

IDENTIFICATION OF ACCOUNTING FRAUD INDICATIONS USING A FINANCIAL RATIO APPROACH AT PT KIMIA FARMA TBK FOR THE 2019 – 2023 PERIOD

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Abstract

Accounting fraud is a serious risk that can damage the integrity of financial statements and harm companies. As a state-owned pharmaceutical company, PT Kimia Farma Tbk faces significant challenges related to the potential for fraud in its financial statements. In this context, financial ratios are often used as a tool to analyze company performance and detect indications of financial problems that could trigger fraud. The purpose of this study is to analyze the effect of financial ratios in identifying indications of accounting fraud at PT Indofarma Tbk during 2022-2023. The method used in this study is a quantitative approach with multiple linear regression analysis techniques. The independent variables in this study include profitability ratios (gross profit margin), solvency (interest coverage ratio), and activity (inventory turnover), while the dependent variable is indications of accounting fraud based on the fraud triangle theory (pressure, opportunity, and rationalization). The results of the analysis show that the company's performance fluctuates, reflecting a decline in product efficiency. Overall, although PT Kimia Farma Tbk shows financial improvement, the extreme fluctuation pattern in several ratios can be an early indication of potential fraud or irregularities in financial reporting.

Keywords:

Accounting Fraud, Financial Ratios, Profitability, Activity, Solvency, PT Kimia Farma Tbk

Introduction

Financial statements are the end result of the accounting process that presents information about the financial position, financial performance, and cash flows of an entity in a given period. This information is used by interested parties, such as management, investors, creditors, and the government, as a basis for economic decision-making. According to Kasmir (2019), financial statements are reports that show the financial condition of a company at a certain point in time or within a certain period, which are useful for assessing the company's performance and financial position. Fraud is an act committed intentionally by a person or group of people to obtain personal gain by deceiving, falsifying, or concealing information, thereby causing harm to other parties. In the context of accounting, fraud often occurs through the manipulation of financial statements, embezzlement of assets, or abuse of authority, which causes financial information to be inconsistent with the actual situation. According to Batrancea, Petra, and Spieler (2022), fraud is an intentional act

to obtain unlawful gains through deception, misrepresentation, or concealment of information that causes harm to other parties.

Financial ratios are analytical tools used to assess a company's financial performance by comparing data in financial statements such as balance sheets and income statements. Through financial ratios, users can assess the effectiveness of management in managing the company's assets, liabilities, and capital, as well as its ability to generate profits and meet short-term and long-term obligations. According to Maritza, Talitha Ayu et al. (2022), financial ratios are an analysis method used as an indicator to assess a company's development by taking data from financial statements during an accounting period, so that the relationship between items in the financial statements can be evaluated systematically. Thus, financial ratios are an important measurement tool that provides an in-depth picture of a company's financial condition from various aspects such as liquidity, solvency, activity, profitability, and growth, which can help internal and external parties in assessing the company's performance and financial health.

Financial statement fraud is one of the biggest risks in the business world; not only does it undermine investor and stakeholder confidence, it also impacts the resilience of a company's economic system. One case that has attracted public attention is the alleged fraud at PT Kimia Farma Tbk, part of the state-owned pharmaceutical holding company. Based on public announcements and information from the Financial Services Authority (OJK) and the Indonesia Stock Exchange (IDX), there are indications of irregularities in the financial statements of Kimia Farma Apotek (KFA), a subsidiary of Kimia Farma. Kimia Farma's management acknowledged allegations of integrity violations in the provision of financial report data for the 2021–2022 period at KFA, which affected revenue, cost of goods sold (COGS), and operating expenses. These alleged violations contributed to the company's consolidated loss in 2023, which reached around IDR 1.82 trillion. Currently, an investigative audit of the case is still ongoing and is targeted for completion in 2024 to ascertain the level of truth and its impact on the company's financial performance.

Financial ratios are a crucial quantitative tool for assessing a company's financial condition. When a company experiences financial pressure, the risk of fraud increases, especially if the internal control system is weak. Often, perpetrators of fraud are aware that their actions violate the rules, but they justify their actions as something “normal.” Cressey then formulated three main elements that cause fraud, namely pressure, opportunity, and rationalization (Shidqi, 2025). For example, when liquidity or profitability declines, companies may be tempted to embellish their financial statements through accounting manipulation or recording fictitious income (Afifa, Narsa & Wardhaningrum, 2021).

The case involving PT Kimia Farma Tbk is a clear example of how financial statements that appear normal on the surface can hide irregularities. Based on the results of monitoring and audits conducted by the authorities, there were allegations of irregularities in the presentation of financial statements, particularly at the subsidiary Kimia Farma Apotek (KFA). These findings indicate financial data

manipulation that could potentially cause significant losses to the company. The alleged violations include discrepancies in the recording of revenue, operating expenses, and cost of goods sold, which have impacted the company's financial performance and public image (OJK & BEI, 2024).

Previous studies have examined the relationship between financial ratios and the potential for accounting fraud, but there is still a gap in its application to the pharmaceutical industry in Indonesia. Several studies show that financial pressure, such as a decline in profitability, can encourage management to manipulate financial statements in order to maintain the company's image. The fraud triangle theory explains that fraudulent acts are usually triggered by three main factors, namely pressure, opportunity, and rationalization. The case of PT Kimia Farma Tbk is a clear example of how declining financial conditions and weak internal controls can open up opportunities for irregularities in the presentation of financial statements, as revealed in the results of an investigative audit into alleged fraud at its subsidiary, Kimia Farma Apotek (KFA). This study uses regression analysis to determine how changes in these ratios can indicate the potential for fraud, with a focus on applying the fraud triangle theory to detect the underlying causes.

This study aims to analyze the effect of financial ratios in identifying indications of accounting fraud at PT Kimia Farma Tbk during 2019-2023. This study explores how profitability, activity, and solvency ratios can indicate potential fraud risks in financial statements. The findings of this study are expected to contribute significantly to understanding how financial ratios can be used as an early detection tool for fraud. In addition, this study will provide practical insights for regulators, auditors, and company management in improving financial control and transparency, which will ultimately reduce the possibility of fraud and protect the interests of stakeholders.

Theoretical Framework

Accounting fraud or financial statement fraud is an act deliberately committed by management or related parties to manipulate financial statements with the aim of misleading users of those statements. According to the Association of Certified Fraud Examiners (ACFE, 2022), financial statement fraud is a type of financial statement fraud, which is the presentation of materially incorrect financial data. It can take the following forms:

- a. Overstatement of revenue
- b. Understatement of expenses
- c. Recognition of fictitious assets or liabilities
- d. Earning management

According to Skousen, Smith, & Wright (2009), financial ratios can be used to detect red flags or early signs of financial statement manipulation. Significant changes in ratios that are not in line with the company's economic conditions can be a signal of fraud. The Kimia Farma case in 2001 was a classic example of financial statement manipulation in Indonesia, where profits were reported to be higher than they actually were. Therefore, analysis of financial ratios for the 2019-2023 period can help

identify whether there are similar anomalous patterns or potential indications of similar manipulation.

Method

This study uses a quantitative approach. Quantitative methods can be defined as research methods based on positivism philosophy, used to study specific populations or samples, collect data using research instruments, and perform quantitative/statistical data analysis, with the aim of describing and testing predetermined hypotheses. (Sugiyono, 2019). The purpose of this study is to determine and test the effect of financial ratios on indications of accounting fraud at PT Kimia Farma Tbk, using secondary data in the form of financial reports with multiple linear regression analysis techniques to test the effect of independent variables on dependent variables.

The object of this study is the financial statements of PT Kimia Farma Tbk for the years 2019-2023, taken from the company's official website and the publication of the audit results of the Supreme Audit Agency (BPK). The sampling technique used was purposive sampling, with the criteria being that the company was listed on the Indonesia Stock Exchange (BEI), had annual financial reports that were accessible to the public, and was indicated to have experienced alleged fraud based on the results of the BPK audit.

Research Variables:

1. Dependent Variable: Indications of accounting fraud (Y), measured through ratios of irregularities and discrepancies in financial statements that refer to indicators in the fraud triangle theory.
2. Variabel Independen:
 - Ratio Activity (X1) : Inventory Turnover (ITO)
 - Ratio Solvability (X2) : Interest Coverage Turnover (ICR)
 - Ratio Profitability (X3) : Gross Profit Margin (GPM)

The data used in this study is secondary data obtained from PT Kimia Farma Tbk's financial reports for the 2019-2023 period, which can be accessed through the company's official website and the publication of the audit results by the Supreme Audit Agency (BPK). Data collection was carried out by downloading published financial reports and verifying them with audit documents issued by the BPK.

The data obtained will be analyzed using multiple linear regression techniques to test the effect of independent variables on dependent variables. Multiple linear regression is used to examine the relationship between financial ratios (profitability, solvency, and activity) and indications of accounting fraud. Hypothesis testing will be conducted to determine whether changes in financial ratios can significantly affect the likelihood of fraud in the financial statements of PT Kimia Farma Tbk.

Results

The management of PT Kimia Farma Tbk (KAEF) discovered alleged violations in the provision of financial report data that occurred at its subsidiary, PT Kimia Farma Apotek, in 2021-2022. This resulted in the company posting a loss of Rp 1.82

trillion in its 2023 financial statements. Kimia Farma CEO David Utama said the loss was caused by alleged violations of financial statement data integrity at its subsidiary, PT Kimia Farma Apotek (KFA), in 2021-2022. According to the 2023 annual financial report, KAEF managed to record positive sales growth throughout 2023. The company was able to increase sales to IDR 9.96 trillion, up 7.93% compared to IDR 9.23 trillion in 2022. The company was also able to reduce its liabilities in 2023.

However, there are several conditions that contribute to KAEF's decline in profit, including operational and non-operational aspects. One of the operational conditions is that the capacity of the 10 factories owned by the company is not in line with the company's business needs. As a measure to improve efficiency, the Company plans to optimize its production facilities by reorganizing the 10 factories into 5 factories. The cost of goods sold (COGS) in 2023 amounted to IDR 6.86 trillion, an increase of 25.83% year-on-year (YoY). The 25.83% increase in COGS was still higher than the increase in sales, which was only 7.93%. The increase in COGS was due to the product portfolio not being optimized according to the initial plan, dynamics in raw material prices, and trends in drugs for therapeutic needs that were different from before, resulting in sales falling short of expectations.

Table 1. Ratio Analysis of PT Kimia Farma Tbk for the 2019-2020 Period

Ratio	2019	%	2020	%
Grosss	3.503.287.686 /		3.657.131.191 /	
Profit	9.400.535.476 x	37,27%	10.006.173.023 x	36,55%
Margin	100% = 37,27		100% = 36,55	
Inventory	9.400.535.476 /		10.006.173.023 /	
Turnover	2.849.106.176 x	329,95%	2.455.828.900 x	407,45%
	100% = 329, 95		100% = 407, 45	
Interest	50.165.5742 /		653.024.423 /	
Coverage	(497.969.909) x	-100,74%	(596.377.203) x	-109,50%
Ratio	100% = (100,74)		100% = (109,50)	

Source: Financial Report of PT Kimia Farma Tbk for the 2019-2020 Period

Table 2. Ratio Analysis of PT Kimia Farma Tbk for the Period 2021-2023

Ratio	2021	%	2022	%	2023	%
Grosss	4.396.285.099 /		3.778.425.700 /		3.101.850.820 /	
Profit	12.857.626.593	34,19%	9.232.675.971 x	40,92%	9.965.033.049 x	31,13%
Margin	x 100% = 34,19		100% = 40,92		100% = 31,13	
Inventory	12.857.626.593		9.232.675.971 /		9.965.033.049 /	
Turnover	/ 2.690.960.379	477,81%	2.941.267.076 x	313,90%	2.481.580.944 x	401,56%
	x 100% =		100% = 313,90		100% = 401,56	
	477,81					

Interest	985.639.320 /	497.048.311 /	(1.570.247.111) /
Coverage	(606.813.011) x	(525.607.653) x	(622.816.879) x
Ratio	100% = 162,43	100% = 94,57	100% = 252,12

Source: Financial Report of PT Kimia Farma Tbk for the Period 2019-2020

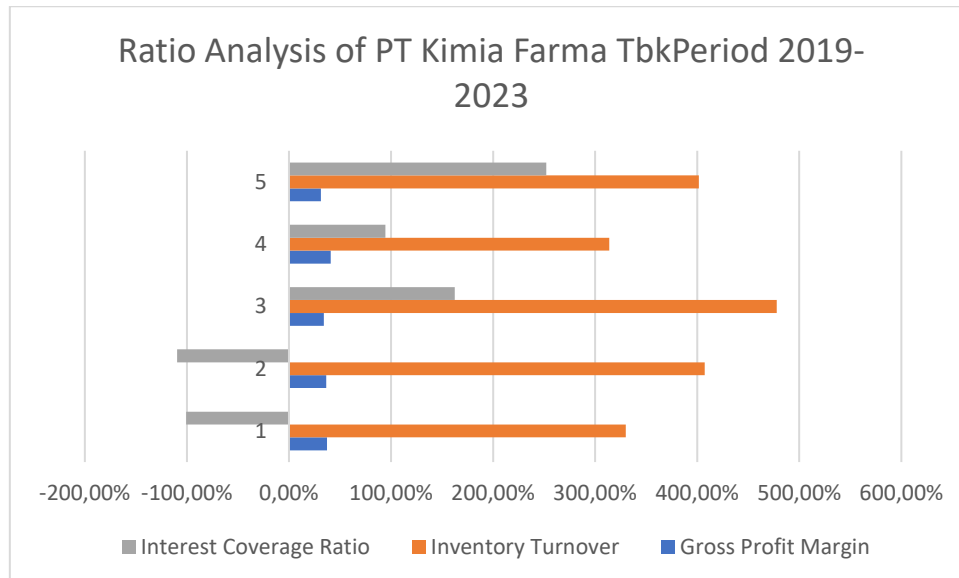


Figure 1. Ratio Analysis of PT Kimia Farma Tbk for the Period 2019-2023

The financial ratio analysis of PT Kimia Farma Tbk for the period 2019–2023 shows fluctuating financial performance, particularly in terms of profitability, inventory management efficiency, and the company's ability to cover interest expenses. In 2019, the Gross Profit Margin ratio of 37.27% indicates that for every Rp100 in sales, the company earned a gross profit of Rp37.27. This figure is relatively good and indicates efficiency in controlling the cost of goods sold. However, the Interest Coverage Ratio (ICR) of -100.74% indicates that operating profit (EBIT) is unable to cover interest expenses, meaning that the company is experiencing operating losses or has very high interest expenses. Meanwhile, the Inventory Turnover Ratio (ITO) of 329.95 times appears very high, which in theory indicates rapid inventory turnover, but this value is too large for the pharmaceutical industry, suggesting that there may be discrepancies in the recording or calculation of inventory data.

Entering 2020, the Gross Profit Margin declined slightly to 36.55%, indicating a decrease in efficiency in managing cost of goods sold or pressure on selling prices in the pharmaceutical market. However, Inventory Turnover increased to 407.45 times, which logically indicates faster inventory turnover, but again needs to be considered carefully because the value is unrealistic for a pharmaceutical company. The Interest Coverage Ratio remained negative at -109.50%, indicating that Kimia Farma's financial condition has not improved and the company is still unable to cover its interest expenses from its operating profit.

In 2021, the Gross Profit Margin fell again to 34.19%, indicating a decline in profitability that may have been caused by increased raw material costs, mainly due to the impact of the COVID-19 pandemic. However, Inventory Turnover increased significantly to 477.81 times, which again needs to be reviewed because the value is very high for this industry. An encouraging sign can be seen in the Interest Coverage Ratio, which rose dramatically to 162.43%, indicating that the company is recovering and is able to cover its interest expenses with its operating profit. This shows an improvement in efficiency and an increase in revenue after two years of financial pressure. Kimia Farma's performance continued to improve in 2022 with a sharp increase in Gross Profit Margin to 40.92%, indicating that the company has succeeded in improving operational efficiency or increasing product selling prices. However, Inventory Turnover actually decreased to 313.90 times, which can be considered a positive signal because this value is more realistic and shows a balance between sales and inventory. Nevertheless, the Interest Coverage Ratio decreased to 94.57%, which means that the company's ability to cover interest expenses weakened slightly compared to the previous year, although it is still in the healthy category.

In the last year, namely 2023, Kimia Farma's financial performance experienced a significant change. The Gross Profit Margin decreased to 31.13%, indicating a decline in production efficiency or greater selling price pressure. This decline could be due to increases in raw material prices, inflation, or price competition in the pharmaceutical market. However, Inventory Turnover increased again to 401.56 times, which means that product sales are fast, although if it is too high, it could indicate that inventory levels are too low and could potentially lead to stock shortages. The most positive aspect this year is the sharp increase in the Interest Coverage Ratio to 252.12%, which indicates that the company is able to cover its interest expenses more than twice its operating profit. This shows a much healthier financial condition compared to previous years.

Overall, during this five-year period, Kimia Farma showed fluctuating trends in gross profit margins with a downward trend at the end of the period, indicating pressure on operational efficiency. Inventory turnover tended to be high and unstable, which was likely due to differences in inventory data recording or management. However, in terms of interest coverage, the company showed a very significant improvement, from a negative position in 2019–2020 to a positive and strong position in 2021–2023. Thus, it can be concluded that overall, Kimia Farma has succeeded in improving its financial performance in the medium term, although there is still a need for improvement in production efficiency and inventory management stability to maintain profitability in the future.

Discussion

The results of the study show that PT Kimia Farma Tbk's financial ratios during the 2019–2023 period experienced significant fluctuations. The decline in the Gross Profit Margin (GPM) ratio in 2019–2020 and 2023 indicates financial pressure that could potentially push management to manipulate financial statements to present a better condition. This is in line with the fraud triangle theory, which states that

financial pressure is one of the main triggers of fraud. Meanwhile, the Inventory Turnover (ITO) ratio shows very high and unstable figures from year to year. An ITO value that is too large for the pharmaceutical industry indicates inconsistencies in inventory recording, which can create opportunities for fraud, particularly in terms of stock manipulation or revenue recognition.

A significant increase in the Interest Coverage Ratio (ICR) in the 2021–2023 period indicates an improvement in the company's ability to cover interest expenses. However, a drastic change from a negative to a positive value in a short period of time may also indicate the possibility of earnings management to show healthier performance. This condition reinforces the findings of Skousen, Smith, & Wright (2009) that unusual changes in ratios can be an early warning sign (red flag) of financial statement manipulation. Thus, extreme fluctuations in Kimia Farma's key ratios can be linked to the potential for managerial pressure to embellish financial statements in order to maintain the company's reputation, especially after the emergence of alleged fraud at Kimia Farma Apotek (KFA), a subsidiary of Kimia Farma.

From a practical standpoint, the results of this study emphasize the importance of implementing good corporate governance and strengthening internal control systems to prevent opportunities for financial statement manipulation. Auditors and regulators also need to be more careful in assessing financial ratio anomalies as early indicators of potential fraud. This study also enriches the literature on fraud detection in the pharmaceutical sector, which has unique characteristics because it depends on inventory turnover and the management of raw material prices that are sensitive to market changes.

Conclusion

Based on the results of the financial ratio analysis of PT Kimia Farma Tbk for the period 2019–2023, it can be concluded that the company experienced significant fluctuations in profitability, activity, and solvency. The decline in Gross Profit Margin indicates efficiency pressures that could trigger manipulative actions, while the unstable Inventory Turnover value potentially indicates irregularities in inventory recording. Although the Interest Coverage Ratio has increased positively, this extreme change needs to be watched as an indication of potential financial statement manipulation.

Overall, the results of this study indicate that financial ratios can be used as an early detection tool for accounting fraud by identifying patterns of irregularities or anomalies in financial statements. The researchers recommend that companies strengthen their internal control mechanisms and apply the principle of transparency in financial reporting. For further research, it is recommended to add other variables such as liquidity ratios, leverage, or corporate governance factors to obtain more comprehensive results in detecting potential fraud in the pharmaceutical sector.

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