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Beyond the Pandemic: A Descriptive Analysis of Return Performance in Indonesia's Healthcare Stocks

Original Article

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Abstract

This study describes the return performance of selected healthcare stocks listed on the Indonesia Stock Exchange during the post-pandemic period. Using a quantitative descriptive design, monthly stock returns were calculated from closing prices for January 2021 to December 2025 and analyzed using mean, minimum, maximum, standard deviation, and cumulative return. The sample consists of eight healthcare-related firms representing pharmaceuticals, herbal and consumer health products, hospitals, and diagnostic services: KLBF, SIDO, TSPC, MIKA, HEAL, SILO, PRDA, and SAME. The results show heterogeneous return characteristics across firms. SILO records the highest mean monthly return at 3.00%, followed by SAME at 1.91%, HEAL at 1.56%, and TSPC at 1.34%. In contrast, SIDO and KLBF show negative average returns, while MIKA is nearly neutral. Risk dispersion is also evident: SAME, PRDA, and SILO exhibit the highest standard deviations, whereas TSPC records the lowest volatility. These findings indicate that healthcare stocks retain defensive relevance after the pandemic but are not homogeneous in risk-return behavior. The study provides an empirical descriptive profile for investors and academics without making causal claims.

Keywords: Descriptive Analysis, Healthcare Stocks, Indonesia Stock Exchange, Post-Pandemic, Stock Return

1. Introduction

The COVID-19 pandemic transformed the position of the healthcare sector in global financial markets. During the early phase of the crisis, healthcare firms were associated with emergency response, pharmaceutical supply, hospital capacity, diagnostics, and medical equipment. After the crisis period, the sector increasingly became linked to recovery, resilience, and long-term transformation in health systems. This transition makes healthcare stocks a relevant object for post-pandemic capital market analysis, particularly in emerging markets where the investor base has expanded rapidly.

The international literature shows that COVID-19 created unusually strong financial-market reactions. Baker et al. (2020) argue that no previous infectious disease outbreak affected the U.S. stock market as forcefully as COVID-19. Al-Awadhi et al. (2020) and Ashraf (2020) also find that stock markets reacted negatively to the growth of confirmed cases and deaths, while Zhang et al. (2020) document substantial increases in global market risk and volatility. These studies confirm that health-related shocks can become financial-market information processed by investors.

Healthcare stocks are often described as defensive because demand for medicines, hospital services, diagnostics, and basic health products tends to be less cyclical than demand in tourism, transportation, property, or discretionary consumption sectors. However, defensive does not mean risk-free. During and after the pandemic, healthcare firms were also exposed to changing utilization rates, inflation in medical costs, supply-chain pressures,

government health policy, reimbursement systems, and shifts in investor sentiment. The post-pandemic period therefore requires a careful descriptive examination rather than assuming that all healthcare stocks move uniformly.

In Indonesia, the healthcare sector remains important due to the scale of national health needs and ongoing health-system transformation. The Ministry of Health of the Republic of Indonesia (2025) emphasizes that the Indonesia Health Profile 2024 serves as a strategic reference for monitoring national health development. WHO Indonesia (2026) reports that Indonesia's total health expenditure in 2024 reached Rp639.9 trillion, equal to 2.9% of gross domestic product, with public financing accounting for 58.5% and out-of-pocket spending at 28.3%. These figures indicate that healthcare is not only a social sector but also a large economic sector.

The capital market context also supports this research. The Indonesia Stock Exchange launched sectoral indices under the IDX Industrial Classification, including the IDX Sector Healthcare index, which measures the performance of stocks classified in the healthcare sector (Indonesia Stock Exchange, 2021). At the same time, KSEI statistics show that the number of Indonesian capital-market investors reached 20,347,147 at the end of December 2025 (KSEI, 2025). This expanding investor base increases the need for accessible empirical studies on sectoral stock performance.

The period January 2021 to December 2025 is particularly relevant because it covers the transition from pandemic attention toward normalization and post-pandemic adjustment. Indonesia also experienced macroeconomic stabilization during this window. Statistics Indonesia reported that Indonesia's economy grew 5.11% in 2025, while Bank Indonesia maintained the BI-Rate at 4.75% in December 2025 to support rupiah stability and monetary transmission (Bank Indonesia, 2025; Statistics Indonesia, 2026). These macroeconomic conditions provide the broader environment in which healthcare stock returns were formed.

Prior research on healthcare stocks in Indonesia has generally focused on event-study designs or causal models. Faidah et al. (2022) examine the market reaction of Indonesian healthcare stocks around the first COVID-19 vaccine administration. Rakhmat & Fahamsyah (2023) analyze health stock reactions around the COVID-19 announcement, while Moelyono (2025) applies event-study methodology to publicly traded healthcare companies. These studies are important, but they do not primarily compare monthly return characteristics across multiple healthcare firms during the post-pandemic recovery period.

This study addresses that gap by providing a descriptive comparison of monthly stock returns for eight healthcare-related companies listed on the Indonesia Stock Exchange: KLBF, SIDO, TSPC, MIKA, HEAL, SILO, PRDA, and SAME. The novelty of this research lies in its post-pandemic period, multi-subsector sample, and descriptive risk-return orientation. The study does not test regression relationships, abnormal returns, or event effects. Instead, it presents mean return, minimum return, maximum return, standard deviation, and cumulative return to profile the performance of Indonesian healthcare stocks after the pandemic.

The objective of this study is to describe and compare the return performance of selected Indonesian healthcare stocks during January 2021-December 2025. The results are expected to provide practical information for investors, especially retail investors interested in defensive sectors, and to enrich the literature on sectoral stock performance in Indonesia.

2. Literature Review

2.1. Stock Return, Risk, and Market Information

Stock return represents the gain or loss obtained by investors from changes in stock prices over a certain period. In capital-market research, return is commonly calculated as the percentage change in stock price from one period to the next. This study applies a simple capital gain/loss approach because the focus is descriptive and the data consist of monthly closing prices.

The theoretical foundation of stock return analysis can be linked to the Efficient Market Hypothesis. Fama (1970) explains that security prices reflect available information, implying that return movements represent market adjustments to information. Although this study does not test market efficiency, the concept is useful for understanding why healthcare-related information, macroeconomic signals, and firm performance can be reflected in stock prices. Sharpe (1964) further links return with risk, indicating that higher expected return is generally associated with higher risk exposure. In this study, standard deviation is used as a descriptive proxy for return fluctuation.

2.2. Healthcare Stocks and Defensive Characteristics

Healthcare stocks are usually associated with defensive characteristics because healthcare demand tends to persist across economic cycles. Pharmaceuticals, consumer health products, hospital services, and diagnostic testing are essential needs. Nevertheless, the defensive nature of the sector should not be interpreted as complete immunity from market volatility. Health-sector firms may face cost inflation, regulatory changes, reimbursement pressures, shifts in patient volume, and changes in investor expectations.

The pandemic literature supports the view that healthcare stocks may behave differently from other sectors. Mazur et al. (2021) find that during the March 2020 U.S. stock market crash, some sectors such as healthcare, food, natural gas, and software performed relatively better than sectors such as petroleum, real estate, entertainment, and hospitality. Buszko et al. (2021) also show that sectoral stock market stability during COVID-19 varied across industries, suggesting that sector-level characteristics matter for risk-return analysis.

2.3. COVID-19, Investor Behavior, and Stock Market Volatility

COVID-19 generated uncertainty not only in public health but also in financial decision-making. Goodell (2020) argues that COVID-19 created broad finance research agendas because the pandemic influenced financial markets, institutions, and economic expectations. Zhang et al. (2020) document substantial increases in volatility across global financial markets, while Haroon & Rizvi (2020) show that panic generated by COVID-19 news was associated with higher equity-market volatility. These findings are relevant because post-pandemic returns may still reflect adjustments after a period of extreme uncertainty.

Investor behavior is also important in interpreting healthcare stock returns. Ramelli & Wagner (2020) show that firm-level exposure and financial characteristics shaped market reactions to COVID-19. Ichev & Marinc (2018), using the Ebola outbreak as context, demonstrate that health-related information can affect stock prices, especially when information is geographically and economically salient. These studies suggest that health shocks and health-related narratives can alter investor perceptions of risk and return.

2.4. Previous Research and Research Gap

In emerging markets, Mittal & Sharma (2021) analyze Indian healthcare and pharmaceutical stocks during COVID-19 and find that the sector exhibited significant abnormal returns during the event window. In Indonesia, Trisnowati & Muditomo (2021)

examine stock market reactions to COVID-19 using an event-study approach. Faidah et al. (2022) focus specifically on Indonesian healthcare stocks around the first vaccine administration and find market reaction in stock prices and trading volume. Rakhmat & Fahamsyah (2023) report significant differences in stock prices before and after the COVID-19 announcement, while stock returns were not significantly different. Rizkianto (2024) uses panel regression to analyze the effect of confirmed cases and deaths on stock returns in several Indonesian sectors.

The gap is clear: most previous studies employ regression, event study, abnormal return, trading volume activity, or volatility models. Fewer studies provide a descriptive comparison of monthly return characteristics across Indonesian healthcare companies after the pandemic. This study contributes by comparing eight healthcare-related stocks over a five-year post-pandemic horizon and presenting simple but empirically grounded statistics that investors can interpret directly.

3. Methods

3.1. Research Design

This research uses a quantitative descriptive design. The design is appropriate because the objective is to describe and compare return performance, not to test causal relationships among variables. Accordingly, this study does not use regression, event study, ARCH/GARCH, or hypothesis testing. The analysis is limited to descriptive statistics of monthly stock returns.

The unit of analysis is the monthly stock return of selected healthcare-related companies listed on the Indonesia Stock Exchange. The observation period is January 2021 to December 2025. Each stock has 60 monthly return observations, resulting in 480 stock-month observations for the eight-company sample.

3.2. Population, Sample, and Data

The population consists of healthcare-sector companies listed on the Indonesia Stock Exchange. The sample is selected using purposive sampling based on relevance to the healthcare sector and data availability. The selected companies represent pharmaceuticals, herbal and consumer health products, hospital services, and clinical laboratory services.

The data used in this research are secondary data in the form of monthly stock returns calculated from monthly closing prices. The return data cover January 2021-December 2025. Before final submission, the underlying monthly closing prices should be traceable to official or recognized market-data sources such as the Indonesia Stock Exchange, Yahoo Finance, Investing.com, RTI Business, or company market-data records.

Table 1. Purposive sampling criteria

No.	Criteria	Number of companies
1	Healthcare-related companies initially considered for the study	8
2	Listed on the Indonesia Stock Exchange	8
3	Main business related to pharmaceuticals, consumer health, hospitals, laboratories, or healthcare services	8
4	Listed before January 2021	8
5	Not delisted during January 2021-December 2025	8
6	No prolonged trading suspension causing incomplete monthly return data	8
7	Monthly return data available for January 2021-December 2025	8
	Final sample	8

Source: *Data Proceed, 2026.*

Table 2. Sample profile

Code	Company	Main healthcare-related business
KLBF	Kalbe Farma Tbk	Pharmaceuticals, nutrition, consumer health, and healthcare distribution
SIDO	Industri Jamu dan Farmasi Sido Muncul Tbk	Herbal medicine, pharmaceutical products, and health supplements
TSPC	Tempo Scan Pacific Tbk	Pharmaceuticals, consumer health, cosmetics, and distribution
MIKA	Mitra Keluarga Karyasehat Tbk	Private hospital network
HEAL	Medikaloka Hermina Tbk	Hermina hospital network
SILO	Siloam International Hospitals Tbk	Siloam private hospital network
PRDA	Prodia Widyahusada Tbk	Clinical laboratory and diagnostic services
SAME	Sarana Meditama Metropolitan Tbk	Hospital and healthcare services through EMC Healthcare

Source: *Data Proceed, 2026.*

3.3. Return Measurement and Data Analysis

Monthly stock return is calculated using the capital gain/loss formula: $R_{it} = (P_{it} - P_{it-1})/P_{it-1}$, where R_{it} is the return of stock i in month t, P_{it} is the closing price of stock i in month t, and P_{it-1} is the closing price of stock i in the previous month. The formula captures price appreciation or depreciation from one month to the next.

The analysis uses descriptive statistics consisting of mean, minimum, maximum, standard deviation, and cumulative return. Mean return describes the average monthly performance of each stock. Minimum and maximum returns identify the most negative and most positive monthly movements. Standard deviation describes return fluctuation and is interpreted as a proxy for volatility. Cumulative return describes the compounded performance over the full observation period.

4. Results and Discussion

4.1. Descriptive Statistics of Monthly Stock Returns

Table 3 presents the descriptive statistics of monthly returns for eight Indonesian healthcare-related stocks during January 2021-December 2025. The results show substantial heterogeneity across companies. This means that healthcare stocks cannot be treated as a single homogeneous defensive group; each firm has distinct risk-return characteristics depending on business model, investor sentiment, and price dynamics.

Table 3. Descriptive statistics of monthly stock returns, January 2021-December 2025

Code	N	Mean	Minimum	Maximum	Std. deviation	Cumulative return
KLBF	60	-0.14%	-15.03%	20.26%	6.48%	-18.59%
SIDO	60	-0.34%	-21.55%	20.59%	7.90%	-32.45%
TSPC	60	1.34%	-10.57%	20.25%	5.66%	103.57%
MIKA	60	-0.01%	-14.51%	16.59%	6.68%	-12.82%
HEAL	60	1.56%	-22.34%	36.28%	9.62%	94.74%
SILO	60	3.00%	-20.44%	71.30%	12.72%	298.64%
PRDA	60	0.16%	-15.90%	69.93%	13.47%	-29.23%
SAME	60	1.91%	-23.94%	49.25%	13.56%	90.45%

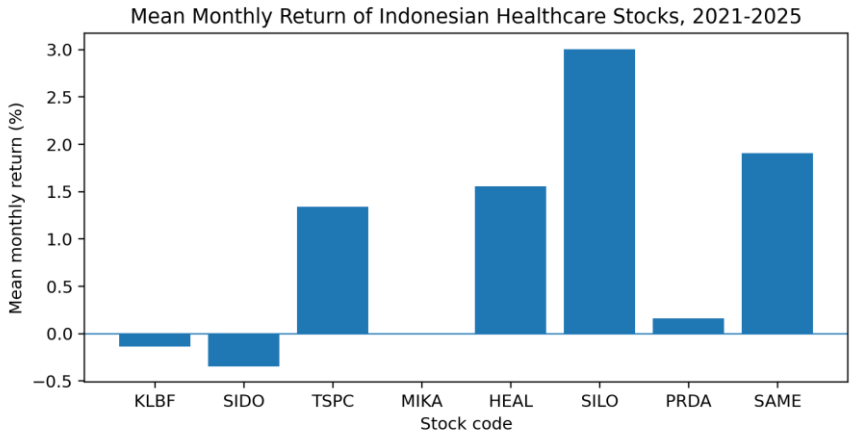
Source: *Data Proceed, 2026.*

The highest average monthly return is recorded by SILO at 3.00%, followed by SAME at 1.91%, HEAL at 1.56%, and TSPC at 1.34%. These results indicate that, within the sample, the hospital group and TSPC generated stronger average monthly performance over the five-year observation period. By contrast, SIDO records an average monthly return of -0.34%, KLBF records -0.14%, and MIKA is almost neutral at -0.01%. PRDA remains slightly positive at 0.16%, but its performance is uneven because of large fluctuations in several months.

The minimum return column shows that SAME experienced the deepest monthly decline at -23.94%, followed by HEAL at -22.34%, SIDO at -21.55%, and SILO at -20.44%. These values indicate that defensive-sector classification did not protect individual stocks from sharp monthly losses. The maximum return column also shows extreme positive movements, especially SILO at 71.30%, PRDA at 69.93%, and SAME at 49.25%. Thus, several healthcare stocks exhibited both downside risk and strong upside movements during the post-pandemic period.

The standard deviation values confirm differences in volatility. SAME records the highest standard deviation at 13.56%, followed closely by PRDA at 13.47% and SILO at 12.72%. These three stocks can be interpreted as more volatile within the sample. TSPC has the lowest standard deviation at 5.66%, suggesting the most stable monthly return movement among the selected stocks. KLBF, MIKA, and SIDO show moderate volatility, while HEAL is higher than the pharmaceutical group but lower than the most volatile hospital and laboratory-related stocks.

Figure 1. Mean monthly return of Indonesian healthcare stocks, 2021-2025



Source: *Data Proceed, 2026.*

4.2. Annual Mean Return Pattern

Table 4. Mean monthly return by year

Year	KLBF	SIDO	TSPC	MIKA	HEAL	SILO	PRDA	SAME
2021	0.92%	0.91%	0.61%	-1.38%	3.87%	5.54%	11.02%	7.44%
2022	2.25%	-0.74%	-0.50%	3.27%	3.39%	1.58%	-3.62%	-0.92%
2023	-2.11%	-2.68%	2.33%	-0.86%	-0.07%	5.25%	-0.07%	0.59%
2024	-1.28%	1.39%	2.83%	-0.79%	1.03%	3.68%	-5.34%	-1.03%
2025	-0.46%	-0.60%	1.45%	-0.30%	-0.45%	-1.03%	-1.19%	3.46%

Source: *Data Proceed, 2026.*

The annual mean return pattern shows that the healthcare-sector sample did not move uniformly across years. In 2021, several healthcare stocks still benefited from pandemic-era attention, especially PRDA, SAME, SILO, and HEAL. PRDA recorded a high average monthly return in 2021, consistent with the heightened relevance of diagnostic services during the pandemic. SAME and SILO also showed strong early-period performance, indicating that

hospital-related stocks attracted investor attention during the healthcare crisis and early recovery phase.

In 2022, the pattern began to normalize. KLBF, MIKA, HEAL, and SILO maintained positive average monthly returns, but PRDA and SIDO turned negative. In 2023 and 2024, TSPC and SILO displayed stronger average monthly performance than many peers, while PRDA faced pressure. In 2025, SAME and TSPC recorded positive average monthly returns, while several other stocks experienced negative or weaker averages. This pattern supports the view that the post-pandemic healthcare sector moved from broad pandemic attention toward firm-specific and subsector-specific valuation adjustments.

4.3. Extreme Monthly Return Movements

Table 5. Extreme monthly return movements

Code	Lowest monthly return	Month	Highest monthly return	Month
KLBF	-15.03%	Aug 2025	20.26%	Apr 2025
SIDO	-21.55%	Aug 2022	20.59%	Feb 2024
TSPC	-10.57%	Feb 2025	20.25%	Oct 2025
MIKA	-14.51%	Oct 2024	16.59%	Apr 2022
HEAL	-22.34%	Mar 2025	36.28%	May 2025
SILO	-20.44%	Dec 2023	71.30%	Apr 2021
PRDA	-15.90%	Apr 2024	69.93%	Jul 2021
SAME	-23.94%	Sep 2022	49.25%	Mar 2021

Source: *Data Proceed, 2026.*

Table 5 clarifies that the largest positive and negative movements occurred in different periods and across different types of healthcare firms. SILO's maximum monthly return of 71.30% occurred in April 2021, while PRDA's maximum return of 69.93% occurred in July 2021. These large positive movements are consistent with the high uncertainty and strong market attention toward healthcare-related firms during the pandemic and early recovery period. However, the presence of large negative returns in later years suggests that market enthusiasm was not permanent.

The deepest losses in SAME, HEAL, SIDO, and SILO demonstrate that healthcare stocks are still vulnerable to price corrections. Investors may view healthcare as a defensive sector, but each stock remains affected by liquidity, valuation changes, earnings expectations, subsector conditions, and broader market sentiment. Therefore, post-pandemic investment decisions in healthcare stocks should consider both average return and volatility, rather than relying only on the defensive-sector label.

4.4. Discussion

The descriptive findings reveal that Indonesian healthcare stocks displayed heterogeneous return characteristics during the post-pandemic period. Although all firms in the sample are related to the healthcare sector, their return performance differed substantially across companies and subsectors. SILO, SAME, HEAL, and TSPC recorded stronger average monthly returns than KLBF, SIDO, MIKA, and PRDA. This finding indicates that healthcare stocks cannot be treated as a single uniform defensive group. In line with the efficient market perspective, stock returns may reflect market responses to available information, investor expectations, and firm-specific conditions (Fama, 1970; Sharpe, 1964).

The stronger mean monthly return recorded by SILO, SAME, and HEAL suggests that hospital-related stocks showed relatively better return performance during the observation period. This may reflect investor attention toward hospital services during the transition from

pandemic crisis to post-pandemic recovery. However, these stocks also recorded relatively high standard deviations, indicating that higher average return was accompanied by greater monthly return fluctuation. Previous studies have shown that health-related shocks and pandemic information generated different stock market reactions across sectors and firms (Al-Awadhi et al., 2020; Ashraf, 2020; Ramelli & Wagner, 2020).

TSPC presents a different descriptive profile. The stock recorded a positive mean monthly return and the lowest standard deviation in the sample. This indicates that TSPC had a relatively more stable return movement compared with stocks that recorded higher maximum returns but also higher volatility. For conservative investors, this type of risk-return profile may be more relevant than stocks with extreme return movements. This finding is consistent with the view that sectoral stock performance during and after COVID-19 may vary depending on firm characteristics, business model, and market perception (Buszko et al., 2021; Zhang et al., 2020).

The results also show that the defensive nature of healthcare stocks should not be interpreted as immunity from market risk. SAME, PRDA, and SILO recorded the highest standard deviations, while several stocks also experienced sharp negative monthly returns. This indicates that healthcare stocks may remain attractive because of the essential nature of pharmaceutical products, hospital services, diagnostic services, and health-related products, but they are still exposed to volatility, valuation changes, liquidity conditions, and investor sentiment. Mazur et al. (2021) found that healthcare stocks performed relatively better than several cyclical sectors during the March 2020 market crash, but this does not mean that all healthcare stocks have stable or positive returns in every period.

The annual return pattern also supports the view that the post-pandemic healthcare sector moved from broad pandemic-driven attention toward firm-specific and subsector-specific adjustment. In 2021, several healthcare stocks such as PRDA, SAME, SILO, and HEAL still showed strong average monthly returns, reflecting heightened attention to diagnostic and hospital-related services. In the following years, however, the pattern became more varied, with some firms maintaining positive average returns while others experienced weaker performance. This finding complements previous Indonesian studies showing that COVID-19-related information and vaccination policy influenced healthcare stock reactions, although the magnitude and direction of market response differed across firms and periods (Faidah et al., 2022; Moelyono, 2025).

Overall, the findings suggest that stock selection within the healthcare sector remains important. Investors seeking higher return potential may pay attention to stocks with stronger average returns, such as SILO, SAME, HEAL, and TSPC, but these returns should be interpreted together with volatility. Stocks with higher standard deviation indicate greater monthly return fluctuation, while stocks with lower standard deviation indicate more stable return behavior. Since this study uses a descriptive quantitative approach, the findings should be interpreted as a risk-return profile rather than evidence of causal relationships.

5. Conclusion

This study describes the return performance of eight Indonesian healthcare-related stocks during January 2021-December 2025. The results show different return characteristics across companies. SILO recorded the highest mean monthly return, followed by SAME, HEAL, and TSPC. Meanwhile, SIDO and KLBF recorded negative average monthly returns, and MIKA was nearly neutral. These results indicate that post-pandemic healthcare stocks in Indonesia did not move uniformly.

The standard deviation results show that SAME, PRDA, and SILO had the highest return fluctuations, while TSPC had the lowest volatility. Stocks with higher standard deviation indicate greater monthly return fluctuation, while lower standard deviation indicates relatively more stable return movement. The findings provide an initial empirical picture of risk and return in Indonesian healthcare stocks after the pandemic.

This study does not make causal claims because it uses a descriptive quantitative method. The findings should therefore be interpreted as a performance profile rather than evidence of relationships among variables. Future research may extend this study by adding risk-adjusted performance measures, comparing healthcare stocks with other defensive sectors, or testing the influence of macroeconomic and firm-specific variables on healthcare stock returns.

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