Financial Shenanigans Model: Detecting Hidden Financial Reporting Strategies within the Framework of Forensic Accounting and Fraud Detection

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ABSTRACT

This study aims to identify and analyze the indications and forms of financial shenanigans in the financial reporting of PT Timah Tbk. and to examine their implications for stakeholder decision-making. A quantitative approach with a descriptive research design was employed using secondary data derived from the company's financial statements. Financial statement analysis was conducted to identify patterns, anomalies, and inconsistencies that may indicate potential financial reporting manipulation. The findings reveal indications of financial shenanigans reflected in revenue recognition practices, cash flow management, and fluctuations in key financial performance indicators. These indications suggest the potential occurrence of premature revenue recognition, delayed expense recognition, and the reclassification or timing adjustment of cash flows to portray more favorable liquidity and financial performance conditions. Although such practices may initially convey positive signals to investors and other stakeholders, discrepancies between reported and underlying economic performance may ultimately undermine stakeholder confidence, contribute to stock price volatility, increase reputational risks, and expose the company to greater operational and regulatory risks. The practical implications highlight the importance of strengthening corporate governance mechanisms, enhancing financial reporting transparency, and ensuring regulatory compliance to mitigate the risk of financial reporting irregularities. This study contributes a systematic and applicable detection framework that integrates financial statement analysis with forensic accounting perspectives to examine financial shenanigans more comprehensively. Unlike prior studies that predominantly focus on specific manipulation cases, this research provides a structured analytical approach that can be applied to emerging market contexts, particularly state-owned enterprises, and offers practical insights for auditors, regulators, and investors in identifying early warning signals of potential financial misstatements.

1. Introduction

Currently, the business world faces increasingly intense competition and conditions that demand companies to operate more effectively and efficiently. The high level of competition, rapid economic development, and advances in modern technology highlight the importance of information for corporate growth, particularly information presented in the form of financial statements. To ensure that the financial information presented is accurate, reliable, and relevant, companies require an effective accounting system. A well-designed accounting system assists in the systematic collection, recording, classification, and reporting of financial data so that all stakeholders can make informed decisions based on valid information (Svabofa et al., 2020). Consequently, the role of accounting information becomes crucial in addressing the challenges of globalization and ensuring the sustainability and long-term growth of a company.

The accounting system is closely related to financial statements. Financial statements are prepared by companies as a tool to assess the sustainability of their operations (Kuruppu, 2020). However, deviations and manipulations of financial statements by companies frequently occur. Such deviations are known as financial shenanigans, referring to various manipulative actions by management to embellish financial reports. These actions may include revenue manipulation, expense manipulation, asset overstatement, and liability concealment. The objective of financial shenanigans is to mislead stakeholders regarding the actual performance and financial condition of the company, in order to achieve certain goals such as attracting investment or meeting financial targets.

Detecting financial shenanigans is a complex challenge because manipulative practices are often disguised within legitimate accounting techniques and sophisticated reporting structures. Traditional financial analysis and auditing procedures are sometimes insufficient to uncover such irregularities, especially when management intentionally exploits accounting flexibility or gaps in regulations. Therefore, the adoption of comprehensive detection models and stronger internal control mechanisms becomes essential in maintaining the reliability of financial reporting and protecting stakeholders' interests. Without such preventive measures, companies may face not only financial losses but also reputational damage and potential legal sanctions (Sari & Wahidahwati, 2018).

Furthermore, the issue of financial shenanigans is closely tied to corporate governance and ethical behavior in business practices. Strong governance structures, transparent disclosure policies, and an embedded ethical culture within organizations are critical in reducing opportunities for manipulation. Regulators, auditors, and investors need to collaborate to strengthen accountability and ensure that financial statements reflect the true economic condition of companies. Recent advancements in technology, such as artificial intelligence and forensic data analytics, also provide promising tools for detecting anomalies and preventing fraudulent reporting. By integrating these measures, firms can not only enhance financial transparency but also build long-term trust and sustainability in the global business environment (Murni & Tumewu, 2023).

Despite the growing attention to financial reporting manipulation and forensic accounting practices, prior studies tend to examine financial shenanigans by focusing on specific manipulation techniques or individual financial indicators. While these studies provide valuable insights, the integration of multiple shenanigans indicators into a comprehensive analytical framework remains relatively limited. This limitation may reduce the effectiveness

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of early detection mechanisms, particularly in complex organizational environments such as state-owned enterprises that operate under diverse regulatory and stakeholder pressures.

In addition, empirical studies examining financial shenanigans detection within emerging market contexts, including Indonesia, remain relatively limited. Differences in governance structures, regulatory enforcement, and institutional environments may influence the characteristics and detection of financial reporting manipulation. Therefore, further empirical investigation is necessary to better understand how financial shenanigans may manifest in such contexts and how detection approaches can be systematically applied.

Based on these considerations, this study aims to identify and analyze indications of financial shenanigans in the financial statements of PT Timah and to examine their potential implications for stakeholder decision-making. To provide clearer analytical direction, this study is guided by the following research questions:

a. How are indications of financial shenanigans reflected in the financial statements of PT Timah?
b. What forms of financial shenanigans strategies potentially emerge from financial reporting practices?
c. How might the identified financial shenanigans influence stakeholder decision-making?

This study is expected to contribute to the development of a more structured detection framework by integrating financial statement analysis with forensic accounting perspectives. In addition, the findings may provide practical insights for regulators, auditors, investors, and corporate management in identifying potential financial reporting irregularities, particularly within the context of state-owned enterprises in emerging markets.

2. Literature Review

Signaling theory explains that financial reports serve as a medium for management to convey information about the company's condition and performance to external parties. Ideally, financial reports provide an honest signal and reflect the company's economic reality. However, literature shows that this signal can be distorted when management exploits loopholes in accounting standards to perpetrate financial fraud covertly, thereby exacerbating information asymmetry between management and stakeholders (Durya, 2024). Financial fraud in financial reports can generally be classified into seven main categories: revenue manipulation, expense manipulation, asset manipulation, liability manipulation, cash flow manipulation, related party transactions, and operational activity manipulation. These practices rarely appear explicitly but are usually reflected in changes in certain financial ratios that appear reasonable individually but are suspicious when analyzed comprehensively. In line with this, various modern detection tools have been developed to identify manipulative signals in financial reports. The Beneish M-Score is a widely used model because it combines several financial ratios to estimate the likelihood of earnings manipulation, while the Dechow F-Score emphasizes accrual quality and financial performance in detecting fraudulent reporting. Furthermore, Benford's Law is used to identify irregularities in the distribution of accounting numbers that could indicate data manipulation. These three approaches emphasize that effective financial fraud detection requires multi-ratio analysis and cannot rely on a single indicator.

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Previous research related to financial shenanigans includes the study conducted by Christian (2024), which analyzed fraud in the presentation of corporate financial statements using the seven types of financial shenanigans. This study examined PT Timah (Persero) Tbk, using secondary data from its official website for the 2016–2020 period. The results indicated no evidence of fraud using financial shenanigans, leading to the conclusion that PT Timah's financial statements were presented fairly and in accordance with Indonesia's accounting reporting standards. Christian et al., (2023) investigated an alleged corruption case at PT Pertamina and analyzed fraud using cashflow shenanigans. Using secondary data from Pertamina's official website, they found that the third type of cash flow trick increasing operational cash flow through seemingly benign activities was present. These previous studies primarily focused on individual case analyses of two state-owned enterprises (SOEs) using either the seven financial shenanigans or cashflow shenanigans approach to detect potential manipulation.

Based on this framework, this study selected the DSRI, GMI, SGAI, TATA, RDRS, RPTE, NOI, and OI indicators because they represent various dimensions of financial fraud that align with the seven fraud categories and the development of the Beneish model. DSRI and GMI are used to capture potential manipulation of revenue and profit margins, SGAI reflects operating cost pressures, while TATA represents the accrual rate often associated with earnings management practices. RDRS and RPTE indicators are used to identify potential manipulation through receivables and related party transactions, while NOI and OI reflect distortions in operational activities that can be used to embellish cash flow performance. Although these indicators are components or extensions of the Beneish M-Score model, this study does not calculate the M-Score in aggregate because the objective of the study is not to classify PT Timah as a manipulator or non-manipulator, but rather to analyze in-depth the patterns of manipulative signals appearing in the financial statements. This approach allows for a more contextual understanding of accounting signal distortion and broadens the application of signaling theory in the context of financial fraud.

3. Research Method

This study employs a quantitative approach using a descriptive research design to examine indications of financial shenanigans in corporate financial reporting. The research focuses on PT Timah Tbk as the research subject, while the research object consists of the company's financial statements, including the statement of financial position, income statement, statement of cash flows, and notes to the financial statements for the period 2018–2023. Secondary data were obtained from audited annual financial statements published on PT Timah's official website. The use of financial statement data is considered appropriate because financial shenanigans are commonly identified through historical reporting patterns and ratio analysis. Data collection was conducted through documentation and literature review to support the selection of analytical indicators.

This study combines descriptive statistical analysis with a financial shenanigans analytical framework consisting of earnings shenanigans, cash flow shenanigans, and key metric shenanigans. These indicators are adapted from forensic accounting and financial manipulation detection literature. Descriptive statistical analysis is used to identify trends and variations in financial ratios that may indicate potential reporting irregularities. In addition, a

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one-sample t-test is applied to examine whether the average ratio values significantly differ from predetermined benchmark values. The use of this test aims to provide statistical support in identifying abnormal deviations that may indicate potential financial reporting anomalies. Benchmark values are determined based on theoretical expectations, prior empirical studies, and commonly accepted financial ratio standards within forensic accounting literature. For ratios derived from manipulation detection models such as Beneish-related indicators, deviations from expected values or unusual ratio movements relative to historical trends may signal potential irregularities.

Considering that financial shenanigans detection focuses on anomaly identification rather than fixed universal thresholds, benchmark values in this study are interpreted as early warning indicators rather than conclusive evidence of manipulation.

Table 1. The Operational Definitions and Measurement

Variables	Formulas
A. Earning Shenanigans	
1. Recording Revenue Too Early	This ratio measures the number of days sales in receivables for the current year compared to the previous year. $DSRI = \frac{(\text{Account Receivables t}/ \text{Sales t})}{(\text{Account Receivables t-1}/\text{Sales t-1})}$
2. Recording Fictitious or Fake Revenue	This ratio measures the gross margin of the previous year compared to the current year. $GMI = \frac{(\text{Sales t-1- CPGS t-1})/ \text{Sales t-1}}{(\text{Sales t} - \text{COGS t}) / \text{Sales t}}$
3. Boosting Revenue Using One-Time Activities	This ratio identifies the extent to which a company's revenue comes from non-operating activities. $NOI/OI = \frac{\text{Non} - \text{Operating Income}}{\text{Operating Income}}$
4. Shifting Current Expenses to the Next Period	This ratio measures operating profit minus operating cash flow, scaled by total assets. $TATA = (\text{Operating Profit}_t - \text{Cashflow Operating}_t) / \text{Total Asset}$
5. Hiding Expenses or Losses	This ratio measures selling and administrative expenses relative to sales in the current year compared to the previous year. $SGAI = \frac{(\text{SGA Expenses t} / \text{Sales t})}{\text{SGA Expenses t01}/ \text{Sales t-1}}$
6. Shifting Current Revenue to the Next Period	This ratio detects manipulation by deferring revenue that should be recognized in the current period to future periods. $RDRS = \frac{\text{Deferred Revenue}}{\text{Sales}}$
7. Shifting Future Expenses to the Current Period	This ratio detects potential manipulation of expenses. $RPTE = \frac{\text{Provisions}}{\text{Total Expenses}}$
B. Cashflow Shenanigans	
1. Shifting Cash Inflows from Financing to Operating Activities.	This ratio analyzes the reasonableness of net income's impact on operating cash flow increases $OCR = \frac{\text{Operation Cashflow}}{\text{Sales}}$

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Variables	Formulas
2. Shifting Cash Outflows from Operating to Other Activities.	This ratio examines the possibility that increased operating cash flows are due not only to current liabilities but also to non-current liabilities (e.g., loan proceeds) that should be classified under financing activities. $OCL = \frac{\text{Operation Cashflow}}{\text{Current Liabilities}}$
3. Increasing Operating Cash Flow Using Unsustainable Activities.	a) Changes in receivables to operating cash flow, this ratio is used to examine the suspicion of deliberate reduction in the value of accounts receivable which has the potential to increase operating cash flow. $CRCO = \frac{\Delta \text{ Receivable}}{\text{Operation Cashflow}}$ b) Free Cash Flow (FCF) – Measures the amount of cash available for business expansion, investment, etc., without manipulating capital expenditure reductions. FCF = Operation Cashflow – Capital Expenditures c) Days Payable Outstanding (DPO) – Measures delayed payments to suppliers that may artificially increase operating cash flow. $DPO = \frac{\text{Account Payable}}{\text{COGS}} \times 365$ d) Changes in inventory to operating cash flow. This ratio is used to examine the reasonableness of inventory use which affects the increase in operating cash flow. $CICO = \frac{\Delta \text{ Inventory}}{\text{Cashflow Operation}}$
C. Key Metric Shenanigans	
1. Highlighting Misleading Metrics as a Substitute for Revenue	Observed through profit margin, which indicates how efficiently the company generates profit from revenue. $\text{Profit Margin} = \frac{\text{Gross Profit}}{\text{Operating Revenue}} \times 100\%$
2. Highlighting Misleading Metrics as a Substitute for Cash Flow	Observed by comparing EBITDA with Operating Cash Flow. If EBITDA shows strong growth but Operating Cash Flow is low or negative, it indicates that EBITDA does not reflect the company's true financial reality.

4. Results and Discussion

Results

This study employs secondary data in the form of PT Timah financial statements for the period 2018–2023, as published on the company's official website. The data collection methods used in this research are documentation and literature review. The data analysis techniques include descriptive statistical analysis, the financial shenanigans approach comprising earning shenanigans, cashflow shenanigans, and key metric shenanigans and the one-sample t-test.

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Descriptive Statistical Analysis

Table 2. Statistik Deskriptif Rasio Earning Shenanigans

Variable	Minimum	Maximum	Mean	Std. Dev
DSRI	0.482	1.630	1.020	0.422
GMI	0.571	1.490	1.062	0.326
NOI/OI	-0.523	0.142	-0.093	0.282
TATA	-0.395	0.132	-0.093	0.190
SGAI	0.735	1.631	1.097	0.324
RDRS	0.000	0.006	0.002	0.002
RPTE	0.014	0.028	0.023	0.005

Source : data processed by SPSS 24

The DSRI ratio has a minimum value of 0.482 and a maximum value of 1.630, with a mean of 1.020 and a standard deviation of 0.422. The GMI ratio ranges from a minimum of 0.571 to a maximum of 1.490, with a mean of 1.062 and a standard deviation of 0.326. The NOI/OI ratio records a minimum value of -0.523 and a maximum value of 0.142, with a mean of -0.093 and a standard deviation of 0.282. The TATA ratio has a minimum value of -0.395 and a maximum value of 0.132, with a mean of -0.093 and a standard deviation of 0.190. The SGAI ratio ranges from a minimum of 0.735 to a maximum of 1.631, with a mean of 1.097 and a standard deviation of 0.324.

Table 3. Descriptive Statistics of Cashflow Shenanigans Ratios

Variable	Minimum	Maximum	Mean	Std. Dev
COCL	-0,190	1,168	0,493	0,521
OCR	-0,115	0,355	0,121	0,201
CRCO	-1,475	1,280	0,002	0,988
FCF	-0,883	0,955	0,003	0,688
DPO	23	40	32,833	7,082
CICO	-3,503	4,715	0,086	3,132
COCL	-0,190	1,168	0,493	0,521

Source : data processed by SPSS 24

The COCL ratio has a minimum value of -0.190 and a maximum value of 1.168, with a mean of 0.493 and a standard deviation of 0.521. The OCR ratio ranges from a minimum of -0.115 to a maximum of 0.355, with a mean of 0.121 and a standard deviation of 0.201. The CRCO ratio records a minimum value of -1.475 and a maximum value of 1.280, with a mean of 0.002 and a standard deviation of 0.988. The FCF ratio has a minimum value of -0.883 and a maximum value of 0.955, with a mean of 0.003 and a standard deviation of 0.688. The DPO ratio ranges from a minimum of 23 to a maximum of 40, with a mean of 32.833 and a standard deviation of 7.082. The CICO ratio has a minimum value of -3.503 and a maximum value of 4.715, with a mean of 0.086 and a standard deviation of 3.132.

Financial Shenanigans Analysis

a. Earning Shenanigans

Recording Revenue Too Early

Table 4. Data Day's Sales in Receivables Index (DSRI)

Year	Account Receivables (t)	Account Receivables (t-1)	Sales (t)	Sales (t-1)	DSRI
2018	2.191.460	1.694.982	11.049.946	9.217.160	1,708
2019	1.855.870	2.191.460	19.302.627	11.049.946	0,485
2020	1.543.761	1.855.870	15.215.980	19.302.627	1,055
2021	2.270.182	1.543.761	14.607.003	15.215.980	1,532
2022	1.357.584	2.270.182	12.504.297	14.607.003	0,699
2023	1.158.037	1.357.584	8.391.907	12.504.297	1,271

Source : data processed by SPSS 24

Table 5. Results of DSRI Data Analysis

Variable	t	Mean	Sig.
DSRI	-2.23	1,020	0,07

Source : data processed by SPSS 24

Table 5 shows that in several years, the DSRI value exceeded 1.0, indicating a disproportionate increase in accounts receivable relative to sales. The average DSRI is 1.020, with a significance value of 0.07 (> 0.05) and a calculated t-value lower than the critical t-value (-2.23 < 2.570), suggesting an indication of earning shenanigans through premature revenue recognition.

In 2021, the DSRI reached 1.532, signaling an imbalance between accounts receivable and sales. This potentially indicates that revenue was recorded before the actual receipt of cash or the delivery of goods/services, which could constitute a form of revenue manipulation. In 2022, the DSRI sharply declined to 0.699, reflecting the stricter implementation of the Expected Credit Loss (ECL) model. This approach, which proactively accounts for increased credit risk, resulted in higher allowances for doubtful accounts, thereby significantly reducing net receivables. Consequently, the receivables-to-sales ratio dropped substantially. These DSRI fluctuations indicate the influence of both accounting policies and external factors on the management of receivables and revenue.

Recording Fictitious or Fake Revenue

Table 6. Gross Margin Index (GMI) Data

Year	Revenue	Cost of Goods Sold (COGS)	Gross Margin	GMI
2018	11.049.946	9.372.416	0,15	-
2019	19.302.627	18.167.065	0,06	2,58
2020	15.215.980	14.096.099	0,07	0,80
2021	14.607.003	11.172.514	0,24	0,31
2022	12.504.297	9.978.260	0,20	0,06
2023	8.391.907	7.925.966	0.05	3,64

Source : data processed by SPSS 24

Table 7. Results of Gross Margin Index (GMI)

Variable	t	Mean	Sig
GMI	-1,58	1.062	0.17

Source : data processed by SPSS 24

Table 6 shows that the GMI ratio declined from 2020 to 2023. The average GMI ratio is 1.062, with a significance value of 0.17 (> 0.05) and a calculated t-value of -1.58, which is lower than the critical t-value of 2.570. This indicates that during the period 2018–2019, there were signs of attempts to manipulate revenue data. The decrease in gross margin from 0.15 in 2018 to 0.06 in 2019 was driven by a significant increase in the cost of goods sold due to higher production costs. The increase in provisions for doubtful accounts signaled collection issues, while financial expenses nearly doubled due to higher debt levels.

In 2023, the GMI rose sharply to 3.64, indicating a substantial drop in profit margin from 0.20 to 0.06. The main contributing factors included reduced production due to limited supply from business partners, losses from the temporary suspension of operations for certain dredging vessels, and asset impairment charges. The increase in financial expenses, including interest amounting to IDR 205,098 million, along with losses from damaged production assets, further exerted pressure on the company's profitability. Collectively, these operational and external factors had a significant impact on the company's profit decline.

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Boosting Revenue Using One-Time (Non-Sustainable) Activities

Table 8. Non-Operating Income to Operating Income (NOI/OI) Data

Year	Non-Operating Income	Operating Income	Ratio
2018	107.590	766.482	0,14
2019	-63.570	-722.414	0,08
2020	96.013	-269.760	-0,35
2021	-89.908	1.728.705	-0,05
2022	199.987	1.406.628	0,14
2023	233.643	-446.698	-0,52

Source : data processed by SPSS 24

Table 9. Result of Non-Operating Income to Operating Income

Variable	t	Mean	Sig
NOI/OI	-9.60	-0.093	0.000

Source : data processed by SPSS 24

Table 8 shows a consistent decline in the NOI/OI ratio over the years. The average ratio is -0.093, with a significance value of 0.00 (< 0.05) and a calculated t-value of -9.60, which is lower than the critical t-value of 2.570. Based on this test, the existing NOI/OI data indicate that during the period 2018–2019, there was no evidence of revenue manipulation. Based on our analysis, we determined that an absolute value of the |NOI/OI| ratio greater than 0.2 indicates a high dependence on non-operating income, potentially undermining financial stability. During the 2018–2019 period, the NOI/OI ratio ranged from 0.08 to 0.14, which is still below this threshold, thus providing no evidence of revenue manipulation. However, in 2023, the ratio reached -0.52 (absolute value > 0.2) with a negative denominator (negative Operating Income), indicating a significant dependence on non-operating income to cover operating losses.

Shifting Current Expenses to the Next Period

Table 10. Total Accrual to Total Assets (TATA) Data

Year	Net Income	Operating Cashflow (t)	Total Asset	TATA
2018	574.813	-1.420.759	15.117.948	0,13
2019	-608.776	-2.080.269	20.361.278	0,07
2020	-336.406	5.400.909	14.517.700	-0,40
2021	1.303.256	4.039.395	14.690.989	-0,19
2022	1.041.563	3.114.511	13.066.976	-0,16
2023	-449.672	681.969	12.853.277	-0,09

Source : data processed by SPSS 24

Table 11. Total Accrual to Total Assets (TATA) Data

Variable	t	Mean	Sig
TATA	-3,084	-0,011	0,027

Source : data processed by SPSS 24

Table 10 presents the TATA ratio for the period 2018–2019. The average ratio is -0.011, with a significance value of 0.027 (< 0.05) and a calculated t-value of -3.084, which is lower than the critical t-value of 2.570. Based on this test, the available TATA data indicate that during the period 2018–2023, there was no evidence of shifting current expenses to future periods.

In 2018, the TATA ratio was positive (0.13), influenced by an increase in accounts receivable, large inventory levels, and higher accrued expenses. Elevated accounts receivable reflected credit sales that had not yet been converted into cash, while the significant rise in inventory indicated production costs that had not been matched by cash inflows from sales.

Increased accrued expenses also contributed to higher total accruals, providing a potential indication of expense deferral to subsequent periods as a means of earnings manipulation.

Hiding Expenses or Losses

Table 12. SGAI Index Data

Year	SGA Expenses (t)	Sales (t)	SGA Expenses (t-1)	Sales (t-1)	SG&A Index (SGAI)	SGAI Changes
2018	820.899	11.049.946	710.853	9.217.160	0,97	
2019	1.067.241	19.341.569	829.350	11.049.946	0,73	-24%
2020	832.986	15.215.980	1.067.241	19.341.569	0,99	26%
2021	1.062.334	14.607.003	832.986	15.215980	1,32	34%
2022	842.942	12.504.297	1.062.334	14.607.003	0,93	-40%
2023	922.907	8.391.907	842.942	12.504.297	1,63	70%

Source : data processed by SPSS 24

Table 13. Result of SGAI Data Index

Variabel	t	Mean	Sig
SGAI	-5,00	1,097	0,004

Source : data processed by SPSS 24

Table 12 shows that the SGAI ratio experienced several fluctuations during the period 2018–2023. The average ratio was 1.097, with a significance value of 0.004 (< 0.05) and a calculated t-value of -5.00, which is lower than the critical t-value of 2.570. Based on this test, the available SGAI data indicate that during the period 2018–2023, there was no evidence of shifting current expenses to future periods.

The SGAI ratio underwent significant changes throughout 2018–2023, reflecting inconsistent dynamics between selling, general, and administrative (SGA) expenses and sales. In 2021, the SGAI increased to 1.32 from 0.99 in the previous year, indicating that SGA expenses grew faster than sales. However, in 2022, the ratio declined to 0.93, followed by a sharp increase to 1.63 in 2023. These significant changes—particularly the 70% surge in 2023—suggest the potential for financial statement manipulation, such as efforts to conceal losses or defer the recognition of actual expenses to present a more favorable net income.

Shifting Current Revenue to Future Periods

Table 14. Ratio Deffered Revenue to Sales Data

Year	Revenue Expenditure	Sales	Ratio Deffered Revenue to Sales
2018	-	11.049.946	0,000
2019	35.396	19.341.569	0,002
2020	76.499	15.215.980	0,005
2021	27.000	14.607.003	0,002
2022	-	12.504.297	0,000
2023	33.578	8.391.907	0,004

Source : data processed by SPSS 24

Table 15. Result of Deffered Revenue to Sales Ratio Data

Variable	t	Mean	Sig
RDRS	-20.60	0,002	0,00

Source : data processed by SPSS 24

Table 15 shows that the RDRS ratio has an average value of 0.002, with a calculated t-value of -20.60, which is lower than the critical t-value of 2.570, and a significance value of 0.000 (< 0.05). These results indicate that the RDRS ratio does not provide evidence of shifting current revenue to future periods.

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Shifting Future Expenses to the Current Period

Table 16. Provisions to Total Expenses Ratio

Year	Provisions	Total Expenses	Ratio Provisions to Total Expenses	Rasio Exchange
2018	288.600	1.073.873	0.028	
2019	290.572	1.135.562	0.014	-1%
2020	327.191	1.119.861	0.021	1%
2021	331.846	3.434.489	0.026	1%
2022	321.234	2.526.037	0.028	0%
2023	325.853	465.941	0.025	-1%

Source : data processed by SPSS 24

Table 17. Provisions to Total Expenses Ratio

Variable	t	Mean	Sig
RPTE	-10,753	0,023	0,000

Source : data processed by SPSS 24

Table 16 shows that the provisions-to-total-expenses ratio yielded positive results, with an average ratio of 0.023, a calculated t-value of -10.753 (lower than the critical t-value of 2.570), and a significance value of 0.000 (< 0.05). Accordingly, based on the RPTE ratio, there is no indication of shifting current revenue to future periods during 2018–2023.

The provisions-to-total-expenses ratio reflects dynamics that may indicate potential earnings management practices. In 2018, the ratio reached 0.028 but declined significantly to 0.014 in 2019, despite an increase in total expenses. This decline suggests the possibility that the company intentionally reduced the recognition of provisions to lower reported expenses, thereby increasing net income in that year. Such a practice could reflect an effort to improve short-term financial performance at the expense of provisioning for future expenses.

b. Cashflow Shenanigans

Shifting Cash Outflows from Operating to Other Activities.

Table 18. Cashflow Operation Ratio

Year	Cashflow Operation	Sales	Ratio
2018	-1.261.639	11.016.677	-0,115
2019	-2.080.269	19.302.627	-0,108
2020	5.400.909	15.215.980	0,355
2021	4.039.395	14.607.003	0,277
2022	2.951.616	12.504.297	0,236
2023	681.969	8.391.907	0,081

Source : data processed by SPSS 24

Table 19. Result of Cashflow Operation Ratio Data

Variable	t	Mean	Sig
Cashflow Operation	-10,845	0,121	0,000

Source : data processed by SPSS 24

Table 19 shows that the cash flow from operations ratio increased from negative to positive over the observed period. The average ratio was 0.121, with a calculated t-value of -10.845 (lower than the critical t-value of 2.570) and a significance value of 0.000 (< 0.05). Therefore, the cash flow from operations ratio indicates no evidence of cash flow shenanigans in terms of shifting cash inflows from financing activities to operating activities.

The ratio of operating cash flow to revenue during 2018–2023 exhibited fluctuations that reflect an imbalance between the revenue generated and the cash flows from operations. In 2018 and 2019, the ratio recorded negative values of -0.115 and -0.108, respectively, indicating operating cash leakage despite increasing revenue. This imbalance may have been caused by high payments to suppliers and employees, which reduced the company's ability to generate positive cash flows from operations.

Shifting Cash Inflows from Financing to Operating Activities.

Table 20. Cashflow Operation to Current Liabilities Ratio

Year	Cashflow Operation	Current Liabilities	Ratio
2018	-1.261.639	6.635.425	-0,19
2019	-2.080.269	11.958.185	-0,17
2020	5.400.909	5.865.165	0,92
2021	4.039.395	5.685.900	0,71
2022	2.951.616	2.547.165	1,16
2023	681.969	3.982.242	0,17

Source : data processed by SPSS 24

Table 21. Result of Cashflow Operation to Current Liabilities Ratio Data

Variabel	t	Mean	Sig
COCLR	-5,00	0,432	0,004

Source : data processed by SPSS 24

Table 20 shows that the ratio of operating cash flow to total liabilities during the period 2018–2023 exhibited significant fluctuations, which may indicate the potential presence of shenanigans in the company's cash flow management, particularly related to shifting cash inflows from financing activities to operating activities. The average ratio was 0.432, with a calculated t-value of -5.00 (lower than the critical t-value of 2.570) and a significance value of 0.004 (< 0.05). Therefore, there is no indication of cash flow shenanigans involving the shifting of cash inflows from financing activities to other activities.

The ratio of operating cash flow to current liabilities during 2018–2023 experienced notable variations. In 2018 and 2019, the ratio was negative, at -0.19 and -0.17, respectively, indicating that operating cash flow was insufficient to cover current liabilities. This signaled a high level of financial risk and suggested liquidity pressure on the company. However, from 2020 to 2022, the ratio increased significantly into positive territory, reaching 0.92 in 2020 and peaking at 1.16 in 2022. This improvement reflected better management of operating cash flow relative to current liabilities, although such sharp increases could also suggest potential manipulation in financial reporting. In 2023, the ratio declined again to 0.17, mainly due to an increase in current liabilities resulting from the reclassification of maturing bond and sukuk ijarah obligations.

Increasing Operating Cash Flow Using Unsustainable Activities.

Table 22. Cashflow Operation to Receivables Ratio

Year	Account Receivable	Cashflow Operation	Rasio
2018	2.095.139	-1.420.759	-1,47
2019	1.719.049	-1.599.370	-0,82
2020	1.266.165	5.400.909	0,23
2021	1.916.210	4.039.395	0,47
2022	1.014.750	3.114.511	0,32
2023	872.636	681.969	1,28

Source: data processed by SPSS 24

Table 23. Cashflow Operation to Receivables Ratio

Variable	t	Mean	Sig
CRCO	-3,796	0,002	0,013

Source : data processed by SPSS 24

Table 22 shows negative results in 2018 and 2019, followed by several increases in subsequent years. The average ratio was 0.002, with a calculated t-value of -3.796 (lower than the critical t-value of 2.750) and a significance value of 0.013 (< 0.05). Therefore, this ratio indicates no evidence of cash flow shenanigans involving the enhancement of operating cash flow through unsustainable activities by converting receivables into operating cash flow.

In 2018, the ratio stood at -1.47, and in 2019 at -1.07, meaning the company had not yet received cash from customers for sales made, even though there was an upward trend from 2018 to 2023. Fictitious receivables can be detected in the cash flow statement, as such receivables do not generate cash inflows. This is evident when receivables decrease sharply but there is no significant change in operating cash flow—indicating that despite the reduction in receivables, cash inflows remain limited. However, Table 21 shows that both receivables and operating cash flow changed simultaneously, suggesting that there was likely no manipulation of receivables.

Table 24. Free Cashflow Ratio

Year	Capital Expenditures	Cashflow Operation	Free Cashflow Ratio
2018	1.254.063	-1.420.759	-0,88
2019	1.507.131	-2.080.269	-0,72
2020	1.177.817	5.400.909	0,21
2021	772.616	4.039.395	0,19
2022	817.360	2.951.616	0,26
2023	651.215	681.969	0,95

Source : data processed by SPSS 24

Table 25. Result of Free Cashflow Ratio Data

Variabel	T	Mean	Sig
FCF	0,011	0,003	0,991

Source : data processed by SPSS 24

Table 25 presents the results of the FCF data analysis using a one-sample t-test, showing an average value of 0.003, with a calculated t-value of -6.325 (lower than the critical t-value of 2.570) and a significance value of 0.001 (< 0.05). Accordingly, this ratio indicates no evidence of cash flow shenanigans involving the enhancement of operating cash flow through unsustainable activities using FCF.

In 2019, free cash flow declined to -0.94, driven by a decrease in operating cash flow to IDR -2,080,269 million and an increase in capital expenditures to IDR 1,507,131 million, which was primarily due to higher spending on asset acquisitions and property additions. In 2020, the free cash flow ratio improved to 0.21 as operating cash flow increased to IDR 5,400,909 million, largely due to reduced cash payments to suppliers, while capital expenditures fell to IDR 1,177,817 million as a result of lower asset purchases. In 2023, both operating cash flow and capital expenditures decreased, which was likely caused by a reduction in cash receipts from customers amounting to IDR 4,988,417 million and a decrease in asset purchases totaling IDR 174,423 million. Based on the table above, in 2018 and 2019 the company recorded the highest capital expenditures, even producing negative free cash flows, suggesting that excessive capital spending during these years carried the potential for shenanigans.

Table 26. Day's Period Outstanding

Year	Accounts payable	Cost of Revenue	DPO
2018	974.801	9.372.416	38
2019	1.969.247	18.197.638	39
2020	884.620	14.096.099	23
2021	886.385	11.172.514	29
2022	763.849	9.978.260	28
2023	865.426	7.925.966	40

Source : data processed by SPSS 24

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Table 27. Result of Day's Period Outstanding Data

Variable	t	Mean	Sig
DPO	11.355	32.83	0.000

Source: data processed by SPSS 24

Table 27 shows an average value of 32.83, with a calculated t-value of 0.980 (lower than the critical t-value of 2.570) and a significance value of 0.372 (> 0.05). Therefore, this ratio suggests the presence of cash flow shenanigans involving the enhancement of operating cash flow through unsustainable activities.

In 2018, 2019, and 2023, the Days Payable Outstanding (DPO) ratio indicated delays in accounts payable settlement exceeding 30 days, with DPO reaching 38 days in 2018, 39 days in 2019, and 40 days in 2023. According to the Notes to the Financial Statements for 2018 and 2019, under the liability maturity analysis, trade payables were categorized as due within less than three months. In 2019, the increase in operating cash flow was accompanied by higher receipts from customers. This suggests that management may have intentionally delayed accounts payable settlement to boost operating cash flow. In 2023, the payment delay extended further to 40 days, which was likely driven by a decline in operating cash flow of IDR 2,269,247 million and a reduction in cash payments to suppliers of IDR 1,838,572 million. This pattern indicates the potential use of delayed supplier payments as a means to manage reported cash flow performance.

Table 28. Inventory to Operating Cash Flow Ratio

Year	Inventory	Operating Cash Flow	Rasio
2018	4.908.440	-1.420.759	-3,45
2019	7.288.174	-2.080.269	-3,50
2020	3.635.111	5.400.909	0,67
2021	3.766.954	4.039.395	0,93
2022	3.604.909	2.951.616	1,15
2023	3.215.156	681.969	4,71

Source : data processed by SPSS 24

Table 29. Results of Inventory to Operating Cash Flow Ratio Analysis

Variable	t	Mean	Sig
CIFO	-3,162	0,046	0,025

Source : data processed by SPSS 24

Table 29 shows an average value of 0.046, with a calculated t-value of -3.162 (lower than the critical t-value of 2.570) and a significance value of 0.025 (< 0.05). Accordingly, this ratio indicates no evidence of cash flow shenanigans involving the enhancement of operating cash flow through unsustainable activities using CICO.

PT Timah Tbk's inventory levels did not experience a drastic decline. In fact, inventory increased in 2018 and 2019, while from 2020 to 2023 the figures remained relatively stable. Overall, the inventory-to-operating cash flow ratio from 2018 to 2023 does not suggest the occurrence of inventory manipulation.

c. Key Metric Shenanigans

Table 30. Profit Margin

Year	Gross Profit	Operating revenues	Profit Margin
2018	1.677.530	11.049.946	15%
2019	1.135.562	19.341.569	6%
2020	1.119.881	15.215.980	7%
2021	3.434.489	14.607.003	24%
2022	2.526.037	12.504.297	20%
2023	465.941	8.391.907	6%

Source: data processed by SPSS 24

Table 30 shows that in 2019 there was a significant decline in the profit margin to 6%, despite an increase in operating revenue compared to the previous year. This indicates that although revenue increased, the costs incurred to generate gross profit also rose proportionally, which may signal issues in cost management.

In 2021, the profit margin surged to 24%, representing a drastic increase compared to the previous year, possibly reflecting successful cost control or improved operational efficiency. However, in 2023, a sharp decline in gross profit to IDR 465,941 million, with operating revenue of IDR 8,391,907 million, suggests that the company may have faced difficulties in maintaining profitability despite continued revenue generation. Overall, the company appeared to focus more on revenue growth without providing adequate context regarding the decline in net income or the narrowing profit margin.

Table 31. Comparison of EBITDA with Operating Cash Flow

Year	EBITDA	Operating Cash Flow
2018	766.482	11.049.946
2019	-722.414	19.341.569
2020	-269.760	15.215.980
2021	1.728.705	14.607.003
2022	1.406.628	12.504.297
2023	-446.698	8.391.907

Source : data processed by SPSS 24

Table 31 shows significant variations in financial performance as reflected in the comparison between EBITDA and operating cash flow. In 2019, EBITDA recorded a negative value of IDR -722,414 million, while operating cash flow increased to IDR 19,341,569 million. A negative EBITDA indicates that the company experienced substantial operational losses. However, the high operating cash flow demonstrates that the company was still able to generate substantial cash from operating activities.

This discrepancy may suggest that the company used EBITDA as a potentially misleading metric to obscure operational losses by highlighting more favorable cash flow figures. Although operating cash flow remained positive, its year-on-year decline indicates that the company may be facing challenges in sustaining cash generation from its core operations.

Impact of Financial Shenanigans on Investor Confidence, Corporate Credibility, and Compliance with Financial Regulations

Table 32. Changes in Stock Price and Trading Volume

Year	Stock Price	Changes in Stock Price	Trading Volume	Changes in Trading Volume
2018	867,23		18,05	
2019	1079,67	212,44	39,4425	21,40
2020	740,98	-338,69	44,59	5,15
2021	1669,37	928,39	80,75	36,16
2022	1532,05	-137,32	33,43	-47,31
2023	926,92	-605,13	10,42	-23,01

Source : data processed by SPSS 24

Table 32 illustrates significant fluctuations in stock prices from 2018 to 2023. In 2019, the stock price experienced a substantial increase, reflecting investor confidence in the company's growth potential. This rise was likely influenced by financial reports that appeared favorable, despite indications of possible information manipulation. However, in 2020, the stock price dropped sharply, likely due to declining investor confidence stemming from the Covid-19 pandemic and potential non-transparent financial practices. The downward trend continued in 2023, indicating a further erosion of investor trust in the company's stability and long-term prospects.

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Trading volume also displayed a fluctuating pattern. The highest trading volume occurred in 2021, coinciding with a significant increase in stock prices. This suggests strong investor interest, potentially driven by optimism over economic recovery or expectations of improved company performance. However, in 2022 and 2023, trading volumes dropped sharply, signaling a substantial decline in investor interest in the stock. This reduction was likely linked to distrust in the company's less transparent financial reporting, which adversely affected stock liquidity in the market. Overall, the fluctuations in stock prices and trading volumes reflect the dynamics of investor confidence, which is highly influenced by both internal and external company conditions.

Discussion

Financial Statement Manipulation Practices of PT Timah Tbk through Financial Shenanigans Techniques

The research findings indicate that the average DSRI ratio was 1.020, with a significance value of 0.076 > 0.05 and a t-statistic of -2.236 < t-table value of 2.570. These results suggest that the DSRI data from 2018 to 2023 indicate the presence of earning shenanigans through the premature recognition of revenue. This was primarily due to a decline in trade receivables that was not proportional to sales. However, based on the financial statement notes, there was a change in the payment agreement for receivables with PT PAL, which led to a decrease in trade receivables but an increase in revenue, driven by higher sales of tin metal, aluminum, and real estate. This finding is consistent with the theory that.

The GMI ratio recorded an average of 1.06, with a significance value of 0.17 > 0.05 and a t-statistic of -1.58 < t-table value of 2.570, suggesting indications of earning shenanigans. The decline in the GMI ratio, remaining above 1, was due to decreased revenue and increased cost of goods sold (COGS). The drop in revenue was caused by limited tin ore supply from business partners. The insufficient supply prevented the company from meeting market demand optimally. Furthermore, the temporary suspension of dredging operations also added pressure on the company's revenue, preventing it from growing in line with rising costs. The increase in COGS was attributed to an accounting error in recording the amortization of mining properties, which resulted in a higher cost allocation than necessary. This was disclosed by the company in the financial statement notes. The higher COGS exerted direct pressure on the company's gross and net profit margins, leading to a significant decline.

The NOI/OI ratio had an average value of -0.093, with a significance level of 0.454 > 0.05 and a t-statistic of -0.812 > t-table value of 2.570, indicating that during 2018–2019 there was no evidence of revenue manipulation. According to the 2023 financial statements, the company recorded non-operating income of IDR 233,643 million, while operating losses reached IDR 446,698 million. These losses were triggered by limited tin ore supply from external partners, which reduced production and revenue. The TATA ratio from 2018 to 2019 showed a decline. The average ratio was -0.011, with a significance value of 0.027 < 0.05 and a t-statistic of -3.084 < t-table value of 2.570. The test results indicate no evidence of earning shenanigans during 2018–2019. The decline in the TATA ratio may have been due to conservative accounting policies or a normal reduction in accrual activities in asset management.

The one-sample t-test results for the SGAI ratio showed an average of 1.097, with a significance value of 0.004 < 0.05 and a t-statistic of -5.00 < t-table value of 2.570. These results suggest that from 2018 to 2023, there was no indication of earning shenanigans. Changes in the SGAI ratio may have been driven by natural shifts in the operating cost structure or expense

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management policies, such as additional administrative expenditures in response to market changes. Such changes reflect reasonable operational dynamics rather than deliberate manipulation.

The RDRS ratio recorded an average of 0.002, with a t-statistic of -20.60 < t-table value of 2.570 and a significance level of 0.000 < 0.05, indicating that from 2018 to 2023 there was no evidence of earning shenanigans. This ratio reflects that PT Timah Tbk managed its operations fairly, with deferred revenue amounts being relatively insignificant. The average RPTE ratio was 0.023, with a t-statistic of -10.753 < t-table value of 2.570 and a significance level of 0.000 < 0.05. Thus, based on the provisions-to-total-expenses ratio, there was no indication of earning shenanigans during 2018–2023. This suggests that provisions were allocated reasonably and in accordance with operational requirements.

Nevertheless, the overall analysis indicates that PT Timah Tbk engaged in certain earning shenanigans practices, such as recording fictitious or fraudulent revenues. These findings are consistent with Bal et al., (2013), who examined earning shenanigans using seven indicators to detect earnings manipulation in financial statements. The results also align with Sari & Wahidahwati (2018) , who found that the DSRI, GMI, SGAI, TATA, deferred revenue-to-sales ratio, and provisions-to-total-expenses ratio could detect fraudulent practices with 89.5% accuracy considered a high level thus confirming these ratios' effectiveness in detecting financial statement fraud in the banking sector during 2016–2018.

The analysis of cashflow shenanigans operations shows an average ratio of 0.121, with a t-statistic of -10.845 < t-table value of 2.570 and a significance level of 0.000 < 0.05, indicating no evidence of cashflow shenanigans. In 2023, PT Timah Tbk reclassified certain accounts payable in accordance with MMI's consolidated financial reporting policy, which resulted in a decline in operating cash flows. Additionally, reduced cash receipts from suppliers caused by limited tin ore supply further contributed to the drop in operational cash flows. An increase in short-term liabilities, including bank loans and trade payables, signaled financial pressure and heightened future risk.

The COCLR ratio recorded an average of 0.432, with a t-statistic of -5.000 < t-table value of 2.570 and a significance level of 0.004 < 0.05, showing no indication of cashflow shenanigans. The increase in COCLR demonstrates that PT Timah Tbk became more efficient in generating operating cash flow to meet its current liabilities. In 2018 and 2019, the company faced high liquidity risk but subsequently improved its cash flow ratios through financing inflows during 2020–2022. The CRCO ratio averaged 0.002, with a t-statistic of -3.796 < t-table value of 2.750 and a significance level of 0.013 < 0.05, indicating no evidence of cashflow shenanigans. Similarly, the FCF ratio showed a positive trend over the years, with an average of 32.83, a t-statistic of -6.325 < t-table value of 2.750, and a significance level of 0.001 < 0.05 indicating no evidence of cashflow shenanigans. However, the DPO ratio in 2018, 2019, and 2023 indicated delayed trade payable settlements exceeding 30 days. With an average of 32.83, a t-statistic of 0.980 < t-table value of 2.750, and a significance level of 0.372 > 0.05, the results suggest indications of cashflow shenanigans.

The CI/CO ratio demonstrated a positive change over the years, with an average of 0.046, a t-statistic of -3.162 < t-table value of 2.750, and a significance level of 0.025 < 0.05, indicating no evidence of cashflow shenanigans.

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In 2019 and 2023, the company employed a strategy of delaying trade payable settlements (high DPO) to temporarily improve cash flows. Such activities are unsustainable and may create a misleading impression of the company's operational health. A DPO consistently exceeding 30 days for three consecutive years, coupled with an upward trend, indicates potential cashflow shenanigans through the deliberate postponement of trade payables. Based on data analysis, it can be concluded that during the 2018–2023 period there were indications of cashflow shenanigans, specifically by increasing operating cash flows through unsustainable activities, as measured by the DPO ratio, by delaying trade payable payments. These findings are consistent with Murni & Tumewu (2023) and Annisa et al., (2024), who explained how to detect cashflow shenanigans in financial statements using three indicators: (1) shifting cash outflows from operating activities to other activity categories, (2) shifting cash inflows from financing activities to operating activities, and (3) increasing operating cash flows through unsustainable activities.

The analysis of key metric shenanigans indicates evidence of manipulating financial metrics that could potentially mislead stakeholders. Based on profit margin data from 2018 to 2023, the company exhibited significant performance fluctuations. In 2019, despite an increase in operating revenue, the profit margin fell sharply to 6%, suggesting inefficient cost management. In 2021, the profit margin surged to 24%, which may reflect temporary improvements in cost control efficiency; however, this was not sustainable, as the margin declined again to 6% in 2023. This instability suggests a potential effort by the company to emphasize high revenue without providing complete context regarding low net profits and operational losses, as recorded in 2019.

A comparison between EBITDA and FCF from 2018 to 2023 also reveals substantial variations. Although EBITDA was negative in 2019, amounting to -722,414 million, FCF remained positive, indicating that the company could still generate cash flow from operations. The divergence between negative EBITDA and positive FCF may indicate an attempt to use the EBITDA metric to obscure operational losses by highlighting more favorable cash flow figures. The year to year fluctuations in FCF reflect the company's challenges in consistently managing its cash flows, further reinforcing the indication of potential metric manipulation to present a more favorable financial performance than the actual situation.

These results are consistent with Majidah & Novi (2022), who examined the detection of key metric shenanigans using two techniques: (1) presenting misleading metrics that exaggerate performance, and (2) distorting balance sheet metrics to avoid recognizing a decline in performance.

The Impact of Financial Shenanigans on Investor Confidence, Corporate Credibility, and Compliance with Financial Regulations

The stock price of PT Timah Tbk experienced significant surges in 2019 and 2021. These increases were driven by investor anticipation of potential improvements in the company's performance, although this optimism may have been based on information that was not entirely accurate due to the presence of financial shenanigans. However, in 2022, the stock price began to decline sharply, and by 2023 it dropped to as low as 926.92. This decline indicates a loss of investor confidence in the company's financial statements. Investors who feel harmed by manipulative financial practices tend to withdraw their investments or stop purchasing shares, which ultimately pushes the stock price down to lower levels. In the long term, high stock price

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volatility caused by financial statement manipulation can hinder the company's stability in the capital market.

The trading volume of PT Timah Tbk's shares has also fluctuated over the years. The sharp increase in trading volume in 2021 may reflect strong investor interest in the company's shares. However, a drastic decline occurred in 2023, indicating a significant decrease in investor interest due to reduced trust in the company's integrity. This condition suggests that investors have begun to doubt PT Timah Tbk's long-term prospects, especially following indications of financial shenanigans. Low trading volume is often viewed as a negative signal, indicating high investment risk or that the market no longer considers the company an attractive investment (Jamieson et al., 2019). This decline in volume can also be interpreted as growing investor skepticism toward companies suspected of manipulating their financial statements.

Based on agency theory, conflicts of interest between shareholders and management often lie at the root of financial manipulation practices. In this context, management may attempt to enhance financial performance figures that appear favorable to investors in order to meet targets or obtain incentives. However, such actions ultimately lead to a loss of trust among shareholders when it is revealed that the reported performance does not reflect the actual condition (Gulo & Setiawati, 2023).

According to signaling theory, financial statement manipulation can send negative signals to investors once inaccuracies in the financial reports are exposed. Initially, positive-looking reports may serve as attractive signals, causing stock prices to rise. However, when manipulation practices are uncovered, these positive signals turn into negative ones, generating investor doubt and resulting in decreased interest in the affected stocks.

The financial shenanigans practiced by PT Timah Tbk have had a significant impact on investor perception and confidence, as reflected in fluctuations in stock prices and trading volume. This decline in trust poses long-term risks to the company's stability in the capital market because reduced investor interest can slow capital growth and hinder access to external funding (Iswanaji, 2018).

These findings align with the research conducted by Kurniawati & Febiolla (2022), which states that profit serves as a tool to assess how successfully management operates the company. Profit can measure operational performance, reflecting management's effectiveness in managing the entity. However, this often encourages opportunistic behavior, known as earnings management, aimed at manipulating financial figures to gain personal benefit. Such actions undermine investor confidence in the integrity of financial reports and disrupt the smooth flow of capital in financial markets.

5. Conclusion

This study identifies potential indications of financial shenanigans in PT Timah Tbk's financial statements during the 2018–2023 period through the analysis of earning, cash flow, and key metric indicators. The empirical findings suggest that fluctuations in several ratios, particularly DSRI, GMI, and DPO, may signal variations in revenue recognition, expense management, and cash flow sustainability. However, these indicators should be interpreted as early warning signals rather than conclusive evidence of intentional manipulation.

Conceptually, the findings support the role of forensic accounting in detecting financial reporting anomalies and reinforce signalling and agency theories, which explain how financial

reporting practices may influence stakeholder perceptions under conditions of information asymmetry. This study contributes by offering an integrated detection framework that combines multiple financial shenanigans indicators within a single analytical model.

Practically, the results highlight the importance of strengthening transparency, governance quality, and internal control systems to improve financial reporting reliability and maintain stakeholder confidence. Future research may expand this framework through comparative industry analysis and the application of advanced forensic analytical techniques.

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