Pharmacy Performance Based on Financial Perspective Before and During COVID-19 Pandemic: A Case Study

Eva Sartika Dasopang\(^1\), Ida Fauziah\(^2\), Fenny Hasanah\(^1\), Desy Natalia Siahaan\(^1\), Dina Yunisma Rasyida Lubis\(^1\)

\(^1\)Faculty of Pharmacy, University of Tjut Nyak Dhien, Medan, North Sumatera, Indonesia
\(^2\)Faculty of Science and Technology, University of Medan Area, Medan, North Sumatera, Indonesia

ABSTRACT

A pharmacy, aside from being a pharmaceutical care provider, is also a functioning business. Thus, in the scope of business, pharmacy performance can be analysed using liquidity, activity, and profitability ratios. This study aimed to determine the performance of Pharmacy X based on a financial perspective before and during the COVID-19 pandemic. This research is a descriptive cross-sectional study that employed data obtained from sales and purchase records. The data were analysed using financial ratio analysis methods, including liquidity, activity, and profitability ratios. This study was conducted at Pharmacy X based on the amount of prescription and non-prescription income from before the COVID-19 pandemic (in 2019) and during the pandemic (in 2020). The results showed that Pharmacy X was not good at managing its current assets and current liabilities during the COVID-19 pandemic. Based on the results for the ratios of total asset turnover and fixed asset turnover, asset utilisation was less efficient. Analysis of the probability ratios and net profit margin showed a decrease in Pharmacy X’s profit during the pandemic. The Return on Assets (ROA), Return on Equity (ROE), and Return on Investment (ROI) values indicated that the business was less able to generate profits and net income from its invested capital.

Keywords: pharmacy performance; COVID-19; financial perspective

INTRODUCTION

As a pharmaceutical service facility, a pharmacy has two functions, namely health service and as a profit-generating business (Hamdani, 2016). Every business can run smoothly if it keeps a close eye on its performance. Performance can be defined as the level of success in carrying out obligations and the ability of a business to achieve its determined objectives (Murtizanah, 2015; Veronica & Koto, 2020). The world remains wary about the spread of COVID-19, which has created widespread turmoil since 2020. The COVID-19 pandemic has impacted all aspects of life, including the economic aspect (Regmi, 2020; Yamali & Putri, 2020). During the pandemic, many businesses, including pharmacies, have seen their performance decline (Kustiyono et al., 2022; World Health Organization, 2020). Therefore, pharmacy owners must organise their management to prevail in such challenging situations and maintain their functions as a pharmaceutical service and means of business (Zheng et al., 2021).

Pharmacy X is located in Padangsidimpuan, the capital city of South Tapanuli. Padangsidimpuan is one of the largest cities in North Sumatra, which is both socially and culturally diverse. Pharmacy X occupies a strategic location in the densely populated centre of the city. It is also situated immediately next to Padangsidimpuan Regional General Hospital, which makes it easily accessible for both the public and hospital patients. The pharmacy not only provides drug services and medical supplies but also cooperates with hospitals and clinics in providing medications and medical equipment. Pharmacy X has recorded profit growth in line with that of the number of drugs and medical supplies. However, the pandemic led to a fall in the number of patients visiting the pharmacy. This coincided with a limit on the number of visitors to doctor’s clinics, thus contributing to a decline in turnover for many pharmacies during the pandemic (Nugroho & Pratiwi, 2021). For these reasons, the author would like to investigate, through a case study, pharmacy performance from a financial perspective before and during the COVID-19 pandemic.

METHODS

This research is a descriptive cross-sectional study that was conducted from January to February 2021 by collecting sales and purchase records made by Pharmacy X in 2019 before the COVID-19 pandemic and in 2020 during the COVID-19 pandemic. The data obtained were processed using the Microsoft Excel, presented in tabular form, and analysed using the financial ratio analysis method, including liquidity ratios, activity
RESULTS AND DISCUSSION

Purchases of medicine and food and beverages fell during the pandemic, decreasing by 45.3% and 20% respectively, while the purchase of medical devices and medical consumables showed a more than threefold increase compared to before the pandemic. This reflected the widespread panic-buying of medical equipment, masks, and hand sanitiser (Yuliana, 2020) prompted by the COVID-19 outbreak that began to affect Indonesia in early 2020. The data can be seen in Figure 1.

Sales of prescription and non-prescription drugs and food and beverages also decreased during the pandemic. The most drastic fall was seen in drug sales, which declined by 46% compared to before the pandemic. This reflected the widespread panic-buying of medical equipment, masks, and hand sanitiser (Yuliana, 2020) prompted by the COVID-19 outbreak that began to affect Indonesia in early 2020. The data can be seen in Figure 1.

Table 1 presents the profit and loss statement for Pharmacy X before and during the COVID-19 pandemic. It can be seen that turnover decreased by around 34% (Rp788,133,000), which was due to poor sales during the pandemic. The cost of goods sold, gross profit and net profit also fell by around 32% (Rp627,633,000), 44% (Rp159,300,000) and 62% (Rp160,500,000) respectively. All of these declines were

ratios, and profitability ratios (Asmi & Haris, 2020). The data is presented in Indonesian Rupiah (IDR/Rp).

Table 1. Profit and loss statement for Pharmacy X before and during the COVID-19 pandemic.

| Category                  | Before Pandemic (Rp) | Pandemic (Rp) |
|---------------------------|----------------------|---------------|
| Medicine                  | 1,438,690,000        |
| Disposable Medical Materials | 32,420,000           | 17,250,000    |
| Medical Devices           | 12,500,000           | 46,761,000    |
| Food and Beverages        | 83,700,000           | 66,653,000    |

Figure 1. Purchase of goods report

| Category                  | Before Pandemic (Rp) | Pandemic (Rp) |
|---------------------------|----------------------|---------------|
| Prescribed Drugs          | 776,050,000          |
| Non Prescribed Drugs      | 1,357,554,000        |
| Disposable Medical Materials | 38,940,000           | 21,943,000    |
| Medical Devices           | 15,225,000           | 29,650,000    |
| Food and Beverages        | 104,873,000          | 80,642,000    |

Figure 2. Sales of goods report

Sales of prescription and non-prescription drugs and food and beverages also decreased during the pandemic. The most drastic fall was seen in drug sales, which declined by 46% compared to before the pandemic. This reflected the pandemic’s impact, whereby consumers felt that their primary need involved products that they perceived would help in preventing and protecting them from the transmission of COVID-19, including supplements, vitamins, and health drinks (Gunawan & Rakhmat, 2020). Sales of disposable medical materials and medical devices showed a threefold increase compared to before the pandemic due to the socialisation conducted by the government for COVID-19 prevention (Figure 2). People were encouraged to keep their distance, use personal protective equipment, and wash their hands (Chuzairi et al., 2021). Social media plays a role in providing information regarding panic buying of medical devices and consumable medical materials in other areas. This sparked panic buying in other areas. Misinformation also increases consumer panic in buying products. Panic buying of medical devices and consumables also occurs worldwide (Arafat et al., 2020; Naeem, 2021).
Table 1. Profit and loss statement (Rp)

| Report                      | Before Pandemic (2019) | Pandemic (2020) | Difference |
|-----------------------------|-------------------------|-----------------|------------|
| Early year items           | 230,785,000             | 150,550,000     | 80,235,000 |
| Purchase of goods          | 1,567,310,000           | 1,072,979,000   | 494,331,000|
| Total goods one year       | 1,798,095,000           | 1,223,529,000   | 574,566,000|
| End of year items          | 150,550,000             | 97,483,000      | 53,067,000 |
| Cost of gold sold          | 1,948,645,000           | 1,321,012,000   | 627,633,000|
| Turn over                  | 2,312,942,000           | 1,524,809,000   | 788,133,000|
| Gross profit               | 364,297,000             | 203,797,000     | 160,500,000|
| Inventory depreciation     | 7,863,332               | 7,863,332       | 0          |
| Consumable medical device  | 3,000,000               | 1,800,000       | 1,200,000  |
| Salary expense             | 96,000,000              | 96,000,000      | 0          |
| Net profit                 | 257,433,668             | 98,133,668      | 159,300,000|

due to the challenging economic circumstances facing the community during the pandemic. The COVID-19 pandemic has caused a decrease in people’s income due to the difficulty of the economy coupled with the many layoffs. Moreover, reduced supply from factories and logistics led to an increase in the price of goods (Malden & Stephens, 2020).

Table 2 indicates that the cash balance rose by around 33% (Rp203,562,000) during the pandemic compared to the pre-pandemic period, due to the net profit earned. The pharmacy had a stronger cash balance during the pandemic due to healthy sales. The total goods figure before the pandemic period was Rp150,550,000 compared to Rp97,483,000 during the pandemic period, which equates to a decrease of around 35% (Rp53,067,000). This was caused by the lack of medicines, disposable medical materials and medical devices in the market due to high demand (Rokhmah et al., 2020).

Accounting theory known as the non-articulated approach states that the balance sheet and income statement are mathematically independent of each other (Sari, 2015). From this, it can be concluded that the year-end balance sheet is good if the assets and liabilities are in balance. Liquidity analysis describes the ability of firms to meet their short-term obligations. The current ratio was thus used to measure the pharmacy’s ability to pay its current liabilities by dividing existing assets by current liabilities (Kaplan, 2019; Saini & Bansal, 2020).

Table 3 shows an increase in the current ratio of 1% in 2020, during the pandemic, compared to 2019, i.e. before the pandemic. This indicates that the business is adept at managing its current assets since the higher the ratio, the greater its ability to meet short-term financial obligations (Raymond, 2017). In terms of total assets turnover, net sales before the pandemic of around Rp1,948,645,000, combined with total assets of Rp796,812,000, produced...
Table 3. Analysis of financial ratios

| Analysis | Before Pandemic (Rp) | Pandemic (Rp) |
|----------|----------------------|---------------|
| **Liquidity** |                       |               |
| 1. Current Assets | 760,212,000          | 910,707,000  |
| 2. Current Liabilities | 796,812,000          | 947,307,000  |
| 3. Ratio | 0.95                 | 0.96          |
| **Activity** |                       |               |
| a. Total asset turnover | 1,948,645,000 | 1,321,012,000 |
| 1. Net sales | 796,812,000          | 947,307,000  |
| 2. Total assets | 796,812,000          | 947,307,000  |
| 3. Ratio | 2.44                 | 1.39          |
| b. Fixed asset turnover | 1,948,645,000 | 1,321,012,000 |
| 1. Net sales | 36,600,000           | 36,600,000   |
| 2. Net fixed assets | 36,600,000           | 36,600,000   |
| 3. Ratio | 53.24                | 36.1          |
| **Profitability** |                       |               |
| a. Net profit margin | 257,433,668         | 98,133,668   |
| 1. Net profit | 257,433,668          | 1,321,012,000 |
| 2. Net sales | 0.13                 | 0.07          |
| 3. Ratio |                       |               |
| b. Return on Asset (ROA) |                     |               |
| 1. Gross profit | 364,297,000          | 203,797,000  |
| 2. Total assets | 796,812,000          | 947,307,000  |
| 3. Ratio | 0.45                 | 0.21          |
| c. Return on Equity (ROE) |                     |               |
| 1. Net profit | 257,433,668          | 98,133,668   |
| 2. Capital | 187,150,000          | 134,083,000  |
| 3. Ratio | 1.37                 | 0.73          |
| d. Return on Investment (ROI) |                  |               |
| 1. Net profit | 257,433,668          | 796,812,000  |
| 2. Total assets | 98,133,668           | 947,307,000  |
| 3. Ratio | 0.32                 | 0.10          |

and pandemic periods. This comparison of net sales with total assets demonstrates a relative decline in the pharmacy’s ability to generate sales from its total assets. A higher total asset turnover ratio indicates a faster turnover of goods at the pharmacy, thereby increasing the ability to earn greater profits due to the efficient utilisation of assets to generate sales (Kasmir, 2018). The fixed assets turnover ratio decreased during the pandemic by 32% (17.14 percentage points) compared to before the pandemic. This indicates that the pharmacy was less effective in using its fixed assets to generate profit. Good fixed asset management is thus critical for the pharmacy to survive in difficult conditions (Kasmir, 2018; Malden & Stephens, 2020). The application of asset management in the company is useful for reducing non-optimal expenses and increasing income. Other benefits of asset management are maintaining asset value with careful planning, the company can reduce the risk of losing the value of its assets due to loss or damage. The application of asset management is useful for keeping assets safe and avoiding the risk of being lost or damaged. The company’s asset management information system allows the company to know the condition of the assets so that the budgeting process is more practical and flexible. Another benefit of asset management is that it prevents the purchase of excess assets where companies can prepare budgets based on priorities and reduce costs. Although it can manage assets and prevent the company from experiencing losses, asset management cannot predict future threats. Therefore, the application of asset management must be complemented by the creation of risk management to help companies manage the uncertainty of their assets in the future. Depreciation of assets is something that companies have to watch out for. If it is used continuously, the asset will decrease in quality both in terms of function and value. Therefore, the role of asset management is to monitor assets, which is very much needed (Gavrikov et al., 2020).

Profitability analysis can also be used to describe the pharmacy’s ability to earn a profit from all available funds and sources of funds. This analysis is aimed at detecting the cause of the profit or loss generated by each type of product within a certain period. This reflects how profit is the main factor in measuring the level of effectiveness and efficiency of a business. Net profit margin is used to analyse the finances of a business. The pharmacy recorded a decrease of 46% (0.06 percentage points) in its net profit margin ratio during the pandemic compared to before the pandemic, thus demonstrating its reduced ability to generate profit (Kasmir, 2018).
Return on Assets (ROA) is used to measure the ability and overall development of a business and is a benchmark for the profits derived from it. ROA can also be used to assess the potential of investment to generate the expected level of profit. The value of the ratio between the profits obtained by the company with the use of assets of more than 2% can illustrate that the ability to earn net income is higher than the assets of the company used (Jang & Ahn, 2021). Table 3 shows ROA ratios of 0.45 and 0.21 before and during the pandemic, respectively, meaning ROA fell by 53%. As such, the pharmacy was less effective in utilising its assets to generate profits (Rahmani, 2020).

Return on Equity (ROE) is used to measure the financial performance of a business. However, since debt is not included in the formulation and analysis of ROE, many businesses prefer to use ROA. Table 3 shows that the business had an ROE ratio of 1.37 before the pandemic, which then fell by 46% (to 0.74 percentage points) during the pandemic. This indicates that the pharmacy was less effective in terms of managing its available capital to generate income. An ROE value closer to 1 would indicate the pharmacy’s effective and efficient use of equity to generate income (Kasmir, 2018).

ROI is used to measure the overall rate of return on investment in the applicable business. A positive ROI indicates that the investment in an asset is still good. Table 3 shows that the business experienced a fall of 69% in its ROI ratio during the pandemic compared to before the pandemic. However, despite this sharp fall, ROI remained positive (at 0.10); therefore, the investment continued to perform favourably (Kasmir, 2018).

Pharmacy X has a current ratio of less than 2, thus indicating that has not been good at managing its current assets and current liabilities. Total asset and fixed asset turnover also fell in 2020 compared to before the pandemic, meaning the business became less efficient in using its assets. The profitability ratios, including net profit margin, ROA, ROE, and ROI also declined during the pandemic compared to the pre-pandemic period, indicating that it was less efficient at generating net profits from the capital invested in overall assets.

This study has a couple of noteworthy limitations. First, because this is a case report study, which cannot represent the overall population, it is impossible to conclude that every pharmacy or business will have experienced a decrease in turnover during the COVID-19 pandemic. Additionally, it was difficult to obtain the requisite permission from pharmacies to analyse their performance due to the confidentiality and commercial sensitivity surrounding potential financial problems.

CONCLUSION
Pharmacy X showed a stronger financial performance during the pre-pandemic period than during COVID-19 pandemic. This was evident from examination of the firm’s liquidity, activity, fixed assets turnover, and profitability ratios, along with its ROA, ROE, and ROI all of which decreased during the pandemic.

CONFLICT OF INTEREST
There are no conflicts of interest stated by the authors.

REFERENCES
Arafat, S. M. Y., Kar, S. K., Menon, V., Alraddie-Mohamed, A., Mukherjee, S., Kaliamoorthy, C., & Kabir, R. (2020). Responsible factors of panic buying: An observation from online media reports. *Frontiers in Public Health, 8*. DOI: https://doi.org/10.3389/fpubh.2020.603894

Asmi, A. S., & Haris, A. (2020). Analysis of the performance of health workers on the quality of health services to the community. *Jurnal Ilmiah Kesehatan Sandi Husada, 12*(2), 953–959. DOI: http://doi.org/10.35816/jiskh.v10i2.447

Chuzairi, A., Kamaruzaman, Sidik, M. A., Rahman, A., & Susanti, R. (2021). Analysis of the impact of the COVID-19 outbreak on the souvenir UMKM economy in Sei Enam, Kijang-Bintan. *JPPM Kepri: Jurnal Pengabdian dan Pemberdayaan Masyarakat Kepulauan Riau, 1*(1), 44-55. DOI: https://doi.org/10.35961/jppmkepri.v1i1.171

Gavrikova, E., Volkova, I., & Burda, Y. (2020). Strategic aspects of asset management: An overview of current research. *Sustainability (Switzerland), 12*(15). DOI: https://doi.org/10.3390/su12155955

Gunawan, & Rakhmat, K. (2020). The impact of COVID 19 on the sale of masks and hand sanitizers in Kabupaten Sumenep. *Eco-Entrepreneurship, 6*(1), 25-33.

Hamdani. (2016). *Good Corporate Governance*. Jakarta: Mitra Wacana Media.

Jang, S. W., & Ahn, W. C. (2021). Financial analysis effect on management performance in the Korean logistics industry. *Asian Journal of Shipping and Logistics, 37*(3). DOI: https://doi.org/10.1016/j.ajsl.2021.06.003

Murtizanah, D. (2015). Analysis of financial statements: The effect of liquidity ratio and activity ratio on KPRI “Makmur” KRIAN profitability. *Jurnal Akuntabel, 5*(1).
Naeem, M. (2021). Do social media platforms develop consumer panic buying during the fear of COVID-19 pandemic. *Journal of Retailing and Consumer Services*, 58. https://doi.org/10.1016/j.jretconser.2020.102226

Kaplan, F. (2019). *Liquidity analysis*. Kaplan Financial Knowledge Bank. Retrieved from http://kfknowledgebank.kaplan.co.uk/financial-reporting/interpretation-of-financial-statement/liquidity-analysis.

Kasmir. (2018). *Financial Statement Analysis* (1st ed.). Jakarta: PT. Raja Grafindo Persada.

Kustiyono, Rachmawati, M & Aziz, A. (2022). COVID 19 pandemic: Its effect on retail business growth in Indonesia. *International Journal of Economics, Business and Accounting Research (IJEBAR)*, 6(1), 515-520.

Malden K., & Stephens, S. (2020). *Cascading economic impacts of the COVID-19 outbreak in China. U.S.-China U.S-China Economic and Security Review Commission Staff Research Report*. Retrieved from https://www.uscc.gov/sites/default/files/2020-04/Cascading_Economic_Impacts_of_the_Novel_Coronavirus_April_21_2020.pdf

Nugroho, Y. D. & Pratiwi, K. A. (2021). Analysis of changes in mobility on the remediation process for the impact of COVID-19 in Indonesia using Google Mobility data. *National Seminar of Official Statistics (2021)*. DOI: https://doi.org/10.34123/semnasoffstat.v2020i1.675

Rahmani, N. A. B. (2020). Effect of RoA (Return On Asset), RoE (Return On Equity), NPM (Net Profit Margin), GPM (Gross Profit Margin) and EPS (Earning Per Share) on stock prices and profit growth at banks listed on the Indonesia Stock Exchange in 2014-2018. *Human Falah: Jurnal Ekonomi dan Bisnis Islam*, 7(1), 104-116.

Raymond. (2017). Effect of liquidity and solvency on profitability at PT. Indosat Tbk. *Jurnal Prodi Manajemen, Universitas Putera Batam*, 5(1), 110-118

Regmi, S. D. (2020). Business Impact of COVID-19 Pandemic on pharmacy shops of Dharan-18: A sample survey. *Dristikon: A Multidisciplinary Journal*, 10(1). DOI: https://doi.org/10.3126/dristikon.v10i1.34559.

Rokhmah, D., Ali, K., Putri, S. M. D., & Khoiron, K. (2020). Increase in public interest concerning alternative medicine during the COVID-19 pandemic in Indonesia: A Google Trends study. *F1000Research*, 9. DOI: https://doi.org/10.12688/f1000research.25525.1

Saini, N., & Bansal, S. (2020). Pharmaceutical companies and liquidity analysis: A review. *International Journal of Economics and Financial Issues*, 10(5). DOI: https://doi.org/10.32479/ijefi.10465

Sari, R.M (2015). Accountability for management of the village income and expenditure budget (APBDes) in Bendosari Village Ngentr District Tulungagung Regency. *Jurnal Kompilek*, 7(2).

Veronica, V., & Koto, S. K. (2020). The Influence of factor of motivation, discipline, and welfare antecedents on employee performance. *Jurnal Pengembangan Wirausaha*, 22(01), 57. DOI: https://doi.org/10.33370/jpw.v22i01.392

World Health Organization, (2020). *Report of the WHO-China Joint Mission on Coronavirus Disease 2019, 2019(February)*.

Yamali, F. R., & Putri, R. N. (2020). The impact COVID-19 on the Indonesian economy. *Ekononis: Journal of Economics and Business*, 4(2), 384-388. DOI: https://doi.org/10.33087/ekonomis.v4i2.179

Yuliana, L. (2020). The impact of pandemic conditions in Indonesia on sales trends (study case on PD. Sumber Jaya Aluminium). *Jurnal Riset Bisnis*, 4(1), 27-38.

Zheng, S. Q., Yang, L., Zhou, P. X., Li, H. B., Liu, F., & Zhao, R. S. (2021). Recommendations and guidance for providing pharmaceutical care services during COVID-19 pandemic: A China perspective. *Research in Social & Administrative Pharmacy : RSAP*, 17(1), 1819–1824. https://doi.org/10.1016/j.sapharm.2020.03.012