEs, where organizational weaknesses and managerial characteristics can influence the likelihood of fraudulent practices. Financial stability reflects pressure as unstable financial conditions can increase incentives for managers to manipulate financial statements. Ineffective monitoring represents opportunity, caused by weak internal controls and governance, which opens the door to fraud. Auditor quality and director's experience relate to competence, which determines whether individuals have the competence and authority to detect or conceal fraud. The image of the CEO is used as a proxy for arrogance, describing the extent to which leaders may overestimate their power and disregard established control mechanisms.

The Effect of Pressure on FSF

Stress arises when a person is driven by material desires or has difficulties in his or her financial problems (Awalluddin et al., 2022). Pressure is proxied with the operational variable of financial stability. Agency theory reveals the incompatibility of goals between owners and agents. When a company experiences financial instability, agents will feel burdened to show positive performance. Therefore, it can encourage agents to engage in financial statement fraud. Research by Nurul & Fitria (2023) shows that stable financial conditions have an influence on the occurrence of fraud in financial statements. The more stable a company's financial condition is, the lower the likelihood of fraud in financial reporting, while the more critical the financial situation, the higher the likelihood of such fraud (Nurul & Fitria, 2023). Achmad et al. (2022), proving that financial stability has a positive influence on financial statement fraud. Research by Julia & Yunita (2022) proves that financial stability has a positive influence on financial statement fraud.

H1 : Financial stability has a positive influence on FSF

The Effect of Opportunity on FSF

The Ineffective monitoring describes the condition of a company not running properly (Musfi & Soemantri, 2024). Financial reporting fraud can occur when a company's manager takes advantage of an existing loophole and covers it up so that it is not detected by the owner, especially when supervision by an independent commissioner is inactive (Andriani et al., 2022). Therefore, the limited effectiveness of oversight by independent commissioners provides opportunities for managers to commit fraud in financial statements, which may not be detected by the company's shareholders. According to agency theory, this condition exacerbates the asymmetry of information between principals and agents, which in turn increases the likelihood of fraud in financial statements. Research by Putry et al. (2025), proving that the ineffective monitoring has a negative influence on financial statement fraud. Andriani et al. (2022), found that ineffective monitoring had a negative influence on FSF.

H2: The ineffective monitoring has a negative effect on FSF

The Effect of Rationalization on FSF

Rationalization is proxied with the operational variables of auditor quality. Rationalization is the process by which a person justifies the actions he has taken. High-quality audits increase user confidence in financial statements and become the basis for decision-making (Khan et al., 2023). According to agency theory, auditors serve as independent parties tasked with reducing conflicts of interest between principals and agents. This conflict arises due to differences in information from both parties in the contractual relationship. The higher the quality of the audit, the greater the likelihood that auditors can identify indications or evidence of financial statement fraud, so that a quality audit can reduce fraud because auditors are more thorough in finding data manipulation, document falsification, and other forms of irregularities (Riadi et al., 2025). This is because high-quality audits enable auditors to detect data manipulation, document falsification, and other irregularities more effectively. Arum &

Wahyudi (2021), found that auditor quality has an influence on financial statement fraud. Research by Fitrianti et al. (2024), proving that the quality of the auditor has an influence on the fraud of financial statements. Riadi et al. (2025), proving that audit quality has a positive influence on financial statement fraud. Research by Hafizh & Qintharah (2024), proving that the quality of the auditor has a positive influence on financial statement fraud.

H3 : The quality of the auditor has a positive influence on the FSF

The Effect of Competence on FSF

Competency refers to the expertise, skills, and insights that individuals possess to commit fraud and take advantage of the position and weaknesses of the internal control system to commit fraud. Director's experience refers to the duration of a board member's tenure as a director in a company. In this context, company management acts as an agent in charge of carrying out and regulating the company's operations. The longer a person's tenure as a board of directors, the deeper his knowledge of the company's business processes will be, ultimately able to improve his ability to recognize weaknesses in the internal control system and take advantage of these loopholes to falsify or engineer the content of financial statements (Dewi & Anisykurlillah, 2021). Ebaid (2023), proving that the experience of the board of directors has an influence on financial reporting fraud. Research by Silaban & Zainal (2021), proving that the director's experience has a negative influence on financial statement fraud. Riyadh et al. (2024), also prove that the experience of director's has a negative influence on financial statement fraud.

H4 : The experience of the directors has a negative influence on the FSF

The Effect of Arrogance on FSF

Arrogance is the attitude of a person who commits fraud with arrogance not afraid of the sanctions that will befall him (Sahla & Ardianto, 2023). The increase in the number of photos of CEOs in financial statements can lead to the perception that CEOs are arrogant, as it reflects an effort to highlight their role and position in the organization in order to strengthen their personal image and popularity (Achmad et al., 2023). This condition has the potential to increase the risk of FSF, because CEOs who have higher ego and dominance are prone to manipulative actions to maintain their reputation, position, and achievements that they want to highlight to the public. Dean (2020), showing that CEO Picture has a positive influence on financial statement fraud. Research by Handayani et al. (2023) proving that CEO pictures has a positive influence on financial statement fraud. In addition, Janah et al. (2022) also proved that CEO pictures have a positive influence on financial statement fraud.

H5 : CEO pictures have a positive impact on FSF

The Effect of Whistleblowing System Moderation on FSF Determinants

WBS is an important mechanism in creating a transparent and accountable organizational environment. When the gap in supervision opens and control weakens, the opportunity for fraud increases, so the implementation of the whistleblowing system is an important step for SOEs in strengthening supervision (Raihan et al., 2024). Through the implementation of the WBS an effective system, the company is able to encourage active participation from internal and external parties in uncovering suspected fraud. Research by Belgacem (2025), showing that the WBS strengthens financial stability. Lestari & Widiyati (2023) Proving that the WBS weakens to ineffective monitoring. The WBS strengthens the quality of auditors as evidenced by proprietary research (Fitrianti et al., 2024). Van Eijbergen & Siebers (2025), showing that the WBS strengthens the experience of directors. CEOs who often display their photos in financial statements are considered to show narcissistic traits or high ego as a reflection of efforts to maintain authority and status, thus potentially encouraging fraudulent behavior that needs to be prevented through proper management, including the implementation of a WBS to involve employees and the public in detecting indications of fraud (Raihan et al., 2024). In the study of Triantoro et al. (2020), proving that the WBS weakens CEO pictures.

H6 : WBS strengthens financial stability in FSF

H7 : WBS weakens to ineffective monitoring on FSF

H8 : WBS strengthens the quality of auditors on FSF

H9 : WBS strengthens the experience of directors on FSF

H10 : WBS weakens CEO pictures on FSF

Theoretical Framework of Thought

The theoretical framework is presented in figure 1.

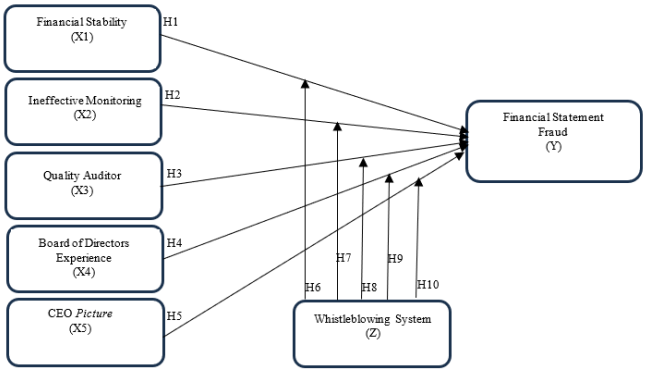

Figure 1. Theoretical Framework of Thought

3. Research Method

This study uses a quantitative-based approach with the aim of examining the influence of the main components contained in the Pentagon fraud theory on fraud in financial statements, as well as testing the role of the WBS as a moderation variable. The type of data used is in the consists of secondary sources, from the annual report of state-owned companies, which is published during the period 2021 to 2024. The data is collected through the official website of each company and other credible public sources. The population in this study includes state-owned companies in Indonesia. The sample determination technique uses the purposive sampling method, which is by setting certain criteria in the sample selection. This research used one dependent variable, and one independent variable, as well as one moderation variable. The variable is shown in table 1.

Table 1. Variable Operational Summary

Factor	Variable	Definition	Variable Measurement	Source
	Financial Statement Fraud	Intentional or negligent mispresentation of financial statements is carried out to mislead users so that Iaporan is not in accordance with applicable accounting principles. (PCAOB, 2002)	Beneish M-Score	(Mayla Alyani et al., 2023)
Pressure	Financial Stability	The ability of the financial system to streamline resource allocation. (Schinasi, 2004)	ACHANGE = (Total Assets t – Total Assets t-1)/Total Assets t-1	(Nurul & Fitria, 2023)
Opportunity	Ineffective Monitoring	Conditions where the internal supervisory mechanism, especially the board of commissioners or audit committees, fail to function optimally supervise management. (Beasley, 1996)	BDOUT = Independent commissioners/ Total commissioners x 100%)	(Achmad et al., 2022)
Rationalization	Quality Auditor	The probability that the auditor will find and report significant errors in the financial statements. (DeAngelo, 1981)	Auditor period time in the same company from 2021 to 2024 use 1 to 5	(N. Lestari & Nedya, 2019)
Competence	Board of Directors Experience	Refers to the length of time a member of the board of directors has served in the company and how deep the knowledge and expertise of a board member is. (Kim et al., 2013)	Tenure of the Board of Directors	(Zeng et al., 2025)
Arrogance	CEO Picture	The number of photos of the CEO featured in the company's annual report. (Oesterle et al., 2016)	Number of photos of the company's CEO	(Situngkir & Triyanto, 2020)

Whistleblowing System	Disclosure by members of an organization of immoral or unlawful practices within the employer's control to a person or institution that has the ability to take action. (Near & Miceli, 1985)	1 if there is no report, 2 if there is a report of action on the complaint	(Stubben & Welch, 2020)

The measurement of financial statements containing fraud uses the Beneish M-Score with a formula.

Score M= -4.84 + 0.92*DSRI + 0.528*GMI + 0.404*AQI + 0.892*SGI + 0.115*DEPI – 0.172*SGA + 4.679*TATA – 0.327*LVGI

The hypothesis test in this study was carried out using the panel data regression method. This method was chosen because it has the ability to combine information from cross-section and time series data to produce more accurate and comprehensive estimates. Meanwhile, the moderation test uses the moderated regression analysis (MRA) method by creating a variable interaction between the fraud pentagon and the WBS. The test aims to assess whether the existence of a WBS can strengthen or weaken the relationship between the Pentagon's fraud factor and the likelihood of fraud. The analysis process is carried out through several stages, namely estimating Common Effect Model (CEM), Fixed Effect Model (FEM), Random Effect Model (REM), then selecting the best model based on the results of the Chow Test, Hausman Test, and Lagrange Multiplier Test (LM Test). The analysis process was conducted using Eviews software, with a significance level set at 5%.

4. Results and Discussion

Sample Results

Details of the sample selection criteria are described in the research population consist of all State-Owned Enterprises in Indonesia during the period 2021-2024. Using purposive sampling methods, several criteria were applied to select the final sample. Details of the sample selection criteria are presented in the table 2.

Table 2. Criteria for Research

No	Criteria	Total
1.	Number of SOEs for the 2021-2024 period	315
2.	Companies that do not publish the complete annual financial report for the 2021-2024 period	217
3.	Companies that do not provide data related to research variabel for the 2021-2024 period	72
4.	The number of state-owned companies that are the research sample	26
5.	Research period (2021-2024)	4
6.	Number of units of analysis (x4)	104

Source: secondary data processed

The companies included in the sample are those that consistently published annual reports during the observation period and disclosed the variables required for tbis study. Based on these criteria, 26 companies were selected, resulting in a total of 104 unit of analysis.

Chow Test

The chow test was conducted to determine whether the Common Effect Model (CEM) or Fixed Effect Model (FEM) was more appropriate for this study. This test examines whether the addition of specific individual effects significantly improves the explanatory power of the model. If the probability value is less than 0.05, the FEM is preffered, otherwise the CEM remains better choice. The results of the chow test are presented in table 3.

Table 3. Chow Test Results

Effects Test	Statistics	D.F.	Prob.
Cross-section F	1.033821	(25,73)	0.4385
Cross-section Chi-square	31.522268	25	0.1723

Source: Eviwes Output

Based on the results of the chow test in table 3, it is known that the value of Prob. The cross-section of the chi-square is 0.1723 > 0.05. Through the rules for making decisions on the following hypotheses.

a. If the value of Prob. The cross-section of the chi-square < 0.05, then H0 is rejected and H1 is accepted
b. If the value of Prob. The cross-section of the chi-square ⩾ 0.05, then H0 is accepted and H1 is rejected.

So it can be concluded that the value of Prob. The cross-section chi-square is 0.1723 > 0.05, this study applies the Common Effect Model (CEM). So the next stage is to test the

Lagrange Multiplier Test (LM Test).

Lagrange Multiplier Test (LM Test)

The Lagrange Multiplier (LM) test was applied to compare the Common Effect Model (CEM) with Random Effect Model (REM). This test aims to assess whether unobserved individual effects exist and should be incorporated into the model specification. A probability value below 0.05 indicates that the REM is more suitable, while a value above 0.05 suggests that the CEM is the appropriate choice. The LM test results are summarized in table 4.

Test Hypothesis

Table 4. Lagrange Multiplier Test (LM Test)

Test Hypothesis			
	Cross-section	**Time**	**Both**
Breusch-Pagan	0.004298	1.671150	1.675448
	(0.9477)	(0.1961)	(0.1955)
Honda	0.065558	-1.292730	-0.867741
	(0.4739)	(0.9019)	(0.8072)
King-Wu	0.065558	-1.292730	-1.200056
	(0.4739)	(0.9019)	(0.8849)
Standardized Honda	0.360221	-0.992370	-5.071084
	(0.3593)	(0.8395)	(1.0000)
Standardized King-Wu	0.360221	-0.992370	-4.355679
	(0.3593)	(0.8395)	(1.0000)
Gourieroux, et al.	--	--	0.004298
			(0.7233)

Source: Output Eviews

From the results of the Lagrange Multiplier Test (LM Test) in table 4, it can be seen that the value of Prob. Breusch-Pagan is 0.9477 (>0.05). So the selected model is the Common Effect Model (CEM). Subsequently, a multicollinearity test was conducted using the Variance Inflation Factor (VIF). The results show that all variables had VIF values of less than 10.00, so it can be concluded that this research model is free from multicollinearity symptoms. Furthermore, a heteroscedasticity test was conducted using the Breusch-Pagan method, where the test results showed that the Chi-Square Prob. Value was greater than 0.05. Therefore, the model was declared to contain no heteroscedasticity and to satisfy the classical assumptions.

Panel Data Regression Analysis

Based on the analysis of the selection of panel data regression models (Common Effect Model, Fixed Effect Model, and Random Effect Model) and tests that have been carried out (Chow Test, Lagrange Multiplier Test (LM Test)) it shows that the more appropriate regression model to be used in this study is the Common Effect Model. The results of the panel data regression and t-test are presented as follows.

Table 5. Panel Data Regression

Variable	**Coefficient**	**Std. Error**	**t-Statistic**	**Prob.**
C	-2.248181	0.369151	-6.090147	0.0000
X1	0.642412	0.200821	3.198929	0.0019
X2	0.866808	0.651920	1.329622	0.1867
X3	-0.067000	0.115267	-0.581260	0.5624
X4	-0.130020	0.125643	-1.034839	0.3033
X5	-0.010922	0.017628	-0.619596	0.5370
R-squared	0.107724	Mean dependent var		-9.972929
Adjusted R-squared	0.062200	S.D. dependent var		7.417251
S.E. of regression	4.926230	Sum squared resid		2378.239
F-statistic	2.366309	Durbin-Watson stat		1.603085
Prob(F-statistic)	0.045068			

Source: Output Eviews

Coefficient Determination Analysis

Based on table 5, it is known that the value of the determination coefficient is R^2 = 0.062200. This value can be interpreted as Financial Stability, Ineffectiveness of Monitoring, Quality of Auditors, Experience of Directors, CEO picture in the model is only able to explain around 6.22% of the variation in independent variables. This shows that the model's ability to explain the occurrence of financial statement fraud is still low, so there is a possibility of 93.78% being influenced by other factors.

Simultaneous Effect Significance Test (F Test)

The F test is performed to analyze the combined or simultaneous effect of independent variables on the dependent variable. Reffering to table 5, the Prob. (F-statistic), which is 2.3663 > 0.05, indicating that all independent variables, namely financial stability,

effectiveness of monitoring, quality of auditors, experience of directors, and CEO picture simultaneously, have no effect on the variable of FSF.

Hypothesis Test (t-Test)

a. It is known that X1, namely Financial Stability, has a Prob value. (Significance) 0.0019 < 0.05 with a t-statistic of 3.1989. It can be concluded that financial stability has a significant positive impact on FSF.
b. It is known that X2, namely Ineffective Monitoring, has a Prob value. (Significance) 0.1867 > 0.05 with a t-statistic of 1.3296. So it can be concluded that ineffective monitoring does not have a significant effect on FSF.
c. It is known that X3 is the quality of the auditor with a Prob value. (Significance) 0.5624 > 0.05 with t-statistic -0.5812. This means that the quality of auditors does not have a significant effect on FSF.
d. It is known that X4, namely the Board of Directors Experience, has a Prob value. (Significance) 0.3033 > 0.05 with a t-statistic of -1.0348. This shows that the experience of the directors has no effect on FSF
e. It is known that X5, namely CEO Picture, has a Prob value. (Significance) 0.5370 > 0.05 with a t-statistic of -0.6195. So it can be concluded that the CEO picture has no effect on FSF.

Moderated Regression Analysis

Next, a moderation test was carried out, which examined whether significant capital structure moderated the relationship between financial stability, ineffective monitoring, auditor quality, director's experience, and CEO picture against FSF. The following table presents the results of the moderation test.

Table 6. Results of Moderation

Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	-1.916573	1.726295	-1.110223	0.2698
X1	3.456588	1.464464	2.360309	0.0204
X2	0.749596	2.221697	0.337398	0.7366
X3	-0.337770	0.578423	-0.583950	0.5607
X4	-0.636296	0.626576	-1.015512	0.3125
X5	0.031264	0.093952	0.332769	0.7401
Z	-0.240695	1.025426	-0.234726	0.8149
X1Z	-1.466846	0.773586	-1.896165	0.0611
X2Z	0.129393	1.514791	0.085420	0.9321
X3Z	0.133848	0.317874	0.421074	0.6747
X4Z	0.276959	0.349179	0.793174	0.4297
X5Z	-0.022767	0.054299	-0.419295	0.6760
R-squared	0.146374	Mean dependent var		-8.391505
Adjusted R-squared	0.044310	S.D. dependent var		6.873443
S.E. of regression	4.664877	Sum squared resid		2002.019
F-statistic	1.434137	Durbin-Watson stat		1.727541
Prob(F-statistic)	0.171123			

Source: Output Eviews

Based on the results of the moderation regression analysis in table 6, it is known.

a. The WBS is not significant as a moderator of the relationship between financial stability and FSF, with the value of Prob. 0.0611 > 0.05
b. The WBS is not significant as a moderator of the relationship between ineffective monitoring of FSF, and the value of Prob. 0.9321 > 0.05
c. The WBS is not significant as a moderator of the relationship between the quality of auditors to the fraud of financial statements, with the value of Prob. 0.6747
d. The WBS was not significant as a moderator of the relationship between the directors' experience with FSF, with a Prob.0.4297 value
e. The WBS is not significant as a moderator of the relationship between the CEO picture and the fraud of financial statements, with the value of Prob. 0.6760

Discussion

The Effect of Financial Stability on FSF

The results of the first hypothesis test (H1) in table 5, obtained that financial stability proxied with asset change (ACHANGE) has a Prob value. 0.0019 < 0.05 then H2 is accepted. This shows that financial stability has a significant positive influence on FSF. Assets show the magnitude of the company's power, so too significant changes can show instability in the company's condition and create pressure for management because it has the potential to open up opportunities for FSF (Musfi & Soemantri, 2024). This situation can put pressure on management to improve unstable financial conditions, potentially encouraging fraud in financial reporting (Situngkir & Triyanto, 2020).

This finding is in line with the agency's theory that there is a difference in interests between shareholders (principals) and managers (agents), thus encouraging managers to potentially commit fraud in financial statements. Financial instability proxied through asset change (ACHANGE) can put pressure on managers to keep performing well in the presence of principals. When asset changes are too significant and reflect unstable conditions, managers tend to look for a variety of ways, including manipulating financial statements to make the company look stable and pressure from principals to be avoided. The results of this study are in line with the research of Fathmaningrum & Anggarani (2021) and Situngkir & Triyanto (2020) which states that the financial stability variable has a positive influence on FSF.

The Effect of Ineffective Monitoring on FSF

The results of the second hypothesis test (H2) in table 5 show that the ineffective monitoring proxied with the ratio of the number of independent commissioners (BDOUT) has a Prob value. 0.1867 > 0.05 then H2 is rejected. This means that the ineffective monitoring variable has no effect on financial statement fraud. The existence of an independent board of commissioners does not contribute to the effectiveness of the supervision within the company will affect the chances of fraud in financial statements, because the existence of a board of commissioners will not have a significant effect if its existence does not run as effectively as it functions (Khamainy et al., 2022).

These findings are in line with research by Julia & Yunita (2022), Istikhoroh et al. (2021), Khamainy et al. (2022)and (Raihan et al., 2024) which states that the variable of ineffective monitoring has no effect on financial statement fraud.

The Influence of Auditor Quality on FSF

The results of the third hypothesis (H3) test in table 5 show that the quality of auditors proxied by the number of years of the auditor's period in the same company for the period 2021-2024 has a Prob value. 0.5624 > 0.05 then H3 is rejected. This means that the auditor's quality variable has no influence on FSF. The length of time the auditor handles the company does not guarantee an increase in the auditor's ability to prevent or detect financial statement fraud. The auditor's long-term relationship with the client has the potential to reduce independence, so the quality of the audit is not strong enough to reduce the risk of FSF. These findings are in line with research by Marsh (2024) which states that the auditor quality variable has no influence on financial statement fraud.

The Influence of the Board of Directors' Experience on FSF

The results of the fourth hypothesis test (H4) in table 5 show that the experience of directors who are proxied using the tenure of directors has a Probability value. 0.3033 > 0.05 then H4 is rejected. This means that the experience of the directors has no influence on FSF. The length of time a director has been in office does not guarantee his ability to prevent or suppress fraudulent practices in financial statements. These findings are in line with research by Adeniyi & Imade (2023) which states that the experience variable of the board of directors has no influence on the fraud of financial statements. The similarity of the results indicates that individual characteristics or board composition, whether in terms of length of tenure, size, or financial expertise, do not automatically increase the effectiveness of supervision in preventing fraud.

The Influence of CEO Pictures on FSF

The results of the fifth hypothesis test (H5) in table 5, obtained that CEO pictures that were proxied with the number of photos of the company's CEO had a Probability value. 0.5370 > 0.05 then H5 is rejected. This shows that the number of photos of CEOs in the annual report cannot be used as a valid indicator to measure the level of managerial arrogance in encouraging fraud. The number of photos featured in the annual report is more often related to the company's communication strategy, publication needs, or annual report presentation style than it reflects the arrogant nature of a CEO (Antawirya et al., 2019). These findings are in line with research by Hidayah & Saptarini (2023), Fitriyah & Novita (2021) and Antawirya et al. (2019) which states that the CEO pictures variable has no influence on financial statement fraud. Although the Pentagon's fraud theory cites arrogance as one of the driving factors for fraud, proxies in the form of a number of CEO photos are not capable enough to describe the actual arrogance.

WBS Strengthens Financial Stability Against FSF

The significance of WBS between financial stability and FSF in table 6 is 0.0611 > 0.05, then H6 is not accepted. Suggesting that WBS has no moderating effect on the relationship between financial stability and FSF. This shows that the effectiveness of WBS as a fraud prevention mechanism depends not only on its existence, but also on the quality, organizational culture, and other structural support. These findings are consistent with studies belonging to Meitasir et al. (2022) which states that WBS does not moderate the relationship between financial stability and financial statement fraud.

WBS Weakens the Ineffective Monitoring Against FSF

The significance of WBS between ineffective monitoring and FSF in table 6 was 0.9321 > 0.05, so H7 was rejected. WBS cannot moderate the relationship between ineffective monitoring of FSF. These findings are in line with the study Susanto & Hastuti (2025) stated that WBS does not moderate the relationship between ineffective oversight of FSF. The implications of these results confirm that the mere existence of WBS is not enough to intervene in the relationship between ineffective monitoring and financial statement fraud. The low level of WBS socialization and training among internal staff members may also contribute to the ineffective of WBS as a monitoring tool (Raihan et al., 2024). WBS needs to be supported by internal trust, assurance of whistleblower anonymity, firm management response, and integration in an adaptive internal control system. Without such structural support, WBS tends to be just a formal tool that does not change the essence of the risks posed by weak supervision.

WBS Strengthens the Quality of Auditors Against FSF

The significance of WBS between auditor quality and FSF in table 6 is 0.6747 > 0.05, then H8 is rejected. WBS cannot moderate the relationship between auditor quality and financial statement fraud. These findings are in line with studies of Lidya Sampepolan et al. (2023) and Achmad, Huang, et al. (2024) which tested the effectiveness of WBS where the results showed that WBS did not moderate the relationship between auditor quality and financial statement fraud. The results of this study confirm that the quality of auditors has an important role in fraud prevention, but WBS has not been shown to be able to strengthen or weaken this influence. The role of WBS will be significant if its implementation is supported by other aspects such as anonymity guarantees, whistleblower protection, and a firm response from management to violations reports.

WBS Strengthens the Board of Directors' Experience Against FSF

The significance of WBS between the experience of the directors and the fraud of financial statements in table 6 is 0.4297 > 0.05, then H9 is not accepted. Suggesting that WBS has not moderating effect on the relationship between the directors' experience with FSF. This means that WBS is unable to strengthen the experience of directors in suppressing the potential for fraud. These findings are in line with research Welly et al. (2024) which states that WBS has no significant influence on fraud prevention. In other words, the effectiveness of WBS in practice is not strong enough to strengthen the relationship between directors' experience and fraud prevention. This confirms that fraud prevention is more determined by the quality of comprehensive governance, not just the existence of internal reporting mechanisms such as WBS.

WBS Weakens CEO Pictures Against FSF

The significance of WBS between CEO pictures and FSF in table 6 is 0.6760 > 0.05, then H10 is rejected. WBS cannot moderate the relationship between CEO pictures against financial statement fraud. A measurement of arrogance through the number of photos CEOs in the annual report states that the number of photos can reflect surface personality attributes such as narcissism or arrogance (Achmad et al., 2022). The effectiveness of WBS as a moderation variable in the relationship between managerial behavior and cheating is highly dependent on the quality of implementation. Therefore, while WBS can help detect violations, its existence does not automatically moderate the impact of CEO attributes measured through photos on the existence of FSF. These findings are in line with the study Achmad et al. (2022) and Magdalena & Dananjaya (2021) namely WBS does not moderate CEO pictures against financial statement fraud

5. Conclusion

Based on the results of the analysis in this study, it can be concluded that the financial stability variable has a positive influence on financial statement fraud. When asset changes are too significant and reflect unstable conditions, managers tend to look for a variety of ways, including manipulating financial statements to make the company look stable and pressure from principals to be avoided. Meanwhile, on the independent variables of ineffective monitoring, auditor quality, experience of directors, and ceo pictures have no effect on FSF. WBS control is also not significant in affecting the possibility of fraud in state-owned companies. These findings indicate that the existence of WBS alone is not enough to suppress fraud, as its effectiveness is greatly influenced by the quality of implementation, protection of whistleblowers, culture of transparency, and management response to reports. This study however has several limitations. First, the measurement of financial stability, ineffective monitoring, auditor quality, director's experience, CEO pictures, and WBS relies on secondary data from annual reports, which may not fully capture the complexity of these constructs. Second, the research sample is limited to Indonesian State-Owned Enterprises during the period 2021-2024, thus limiting the generalization of findings to other sectors or

countries. Future studies are expected to develop measurement approaches that provide a more comprehensive understanding of the relationship with fraud in FSF, such as employee creativity measured by innovation awards. The research can also be extended to different industry sectors or longer periods of time to provide more comprehensive results.

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