



## Financial Performance of Pharmaceutical Companies: Before and During COVID-19 in Indonesia

Siska Amalia Anggraini<sup>1</sup>, Dio Alfarago<sup>2\*</sup>

<sup>1,2</sup> Directorate General of Taxes, Jakarta, Indonesia

### ARTICLE INFORMATION

Received: February 11, 2025  
Revised: April 17, 2025  
Available online: April 30, 2025

### KEYWORDS

Covid-19 Pandemic, Liquidity, Pharmacy, Profitability, Solvency.

### CORRESPONDENCE

Phone: +6285371981435  
E-mail: [dioalfarago@gmail.com](mailto:dioalfarago@gmail.com)

### A B S T R A C T

The Covid-19 pandemic has had a significant negative impact on Indonesia's economy. However, not all companies experienced a crisis due to this event. PT Kimia Farma Tbk, a pharmaceutical company, managed to withstand economic turmoil. This study aims to analyze the financial performance of PT Kimia Farma Tbk before and during the Covid-19 pandemic using financial ratio analysis, including liquidity, solvency, and profitability ratios. The study compares the company's financial condition before the pandemic (2017, 2018, and 2019) and during the pandemic (2020, 2021, and 2022). The results indicate that the company's liquidity ratio consistently declined, signalling a weakening ability to meet short-term liabilities. The solvency ratio also showed a decrease due to the impact of Covid-19, highlighting the need for the company to manage its debt more cautiously. Additionally, the profitability ratio did not show significant growth, even though the demand for Covid-19-related products increased.

### INTRODUCTION

In 2020, the Covid-19 pandemic had a pretty substantial impact on numerous countries around the world, including Indonesia. The Covid-19 virus not only causes health problems but also triggers an employment crisis, which has a significant impact on society (Gandasari & Dwidienawati, 2020). As a result of the government's decision to implement a policy of Large-Scale Social Restrictions (PSBB) to prevent the spread of the virus, many firms have been forced to decrease their workforces or even shut their accounts, resulting in a weakening of the national economy.

Many people believe that the medical field will be one of the few to prosper in the midst of the epidemic. The pharmaceutical industry is a priority in the economy during this pandemic because it plays a crucial role in overcoming the spread of Covid-19. The pharmaceutical industry is critical to the delivery of high-quality health services, especially when the supply chain of medicines is disrupted or must be stopped for a number of reasons (Tirivangani, Alpo, Kibuule, Gaeseb, & Adenuga, 2021). According to Nugroho (2020) and Azka (2021), pharmaceutical issuers have shown quite promising performance throughout 2020. This is supported by Elita et al. (2020), who indicate that pharmaceutical companies experienced significant price and volume increases in the first six months of 2020. As a result, the pharmaceutical industry is among those that experienced a boom in demand during a pandemic while other industries suffered a fall.

The pharmaceutical sector is currently in a somewhat elevated state, with demand for pharmaceutical products

related to the handling of the Covid-19 virus increasing dramatically, while demand for products not directly related to the Covid-19 virus has not increased or has even fallen. PT. Kimia Farma Tbk is one example of a pharmaceutical company in Indonesia. In 1817, the Dutch East Indies Government established this company as the first pharmaceutical industry company in Indonesia. PT. Kimia Farma Tbk is currently marketing products related to the eradication of the coronavirus, such as medications, vitamins, and medical devices intended to help the acceleration of the nation's health recovery.

PT. Kimia Farma Tbk is one of the most well-known and largest pharmaceutical companies in Indonesia, making it an intriguing topic for investigation. Laba et al. (2022), Sitompul (2020), Illahi et al. (2020), and Martina et al. (2022) are among the researchers who have measured the performance of PT. Kimia Farma Tbk in the past. This study gives a novel perspective by measuring PT. Kimia Farma Tbk's financial performance prior to and during the Covid-19 pandemic. This measurement requires a tool that can measure the performance of the company. Financial ratios can be used as a basis for analyzing a company's performance and are meant to help interested parties in their decision-making. To evaluate the performance of PT Kimia Farma Tbk, only the liquidity ratios, solvency, and profitability for the financial reporting periods of 2020, 2021, and 2022 (when the Covid-19 pandemic occurred) as well as 2017, 2018, and 2019 (before to the Covid-19 pandemic) will be discussed.

This study stems from the phenomenon that while many sectors suffered economic downturns due to the pandemic and the implementation of the Large-Scale Social Restrictions (PSBB), the pharmaceutical sector experienced increased demand, particularly for products related to Covid-19 prevention and treatment. PT Kimia Farma Tbk, as one of the oldest and largest pharmaceutical companies in Indonesia, played a significant role in providing medicines, vitamins, and medical devices during the crisis. However, there is still limited research specifically examining how the pandemic affected the company's financial performance. This creates an interesting research gap, especially in analyzing Kimia Farma's financial health before and during the Covid-19 pandemic using liquidity, solvency, and profitability ratios. Previous research on the financial performance of pharmaceutical companies, such as the study by Setianingsih (2022), measured performance using the current ratio, debt to equity ratio, return on assets ratio, and receivable turnover. This study expands on prior research by employing a broader set of financial ratios to provide a more detailed assessment of Kimia Farma's financial performance.

Based on the submitted description, the purpose of this research is to analyze:

1. Liquidity Ratio of PT Kimia Farma Tbk before and during the Covid-19 pandemic.
2. Solvency Ratio of PT Kimia Farma Tbk before and during the Covid-19 pandemic.
3. Profitability Ratio of PT Kimia Farma Tbk before and during the Covid-19 pandemic.

Financial ratios are comparisons of statistics in the financial statements that are used to identify a company's financial position and evaluate management performance over a specific time period (Lithfiah, Irwansyah, & Fitria, 2019). The ratio of the numerator and denominator from the financial statements (income statement or balance sheet) is used to calculate financial ratios (Laitinen, 2018). The performance of a company can be determined by studying its financial statements and ratios. Financial ratio analysis is the practice of examining accounting-related indices in financial statements such as balance sheets, income statements, and cash flow statements in order to evaluate a company's financial performance. According to Amilin (2015), the following ratios can be used to analyze financial information:

### Liquidity Ratio

Liquidity ratios measure a company's ability to pay debt obligations with its current assets. The analysis that can be conducted is as follows:

1. *Current Ratio*

The current ratio is a liquidity ratio that measures a company's ability to pay short-term obligations or those due within short time.

$$\text{Current ratio} = \frac{\text{Current Assets}}{\text{Current Liabilities}}$$

2. *Quick Ratio/Acid Test Ratio*

The quick ratio is a financial ratio that demonstrates a company's capacity to pay current liabilities or debts with current assets, excluding inventory value.

$$\text{Quick ratio} = \frac{\text{Current Assests} - \text{Inventory}}{\text{Current Liabilities}}$$

3. *Cash Ratio*

Cash ratio specifically calculates the ratio of a company's total cash and cash equivalents to its current liabilities. The availability of cash funds or cash equivalents, such as checking or savings accounts at banks, might indicate cash availability (which can be withdrawn at any time).

$$\text{Cash ratio} = \frac{\text{Cash or Cash Equivalent}}{\text{Current Liabilities}}$$

### Solvency Ratio

The solvency or leverage ratio measures the proportion of a company's assets financed by debt. The financial ratios used are:

1. *Total Debt-to-Asset Ratio (DAR)*

A debt ratio measures a company's leverage in terms of total debt to total assets.

$$\text{DAR} = \frac{\text{Total Debt}}{\text{Total Assets}}$$

2. *Total Debt-to-Equity Ratio (DER)*

The debt-to-equity ratio is the ratio used to assess debt-to-equity.

$$\text{DER} = \frac{\text{Total Debt}}{\text{Total Equity}}$$

### Profitability Ratio

The profitability ratio is a ratio that assesses the company's ability to generate profit. This ratio also provides a measurement of a company's management effectiveness. The following are types of profitability ratios:

1. *Gross Profit Margin (GPM)*

GPM is the percentage of sales remaining after the cost of goods sold has been subtracted.

$$\text{GPM} = \frac{\text{Sales} - \text{Cost of Goods Sold}}{\text{Sales}}$$

2. *Net Profit Margin (NPM)*

NPM is the percentage of each remaining sales profit after all costs and expenses, including interest and taxes, have been subtracted.

$$\text{NPM} = \frac{\text{Earning after Interest and Tax}}{\text{Sales}}$$

3. *Return on Investment (ROI)*

ROI is the company's ability to generate profits that will be used to cover the investment issued.

$$\text{ROI} = \frac{\text{Earning after Interest and Tax}}{\text{Total Assets}}$$

4. Return on Equity (ROE)

ROE is a ratio for measuring net profit after tax using own capital. This ratio shows the efficiency of the use of own capital.

$$ROE = \frac{\text{Earning after Interest and Tax}}{\text{Equity}}$$

5. Return on Assets (ROA)

ROA is the company's ability to generate profits with all assets owned by the company. This ratio measures the rate of return (EBIT) of the assets used. The bigger the ratio, the better (Sutrisno, 2001).

$$ROA = \frac{\text{Net Income}}{\text{Average Total Assets}}$$

METHODS

This research employs a quantitative approach, specifically using numerical data analysis. The primary technique used is financial ratio analysis, which involves comparing key accounts from the Balance Sheet and Income Statement. The financial ratios analyzed include liquidity, solvency, and profitability. The study focuses on PT Kimia Farma Tbk, utilizing secondary data sourced from the company's annual financial reports, which are publicly available on its official website ([www.kimiafarma.co.id](http://www.kimiafarma.co.id)). The analysis compares data from the company's Consolidated Financial Statements for 2020, 2021, 2022 (during the pandemic) and 2017, 2018, 2019 (before the pandemic).

Additionally, this research references findings from Wijayanti (2020) in her study, "Analysis of Liquidity and Profitability to Assess Financial Performance of PT Kimia Farma Tbk 2014-2019," as well as from Sitompul (2020) in her journal, "Financial Performance Analysis of PT Kimia Farma Tbk Listed on the Indonesia Stock Exchange (IDX)." These studies examine the company's financial performance from 2014 to 2019, providing a basis for assessing whether the pandemic impacted the company's 2020 performance or followed an existing trend of growth or decline.

A conceptual framework is developed based on the background and literature review, as shown in Figure 1.

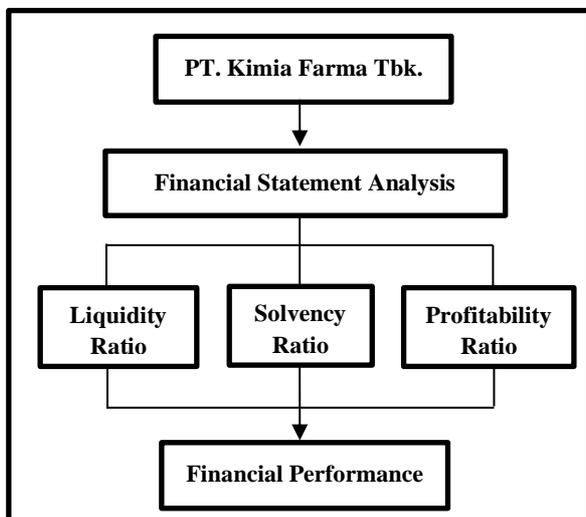


Figure 1. Conceptual Framework

RESULTS AND DISCUSSION

Table 1 presents the results of calculations using the financial ratio formula, which provides data from 2017 to 2022.

Table 1. Comparison of PT. Kimia Farma Tbk's Financial Ratios in 2020, 2021, 2022 (During the Covid-19 Pandemic) and in 2017, 2018, 2019 (Before the Covid-19 Pandemic)

Financial Ratio	Formula	Average Financial Ratio		Deviation
		During Pandemic	Pre-Pandemic	
<b>Liquidity Ratio</b>				
Current Ratio	$\frac{\text{Current Assets}}{\text{Current Liabilities}}$	100.00%	135.33%	-35.33%
Quick Ratio	$\frac{\text{Current Asset} - \text{Inventory}}{\text{Current Liabilities}}$	59.86%	91.75%	-31.88%
Cash Ratio	$\frac{\text{Cash or Cash Equivalent}}{\text{Current Liabilities}}$	19.25%	37.37%	-18.12%
<b>Solvency Ratio</b>				
Debt-to-Asset Ratio	$\frac{\text{Total Debt}}{\text{Total Assets}}$	57.68%	59.33%	-1.65%
Debt-to-Equity Ratio	$\frac{\text{Total Debt}}{\text{Total Equity}}$	136.90%	147.65%	-10.75%
<b>Profitability Ratio</b>				
Gross Profit Margin	$\frac{\text{Sales} - \text{Cost of Goods Sold (COGS)}}{\text{Sales}}$	36.05%	37.65%	-1.61%
Net Profit Margin	$\frac{\text{Earning after Interest and Tax (EAIT)}}{\text{Penjualan (Sales)}}$	0.44%	3.97%	-3.53%
Return On Investment	$\frac{\text{Earning after Interest and Tax (EAIT)}}{\text{Total Assets}}$	4.56%	6.32%	-1.76%
Return On Equity	$\frac{\text{Earning after Interest and Tax (EAIT)}}{\text{Equity}}$	0.83%	8.27%	-7.45%
Return On Assets	$\frac{\text{Net Income}}{\text{Average Total Assets}}$	0.32%	2.92%	-2.60%

Liquidity Ratio

The liquidity ratio is a ratio that describes the company's ability to fulfill its short-term obligations (Agusta & Hati, 2018). The liquidity ratio comprises the Current Ratio, the Quick Ratio, and the Cash Ratio. The Current Ratio reflects a company's ability to pay short-term liabilities using current assets. Based on Table 1, PT Kimia Farma Tbk's average current ratio declined from 135% (Pre-Pandemic 2017, 2018, 2019) to 100% (during Pandemic). This indicates that in Pre-Pandemic, every Rp 1 of current liabilities was covered by Rp 1.35 in current assets, whereas during Pandemic, this amount decreased to Rp 1. The 35% decline suggests a weakened ability to settle short-term debts, likely due to an increase in current liabilities, a decrease in current assets, or both. Regardless of the cause, a declining current ratio signifies reduced cash-generating capacity and financial stability.

Similarly, the Quick Ratio, which measures the company's ability to meet short-term obligations using its most liquid assets, excluding inventory, also declined. In Pre-Pandemic, PT Kimia Farma Tbk had an average quick ratio of 92%, meaning Rp 0,92 of liquid assets were available for every Rp 1 of current debt. During Pandemic, this decreased to 60%, covering only

Rp 0.6 per Rp 1 of current debt. The 32% decline suggests that the company's most liquid assets were increasingly insufficient to cover half of its short-term liabilities, reflecting a growing liquidity challenge.

The Cash Ratio, which evaluates a company's ability to settle short-term liabilities using only cash and cash equivalents, remained relatively stable. In Pre-Pandemic, PT Kimia Farma Tbk had an average cash ratio of 37%, meaning Rp 0.37 of cash was available per Rp 1 of current debt. In Post Pandemic, the average ratio slightly decreased to 19%. The company's cash reserves were insufficient to cover more than 20% of its current obligations, indicating a weak liquidity position during the pandemic.

Comparing these findings with previous studies by Sitompul (2020) and Wijayanti (2020), it is evident that PT Kimia Farma Tbk's liquidity ratio consistently declined from 2014 to 2019. Between 2014 and 2018, the average Current Ratio was 179.82%, but it dropped sharply to 99% in 2019, further to 90% in 2020 and increased slightly to 105% in 2021 and 2022. Similarly, the Quick Ratio, which averaged 119.12% in 2014-2018, declined to 61% in 2019, 54% in 2020, and increased slightly in 2021 and 2022. The Cash Ratio, which averaged 48.23% between 2014 and 2018, also saw a substantial drop. The liquidity deterioration in 2019 to 2022 can be attributed to rising short-term debt without a proportional increase in current assets, suggesting that increased liabilities were used to finance non-current assets rather than maintaining liquidity. Overall, the company's liquidity has been on a downward trend, reflecting a progressively weaker ability to meet short-term obligations and an increasingly unhealthy financial position during Pandemic Era.

### Solvency Ratio

The Solvency Ratio measures a company's ability to meet its long-term debt obligations (Utami, 2017). This study utilizes the Debt-to-Asset Ratio (DAR) and the Debt-to-Equity Ratio (DER) to assess solvency. The Debt-to-Asset Ratio determines the extent to which a company's assets are financed by debt. A lower ratio indicates a healthier financial position, suggesting that the company relies more on equity than debt for asset financing.

PT Kimia Farma Tbk's Debt-to-Asset Ratio exceeds 50%, meaning more than half of its funding comes from debt. In Pre-Pandemic, the average ratio stood at 59.3%, indicating that Rp 59.3 of every Rp 100 in funding was sourced from debt. During Pandemic, the ratio slightly decreased to 57.7%, showing a marginal decline of 1.6%. Although the decrease is minimal, the high percentage suggests that the company relies heavily on debt financing.

The Debt-to-Equity Ratio (DER) measures the proportion of debt relative to equity, with lower values indicating a safer financial position. In Pre-Pandemic period, PT Kimia Farma Tbk's average DER was 147.6%, meaning that debt significantly exceeded equity. During Pandemic, the ratio slightly decreased to 136.9%, reflecting a minor reduction of 10.7%. Despite this slight improvement, the DER remains extremely high, exceeding 100%, which indicates that the company's debt burden is still substantial. However, there was little change between the pre-pandemic and pandemic periods, suggesting that the company's capital structure remained relatively stable.

Compared to previous research by Sitompul (2020) and Wijayanti (2020), PT Kimia Farma Tbk's Debt-to-Asset and Debt-to-Equity Ratios had been increasing from 2014 to 2018. During this period, the average DAR was 50.92%, while the average DER was 111.95%. The highest recorded levels were in 2018, when the DAR reached 63.40% and the DER peaked at 173%. After 2018, the DAR began to decline, while the DER showed a tendency to rise. Although this indicates some improvement in the company's financial health, prudent debt management remains crucial to prevent excessive leverage and ensure long-term stability.

### Profitability Ratio

The Gross Profit Margin (GPM) is a key profitability ratio that measures a company's ability to generate gross profit from each sale. It is widely used to assess the financial performance of a company's core business operations (Shi, Huang, Wu, & Jin, 2021). Based on Table 1, PT Kimia Farma Tbk's average GPM in Pre-Pandemic was 37.65%, while in during the pandemic, it declined slightly to 36.05%, reflecting a 1.6% decrease. This decline indicates a reduced ability to generate gross profit from sales. Despite a 6% increase in sales revenue in 2020 compared to 2019—amounting to an additional Rp 605.64 billion (Rp 10.01 trillion - Rp 9.40 trillion)—, this growth was accompanied by an 8% increase in the cost of goods sold (COGS), rising by Rp 451.79 billion (Rp 6.35 trillion - Rp 5.90 trillion). As a result, gross profit only increased by Rp 153.84 billion, or 4%, which was not proportional to the rise in sales revenue. Overall, Average GPM ratio +36%, because during pandemic, the rise in sales followed by the rise in COGS. Compared to prior research by Sitompul (2020) and Wijayanti (2020), PT Kimia Farma Tbk's GPM from 2014 to 2018 averaged 33.19%, classifying it as "good." Despite the slight decline in 2020, the company's GPM remained relatively strong, especially considering that many other businesses faced significant losses or closures due to the pandemic. According to Rahmazaniati, Rahmadani, Maulina, Vonna, & Husen (2024), high profits are desirable for both investors and company management. This reflects effective asset and equity management, leading to increased earnings. As profits rise, so does the company's value.

The Net Profit Margin (NPM) measures the ratio of net profit to total revenue (Janice & Toni, 2020). According to Table 1, PT Kimia Farma Tbk's average NPM decreased from 3.97% in Pre-Pandemic to 0.44% during Pandemic, reflecting a 3,53% decrease. However, when compared to the average NPM from 2014 to 2018, which stood at 5.13%, the pre and during pandemic figures remain significantly lower. This decline was primarily driven by the company's rising debt in 2019, which necessitated high-interest expenses, consuming a substantial portion of earnings and leaving only a marginal net profit. Nevertheless, the increase in NPM suggests a slight improvement in profitability, which may enhance investor confidence in the company's financial performance during the COVID-19 pandemic (Choiriyah, Fatimah, Agustina, & Ulfa, 2021).

Return on Investment (ROI) is a critical measure of a company's efficiency in managing its investments. A lower ROI indicates less effective asset management, and projects with negative ROI or lower returns should be reconsidered (Wu & Buyya, 2015). Based on Table 1, PT Kimia Farma Tbk's Average

ROI decreased from 6.32% in Pre-Pandemic to 4.56 % during Pandemic, a decrease of 1.76%. Despite this growth, the company's ROI remains low compared to the 2014-2018 average of 6.26% (Sitompul, 2020). This reduction is largely attributed to the company's high-interest expenses, which consumed a significant portion of profits, leaving limited returns on investment.

Return on Equity (ROE) measures a company's efficiency in utilizing its equity to generate profit. A lower ROE suggests inefficiencies in capital management. According to Table 1, PT Kimia Farma Tbk's ROE was 8.27 % in Pre-Pandemic but decrease to 0.83% during Pandemic, representing a decrease of 7.45%. However, when compared to the average ROE of 11.85% from 2014 to 2018 (Sitompul, 2020), the Post pandemic era figures remain strikingly low. The primary reason behind this decline is the substantial interest expenses incurred due to high debt levels, which significantly reduced the portion of profits allocated to shareholders. This indicates a declining ability of PT Kimia Farma Tbk to efficiently manage its equity.

Return on Assets (ROA) assesses a company's ability to generate profits from its total assets. A lower ROA signifies less effective asset management. Based on Table 1, PT Kimia Farma Tbk's Average ROA was 2,92 % in Pre-Pandemic and decreased to 0.32% during Pandemic, reflecting a decline of 2,6%. However, compared to the average ROA of 6% from 2014 to 2018 (Wijayanti, 2020), the company's ROA in pre and during Pandemic remains extremely low. Similar to ROI, the primary reason for this weak performance is the large portion of profits allocated to interest payments, leaving minimal net profit. As a result, PT Kimia Farma Tbk's financial efficiency in managing its assets declined, making its performance in pre and during pandemic era appear significantly weaker compared to previous years.

## CONCLUSION

The Covid-19 pandemic significantly impacted various industries, yet the pharmaceutical sector experienced notable growth. This study evaluates the financial performance of PT Kimia Farma Tbk using financial ratio analysis. Findings indicate a consistent decline in liquidity in pre-pandemic (2017, 2018, 2019) to during pandemic (2020, 2021, 2022), reflecting weakened short-term debt repayment capacity. The solvency ratio remained stable but was significantly higher than in 2014–2018 due to increased debt in 2019. This surge in debt led to interest expenses exceeding 90% of operating profit, resulting in a negligible net income in 2020 until 2022. Profitability analysis reveals a consistent ratio in the Gross Profit Margin (GPM) in 2017 to 2022, though it remained strong compared to other sectors severely affected by the pandemic. Key profitability ratios—including Net Profit Margin (NPM), Return on Investment (ROI), Return on Equity (ROE), and Return on Assets (ROA)—showed substantial differences among period of during Pandemic, Pre-Pandemic, and 2014–2018. Financial ratio during the pandemic period were relatively lower than in 2014–2018 due to high-interest expenses. Despite increased sales in 2020, rising costs of goods sold, driven by higher raw material prices, resulted in gross profit levels comparable to pre-pandemic figures. Overall, while Covid-19 did not significantly impact PT Kimia Farma Tbk's financial performance, its role in the pharmaceutical industry ensured stability amid economic uncertainty.

This study carries significant implications for prospective investors and stakeholders by offering an objective and comprehensive overview of PT Kimia Farma Tbk's financial risk profile and profitability potential, particularly in the context of economic crises. Such insights are expected to support more prudent and informed investment decision-making. For the company's management, the findings may serve as a reference for evaluating and strengthening the financial structure, particularly in terms of debt and liquidity management, to enhance long-term financial resilience and performance.

This study is limited to analyzing PT Kimia Farma Tbk's financial performance from 2017 to 2019 (pre-pandemic) and during the pandemic (2020–2022). Future research should examine the company's performance in the post-pandemic period (2023 onward) to provide a more comprehensive understanding of the long-term impacts of Covid-19.

## REFERENCE

- Agusta, R. F., & Hati, S. W. (2018). Calculation of Liquidity, Solvency and Profitability Ratio in Manufacturing Company. *Journal of Applied Accounting and Taxation*, 3(2), 110–116. <https://doi.org/10.30871/jaat.v3i2.765>
- Amilin. (2015). *Analisis Informasi Keuangan. In: Gambaran Umum dan Konsep Dasar Analisis Laporan Keuangan*. Jakarta: Universitas Terbuka.
- Azka, R. M. (2021). Emiten Farmasi Cuan Banget Waktu Pandemi, Gimana Nasibnya Tahun Ini Ya? Retrieved March 5, 2022, from Market website: <https://market.bisnis.com/read/20210404/192/1376411/emiten-farmasi-cuan-banget-waktu-pandemi-gimana-nasibnya-tahun-ini-ya>
- Choiriyah, C., Fatimah, F., Agustina, S., & Ulfa, U. (2021). The Effect Of Return On Assets, Return On Equity, Net Profit Margin, Earning Per Share, And Operating Profit Margin On Stock Prices Of Banking Companies In Indonesia Stock Exchange. *International Journal of Finance Research*, 1(2), 103–123. <https://doi.org/10.47747/ijfr.v1i2.280>
- Elita, I., Wardianto, K. B., & Harori, M. I. (2020). Analisis Pergerakan Saham Perusahaan Sub Sektor Farmasi Menggunakan Indikator Bollinger Band di Tengah Pandemi Covid-19. *Jurnal Perspektif Bisnis*, 3(2), 77–88. <https://doi.org/10.23960/jpb.v3i2.30>
- Gandasari, D., & Dwidienawati, D. (2020). Content Analysis of Social and Economic Issues in Indonesia during the COVID-19 pandemic. *Heliyon*, 6(11), e05599. <https://doi.org/10.1016/j.heliyon.2020.e05599>
- Illahi, W. R., Jhoansyah, D., & Mulia Z, F. (2020). Analisis Rasio Keuangan dalam Mengukur Kinerja Perusahaan pada PT. Kimia Farma TBK. yang Terdaftar di BEI Periode 2016–2018. *Jurnal Syntax Transformation*, 1(4), 53–57. <https://doi.org/10.46799/jurnal-syntax-transformation.v1i4.48>
- Janice, J., & Toni, N. (2020). The Effect of Net Profit Margin, Debt to Equity Ratio, and Return on Equity against Company Value in Food and Beverage Manufacturing Sub-sector Companies listed on the Indonesia Stock Exchange. *Budapest International Research and Critics Institute (BIRCI-Journal): Humanities and Social Sciences*, 3(1), 494–510. <https://doi.org/10.33258/birci.v3i1.799>
- Laba, Y. K., Tumbel, T. M., & Mangindaan, J. V. (2022). Analisis Rasio Keuangan untuk Menilai Kinerja Keuangan PT Kimia Farma Tbk. *Jurnal Ilmiah Ilmu Ekonomi Dan Bisnis*, 3(1), 42–47.
- Laitinen, E. K. (2018). Financial Reporting: Long-Term Change of Financial Ratios. *American Journal of Industrial and Business Management*, 08(09), 1893–1927. <https://doi.org/10.4236/ajibm.2018.89128>

- Lithfiyah, E., Irwansyah, & Fitria, Y. (2019). Analisis Rasio Keuangan. *Akuntabel: Jurnal Ekonomi Dan Keuangan*, 16(2), 189–196. Retrieved from <http://repository.ut.ac.id/id/eprint/3852>
- Martina, Y., Wagini, W. W., & Hidayah, N. R. (2022). Analisis Rasio Profitabilitas Untuk Menilai Kinerja Keuangan Pada PT. Kimia Farma (PERSERO) Tbk. *EKOMBIS REVIEW: Jurnal Ilmiah Ekonomi Dan Bisnis*, 10(1), 67–75. <https://doi.org/10.37676/ekombis.v10i1.1696>
- Nugroho, A. C. (2020). 10 Saham Top Gainers pada 5 Agustus, Emiten Farmasi Merajai. Retrieved March 5, 2022, from Market website: <https://market.bisnis.com/read/20200806/7/1275420/10-saham-top-gainers-pada-5-agustus-emiten-farmasi-merajai>
- Rahmazaniati, L., Rahmadani, I., Maulina, R., Vonna, S. M., & Husen, T. I. (2024). Peran Struktur Modal dan Profitabilitas dalam Meningkatkan Nilai Perusahaan Sektor Perkebunan di Indonesia. *Jurnal Akbis (Media Riset Akuntansi Dan Bisnis)*, 8(2), 107–111. <https://doi.org/https://doi.org/10.35308/akbis.v8i2.10555>
- Setianingsih, R. (2022). Analisis Kinerja Keuangan PT Kimia Farma Tbk Sebelum dan Selama Pandemi Covid-19. *Jurnal Akuntansi Dan Bisnis (JAB)*, 8(02), 46–56.
- Shi, F., Huang, B., Wu, C., & Jin, L. (2021). How Is Gross Profit Margin Overestimated in China? *Journal of Mathematics*, 2021. <https://doi.org/10.1155/2021/3924062>
- Sitompul, T. (2020). Analisis Kinerja Keuangan PT. Kimia Farma (Persero) Tbk yang Terdaftar Di Bursa Efek Indonesia. *Jom Fisip*, 7(Juli), 1–14.
- Tirivangani, T., Alpo, B., Kibuule, D., Gaeseb, J., & Adenuga, B. A. (2021). Impact of COVID-19 Pandemic on Pharmaceutical Systems and Supply Chain – a Phenomenological Study. *Exploratory Research in Clinical and Social Pharmacy*, 2, 100037. <https://doi.org/10.1016/j.rcsop.2021.100037>
- Utami, W. B. (2017). Analysis of Current Ratio Changes Effect, Asset Ratio Debt, Total Asset Turnover, Return On Asset, and Price Earning Ratio In Predicting Growth Income by Considering Corporate Size In The Company Joined In LQ45 Index Year 2013 -2016. *International Journal of Economics, Business and Accounting Research (IJEBAR)*, 1(01), 25–37. <https://doi.org/10.29040/ijebar.v1i01.253>
- Wijayanti, E. (2020). Analisis Likuiditas dan Profitabilitas untuk Menilai Kinerja Keuangan PT. Kimia Farma (Persero) Tbk Tahun 2014 - 2019. *Jurnal Ilmu Manajemen Terapan*, 2(2), 272–284. <https://doi.org/10.31933/jjimt.v2i2.387>
- Wu, C., & Buyya, R. (2015). Cost Model Categories. In *Cloud Data Centers and Cost Modeling* (pp. 611–647). Elsevier. <https://doi.org/10.1016/B978-0-12-801413-4.00015-5>