

Resilience and Adaptation: Investment Metrics of Indonesian Healthcare Companies Before and During the COVID-19 Pandemic

Firly Irhamni¹

¹*Department of Management, Faculty of Economic, Business and Digital Technology, Universitas Nahdlatul Ulama Surabaya. Email: firhamni@unusa.ac.id*

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ABSTRACT

The impact of dividend policy and stock valuation (price earning proportion and price to book value) on the prices of healthcare industry stocks listed on the Indonesia Stock Trade somewhere in the range of 2016 and 2021 is examined in this study. The research data used in this quantitative analysis are secondary data. This study included eighteen healthcare sector companies in its sample. Purposive sampling is the methodology used in this study, and SPSS 24 is the analysis tool. We explained the relationship between stock prices, dividend policy, and stock valuation. We order the variables into pre-pandemic and during-pandemic categories subsequent to testing them for like clockwork. That's what the experimental results demonstrate, for all periods, the earning-per-share notation has a significant impact on stock prices. Stock valuation, on the other hand, has a significant impact on stock prices, as does the final dividend policy with dividend payout proportion and dividend per share. Meanwhile, results from the pre-pandemic time frame indicate that EPS and DPR didn't significantly influence results; results from the pandemic time frame indicate that stock valuation didn't significantly influence stock price. This research provides fresh insights into what the recovery of economic exposure means for corporate conduct in Indonesia, where persistent financial and economic pressures from stock market unpredictability give substantial sources of uncertainty.

1. Introduction

Manufacturing companies, especially the healthcare industry, are engaged in producing products that are sold for profit. The sector needs to become more competitive and continue to innovate to produce globally competitive quality products to meet consumer demand. The healthcare industry such as healthcare industry in Indonesia has great potential as people need healthcare daily. This is a huge opportunity for the healthcare industry. One of the industries that has a significant impact on the capital markets is the consumer products sector. The healthcare industry in Indonesia is dominated by pharmaceuticals, medical devices healthcare services such as hospitals, clinics, and laboratories (Neelima et al., 2024). This industry is a promising industry for investors. In Indonesia, the healthcare market is estimated to have grown from IDR 490.3 trillion (\$33.4 billion) in 2019 to IDR 1,224 trillion (\$78.0 billion) by 2027, with an annual growth rate of 11.7% (Trade.gov). This growth is fueled by a rising population, increasing disposable income, and growing awareness of healthcare. Although there are some obstacles, such as unequal distribution of healthcare resources across the country. The majority of doctors and hospitals are concentrated in Java, leaving many remote areas underserved (Indonesia Invests in Quality Healthcare Access). Also the second challenge like specialist shortages, particularly in critical areas (Indonesia Invests in Quality Healthcare Access). The government has launched a new hospital based specialist training program to address this gap.



Figure 1. Economic Growth Trend

Due to social limitations imposed by the government, Indonesia's economic growth slowed down

significantly in 2019, which was made worse by the COVID-19 outbreak that started in 2020 (Amiruzzaman et al., 2022). In the second quarter of 2021, this tendency will be robust once more. This demonstrates how home consumption has evolved into a yardstick for gauging the health of the economy as a whole. As a result, the state of the economy is also affecting some of the biggest businesses in the healthcare sector (Ahmad et al., 2024). Economic developments always follow a pattern of rising consumption, and the current drop in consumption has an impact on the expansion of the economy as a whole. In corporations, sellers and purchasers negotiate stock prices. Typically, both internal and external elements of the business have an impact on these two parties. Internal factors are those that affect a company's performance and that management has some degree of influence over. The dividend policy, liquidity, profitability, obligation to-value proportion, and other financial parameters are a couple of examples. Albeit outside influences are uncontrollable by corporate management, internal issues such as political challenges, fluctuations in return rates, high rates of inflation, and deposit interest rates are considered manageable. The stock price represents the normal value of future cash flows to shareholders.

This paper advances three artistic categories. In contrast to Luo and Tsang (2020), Baek et al. (2020), and Mckibbin and Fernando (2020), this study concentrates on the reaction of the stock market. We first examine the effects both before and during the COVID-19 scourge. The study specifically examines the healthcare sector's reaction to the COVID-19 pandemic on the Indonesian stock trade. Along with market insights, the study provides information on the healthcare industry during the period when COVID-19 initially arisen in China, before it expanded to other countries and caused a sustained decrease in the exhibition of the Indonesian stock market. Participate in the writing on stock pricing, dividend policies, and stock value. Most of reversals, according to Heyman et al. (2019), happen during unstable times, which is normally when overreaction is most pervasive. Lastly, this article compares organization valuation and dividend policy while examining the stock market during the post-pandemic recovery. This article is coordinated as follows: Section 2 outlines the study's theoretical system, while Section 3 provides information on the sample, data, and observational model. Results are shown in Section 4, and a conclusion is given in Section 5.

2. Literature Review

Signal theory

According to this theory, informational signals are required to find out and assess whether an investor has invested in the subject company. Fama (1970) originally put forth the efficient market hypothesis for stock markets. Regardless of whether they are used by institutional investors or retailers, markets are considered proficient in this sense assuming they continuously tolerate risk and are unable to produce exceptional profits with their ongoing trading tactics (Gumanti, 2011). According to the productive market theory, past price variations of an asset can't be used to forecast future price changes. Hartini (2017) conducted a study that was connected to this one and was named Debt-to-Equity Ratio (DER) Coalition and Earnings Per Share (EPS) for Stock Price. The study concluded that both DER and EPS well affected stock price. Put another way, investors would expect an increase in the organization's value in the event that the distribution was more than the dividend yet paid out as a bigger percentage (Bobir et al., 2024). Conversely, in the event that the organization paid a considerably smaller percentage of dividends than investors had expected, the price of the shares would drop on the financial market.

Customer Effect Theory

This theory contends that investors always depend their choices on the dividend policies chosen by companies, which may incentivize investors to transfer to an alternate organization or remain with this one in response to changes in dividend policies.

Agency Theory

This theory holds that investors need to expand their cash gains by distributing a bigger percentage of

profits, whereas management wants to increase the portion of retained earnings to ensure that there are sufficient funds available for investment or expansion reasons. This leads to agency conflict.

Stock Price

A security that shows an individual or organization owns or has an interest in a firm is its stock price. The closing stock price, also known as the closing price, is the one that is used after the book is closed toward the year's end. While deciding whether to invest, or in understanding with their wishes, investors often consider stock prices before determining the best course of action for a corporation to ensure its profitability and well-being. Sunariyah (2011) states that there are three components to the stock price:

a) Normal price

the amount set by the issuer for each share that was distributed. The nominal price is determined by the issuer's preferences.

b) Initial price

This is the price of the stock before it is listed on the stock trade. The initial price will be chosen by the issuer and underwriter in their understanding. This starting price serves as the basic value at the stock cost index calculation.

c) Market price

Subsequent to being listed on a stock trade, shares can be sold between investors for this amount. The market price in the secondary market is set by supply and demand dynamics. The easiest price to find is the market price, which is the price of a stock on a functioning business sector or on the other hand, in the event that the market is closed, the closing price.

Earning Per Share (EPS)

An index displays the amount of profit (return) got by shareholders and investors. The amount of money an investor makes for each share of common stock they own is expressed as earnings per share. A higher EPS number indicates that a company can give investors a superior degree of government assistance, which raises the company's share price (Dewi, 2015). Before making an investment in a firm, investors often focus to a greater degree toward its higher EPS value and EPS development rate after some time. Investors find companies with higher earnings per share more desirable. Such an occasion would affect the firm's share value, specifically an increase in share prices and an increase in the company's price book value (PBV) (Yusrizal and Juneris, 2018). Ownership rights are without a doubt held by shareholders, and this establishes a ceiling on the amount of output the business can produce. As a result, businesses should constantly attempt to strengthen their capacity to create net profit (Bustani et al., 2021).

Stock Valuation Framework

a. Price Earning Ratio (PER)

As stated by Dewi and Sudiarta in Mujati and Dzulkodah (2016), stock price development is at last influenced by investors' interest in earnings development. A company's earnings development is displayed by its price-to-earnings ratio. In the stock market, the price-to-earnings ratio (P/E) is a frequently utilized measure to assess a company's stock valuation. The computation involves dividing the present stock price by the profits per share (EPS) of the company. According to Hanafi et al., PER is a part of market relations, and an investor's or potential investor's perspective is more important (2016:85). An investor can determine the amount they are willing to pay for each share by looking at a ratio known as the Price Earnings Ratio (PER). P/E ratios are normally high for equities of firms with promising futures and high earnings because they indicate future stock prices. Low P/E ratios, on the other hand, are frequently found in the stocks of companies that have poor performance and uncertain futures. Investors use this indicator to foresee future stock price development and determine whether

the P/E ratio of a company is too high. Not extremely appealing because the stock price probably won't increase and there is restricted chance of capital gains. For the Indonesian stock exchange, a reasonable PER threshold is 10-15; for additional promoted stock exchanges, the threshold is usually 15-20. The company value increases as the PER rises.

b. Price to Book Value (PBV)

Price-to-book value, according to Novitasari (2013), is the market ratio's measurement of the stock market price's performance in relation to its book value. This ratio shows the possible value of an industry in relation to the amount of capital invested. This financial measure compares a company's market capitalization, or stock price, to its book value, or all the more precisely, its net asset value. In contrast, a low P/B ratio could indicate that the market values the company's assets less than its stock price. A high P/B ratio suggests that the market values the company's assets more than its stock price. Obviously, investors can anticipate greater returns assuming the PBV value is higher. Price-to-book value is the calculation or comparison of a stock's reasonable worth and book value. The PBV ratio allows investors to swiftly ascertain the amount by which a stock's reasonable worth has increased from its book value. The PBV ratio rises when the business does well (Cahyaningrum and Antikasari, 2017). Thus, the factors to consider while investing PBV is a vital financial statistic for investors as it provides a comprehensive description of a firm and its total book value. Tryfino (2009), referred to by Ramadhani (2016), states that this ratio can give a general perspective on a stock's probably price fluctuations; thus, it has an indirect impact on the rise in stock price. From a dependability standpoint, a high PBV ratio is a factor (Lestari and Susetyo, 2020). Great economic productivity is described by a high PBV ratio. Assuming that the business is operating profitably, its PBV value will be high. Put otherwise, a company's PBV various increases with further developed performance comparative with the earlier year (Cahyaningrum and Antikasari, 2017).

Dividend Policy

The decision of dividend policy is viewed as a pivotal strategic financial one that must consider various factors. Many theories exist that attempt to explain why investors act the manner in which they do in relation to dividend policy; nevertheless, there are hypotheses that are unbiased or supportive of the possibility that dividend policy has an impact on a company's financial performance. The essential theories pointed toward elucidating distributive politics are:

a. Neutral Theory (Dividend Policy)

M&M (Modigliani & Miller, 1961), Two economists working together are credited with developing this hypothesis. This thought holds that the decision on the best way to distribute profits has no impact available value or price of the company's stock. Rather, the only factors that impact a company's worth are the profits it has made and any hazards to its investments or assets. The income from asset management, not the way things are distributed to shareholders in the type of cash payouts or retained earnings, determines the firm's reasonable worth. The authors showed up to the conclusion that a corporation's decision to reinvest its profits to advance development, or to get cash through distributions the two of which raise proprietor riches and that investment proficiency is a critical component in determining shareholder abundance. All the concept of capital gains, they continued, is based on raising the market price of shares held before declaring dividend distributions; in the event that a company makes a profit and decides to distribute part of it as dividends, that decision will result in capital gains; the market value of the shares will rise by the amount of retained earnings; on the other hand, assuming a business chooses to hold its profits as retained earnings, the market value of the shares will decrease by the amount of the dividends. Since this theory's legitimacy does not correspond with the real world, (M&M) contend that it is irrational and requires additional research or scientific validation.

b. Bird-In-The-Hand Theory

The concepts of Myron J. Gordon and J. Lintner are remembered to have been influenced by the first

theory, known as the unbiased dividend policy theory, which holds that there is no connection between dividend policy and stock price or corporate value. This provoked a previous theory (M&M theory) to be reprimanded. According to Sartono (1997), shareholders favor dividend payouts to retained profits. The rationale is that dividend payments constitute an assured payout, as opposed to capital gains. Investors, says Gordon Lintner, feel that a bird in the hand merits a thousand in the sky. This income is alluded to as the "bird-in-the-hand paradox" by Modigliani-Mill operator. This line of reasoning holds that a company's dividend policy straightforwardly affects its fairly estimated worth since bigger distributions lessen the expected profit from invested capital. Because preserving and reinvesting earnings requires a high degree of risk, the probability of investors getting capital gains from retained profits is lower than the probability of investors realizing capital gains from capitalizing dividends. It fulfills Given that the distribution of profits presently is more definite than the possibility of earning capital gains later on, this suggests that investors would like to transfer profits to shareholders rather than holding them for future capital gains.

c. Tax Preference Theory

It was Krishna Ramaswamy and Robert H. Litzenberger who fostered the tax inclination theory of dividends. This theory holds that investor behavior is influenced by the disparate tax treatment of capital gains and dividends. The authors of the study discovered that because there are less taxes to pay, investors favor companies that offer practically zero dividends. This conclusion was reached after a survey of the US stock market. Investors should anticipate that the company won't distribute cash dividends and that the profits will remain undistributed on the off chance that capital gains from the sale of stock are without tax or have a tax rate that is lower than the tax rate on the cash dividends distributed. Assuming all other variables remain same, the wealth of shareholders increases as the proportion of cash dividends that diminish undistributed earnings decreases.

We use dividend payout ratio and dividend per share as indicators for dividend policy variables in this study. Dividend per share is a measurement of dividend payment in relation to the total number of outstanding shares in a specific year. the portion of a business' profits distributed to shareholders as dividends. It shows the percentage of earnings given to stockholders as dividends in cash. It is registered by dividing the total amount of dividends paid by the quantity of outstanding shares. The dividend payout ratio is a metric that assesses the amount of retained earnings that is used as a financing source and illustrates the portion of a company's revenues from healthcare industry companies that are paid out as cash dividends to shareholders somewhere in the range of 2016 and 2021. A high dividend payout ratio (DPR) is indicative of a high profit-sharing program executed by the company, which in turn encourages investors to purchase company shares for dividend payments. The stock price will rise in proportion to market demand (Pranata et al., 2015). According to Bustani et al. (2021), the business must generate net profit and give it out as legitimate tips. ... order for investors to seriously assess the company's ability to generate a profit. Investors boost their financial allocation at the appropriate second by purchasing company shares, which affects the share price.

Research Hypothesis

H1: Earnings Per Share (EPS) ratio has a significant effect on stock prices

H2: Stock valuation with the notation of Price Earning Ratio (PER) and Price to Book Value (PBV) ratio has a significant effect on stock prices.

H3: The Dividend Policy has a significant effect on stock prices with notation Dividend Per Share and Dividend Payout Ratio has a significant effect on stock prices.

3. Methodology

Quantitative methods are utilized in this investigation. Purposive sampling is a technique used to determine the sample with specific considerations; sample members will be chosen so as to ensure that the sample used can accurately mirror the population's characteristics (Sugiyono, Quantitative Research

Methods, Qualitative and Research and development, 2013). This was the sample selection technique used in this study. These are the criteria that are applied while sampling for study:

- a) For the years 2016-2021, healthcare companies are listed on the Indonesia Stock Exchange.
- b) From 2016 to 2021, the corporations that served as examples released yearly financial reports five times in succession.
- c) Businesses with standard financial data for the 2016-2021 period that meet the requirements of this study.

Both independent and ward variables are used in this investigation. One variable that is frequently alluded to as an influencing variable is the independent variable. In this study, EPS (X1), PER (X2), PBV (X3), DPS (X4), and DPR (X5) are the independent variables. Stock prices are the reliant variable in this research. The statistical data analysis in this study was measured with the SPSS version 24 program. Various linear regression analysis was done with SPSS.

4. Results and discussion

Descriptive Statistics

Descriptive statistics typically only illustrate or characterize the data's real state. In this study, the mean and standard deviation were utilized as analytical tools.

Table 1. Descriptive statistical analysis results

	N	Minimum	Maximum	Mean	Std. Deviation
STOCK PRICE	108	50.00	16000.00	29.437.940	381.171.889
EPS	108	-61.00	873.00	1.655.673	20.523.576
PER	107	-311.80	168.72	65.727	5.307.187
PBV	108	-.76	224.82	65.643	2.263.105
DPS	108	-8.60	911.12	807.809	17.284.802
DPR	108	-.81	5.02	.3149	.63875
Valid N (listwise)	107				

Source: secondary data processed by SPSS, 2023

Table 4.2 presents the findings from the analysis conducted with descriptive statistics. The quantity of valid data points for each variable, or the stock prices on the N value, is 108. 2943,79 is the average value (mean), and 3811,71889 is the standard deviation.

Classical Assumption Test

Table 2. Normality Test Results

One-Sample Kolmogorov-Smirnov Test		
		Unstandardized Residual
N		83
Normal Parameters ^{a,b}	Mean	.0000000
	Std. Deviation	1.051.167.937
Most Extreme Differences	Absolute	.084
	Positive	.084
	Negative	-.067
Test Statistic		.084
Asymp. Sig. (2-tailed)		.200 ^{c,d}

From the aforementioned table, the Asymp was derived for the One-Sample Kolmogorov-Smirnov Test results table. Indicating that the test data variables are regularly distributed is a Sig (2-tailed) value of 0.2 > 0.05.

Table 3. Multicollinearity test results

Model		Collinearity Statistics	
		Tolerance	VIF
1	(Constanta)		
	EPS	0,473	2,113
	PER	0,775	1,290
	PBV	0,798	1,253
	DPS	0,236	4,240
	DPR	0,341	2,930

Dependent Variable: Stock Price

Source: Secondary Data processed by SPSS, 2021

According to Table 1.3, the multicollinearity test findings indicate that the EPS variable has a tolerance value of 0.473, PER is 0.755, PBV is 0.798, DPS is 0.236, and DPR is 0,341. The variables with the VIF values of EPS 2,113, PER 1.290, PBV 1.253, DPS 4,240, and DPR 2,930 are as follows. Since this study satisfies both the tolerance value of more than 0.10 and the VIF value of less than 10, it does not show multicollinearity symptoms.

Heteroscedasticity Test

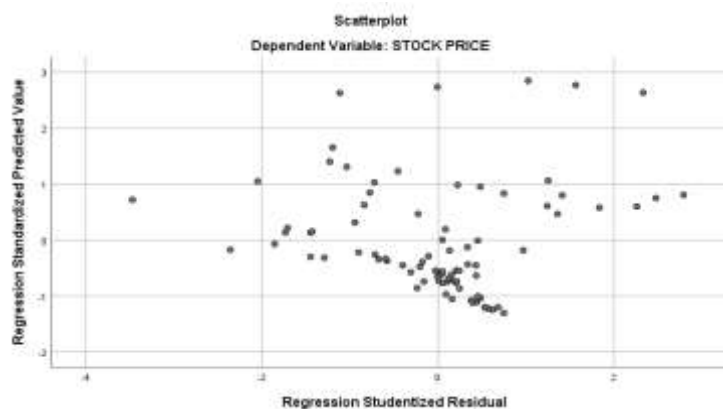


Figure 2. Heteroscedasticity Test Results

Source: secondary data processed by SPSS, 2023

The test findings in the following graphic demonstrate that the dots disperse randomly and don't converge at a single location. This demonstrates that heteroscedasticity symptoms don't exist.

Autocorrelation Test

Table 4. Results of the Durbin-Watson Autocorrelation Test Model Summary

N	K	D	DL	DU	4-DL	4-DU	Ket
108	5	1.473	1.473	1.766	2.527	2.234	There is no autocorrelation

Source: data processed 2023

The Durbin-Watson value is 1.473, according to the autocorrelation test results. Thus, it can be said that autocorrelation does not exist because of the Durbin-Watson $DU\ 1.766 > D\ 1.473\ DU -4\ (4 - 1.766 = 2.527)$.

Multiple Linear Regression Analysis

Table 5. Findings from the coefficients of linear regression analysis for every time period

Model		Unstandardized Coefficients		Standardized Coefficients
		B	Std. Error	Beta
1	(Constant)	-2888,566	589,863	
	EPS	338,673	36,255	0,613
	PER	31,375	9,187	0,175
	PBV	131,783	25,939	0,257
	DPS	3,962	1,967	0,187
	DPR	1304,963	452,587	0,223

Dependent Variable: Stock Price

Source: Secondary Data processed by SPSS, 2023

Table 1.5 of the linear regression study results explains that the following regression equation can be used to determine how EPS, PER, PBV, DPS, and DPR affect stock prices:

$$\text{Stock price} = -2888,566 + 338,673 \text{ EPS} + 31,375 \text{ PER} + 131,783 \text{ PBV} + 3,962 \text{ DPS} + 1304,963 \text{ DPR} + e$$

T test (Partial)

Table 6. Partial Test Results (T Test) for all periods Coefficientsa

Model		t	Sig.
1	(Constant)	-4,897	0,000
	EPS	9,342	0,000
	PER	3,415	0,001
	PBV	5,081	0,000
	DPS	2,014	0,047
	DPR	2,883	0,005

Dependent Variable: Stock Price

Determinant Coefficient Test (R2)

Table 7. Coefficient of Determination Test Results (R2) Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Durbin-Watson
1	.884 ^a	0,782	0,763	0,41140	1,473

Dependent Variable: Stock Price

Source: Secondary Data processed by SPSS, 2023

An adjusted R square of 0.763 was obtained from the test data above. This indicates that EPS, PER, PBV, DPS, and DPR affect 76.3% of stock prices throughout all periods, with other factors influencing the remaining 23.7%.

Table 8a & 8b. Comparison of Statistics Descriptive Data Pre-Pandemic (2016-2018) and During Pandemic (2019-2021)

	Mean	Std. Deviation
STOCK	2880.5694	3756.77053
EPS	148.2813	176.84338

PER	2.9381	66.29398
PBV	9.0921	31.28198
DPS	78.4341	161.25521
DPR	0.2630	0.37097

8a. Statistics Descriptive Data Pre-Pandemic

	Mean	Std. Deviation
STOCK	3060.8679	3917.14048
EPS	200.6938	218.57513
PER	10.2760	35.13500
PBV	4.0381	6.57457
DPS	84.6962	186.61827
DPR	0.3738	0.83128

8b. Statistics Descriptive Data During Pandemic Table 9. Comparison results of T-test between pre-Pandemic and During Pandemic

Model	t	Sig.
(Constant)	0.109	0.914
EPS	7.722	0.000
PER	1.514	0.137
PBV	2.816	0.007
DPS	1.932	0.059
DPR	0.020	0.984

pre-Pandemic

Model	t	Sig.
(Constant)	-0.791	0.433
EPS	7.183	0.000
PER	0.843	0.404
PBV	1.939	0.059
DPS	2.345	0.023
DPR	2.492	0.016

During Pandemic

Table 10. Non-parametric statistical hypothesis test using **Wilcoxon signed-rank test**

		Ranks		
		N	Mean Rank	Sum of Ranks
PANDE	Negative	24 ^a	26.33	632.00
M - PRE	Positive	29 ^b	27.55	799.00
	Ties	1 ^c		
	Total	54		

Test Statistics^a

	PANDE M - PRE
Z	-.739 ^b
Asymp. Sig. (2- tailed)	0.460

There is a decrease in 24 share prices from before the Pandemic to after the pandemic of 26.33 points and there was an increase in 29 share prices from pre-pandemic to during the pandemic of 27.55 points. Healthcare stock prices performed the same way before and during the COVID-19 epidemic.

Research discussion

From the descriptive statistics result, there are an increase in mean stock price from 2880.57 pre-pandemic to 3060.87 during the pandemic for healthcare companies in Indonesia. This suggests resilience in the healthcare sector during the COVID-19 crisis, aligning with findings by Ding et al. (2021) who observed that healthcare firms generally performed better during the pandemic. EPS increased from 148.28 to 200.69, indicating improved profitability. This is in line with studies by He et al. (2020), which discovered that the pandemic increased demand and profits for healthcare companies. Higher investor expectations for future development are suggested by the PER's increase from 2.94 to 10.28. The high standard deviation, notwithstanding, suggests that there is a ton of variation between businesses. This is consistent with research conducted by Mazur et al. (2021) regarding the diverse effects of COVID-19 on various healthcare subsectors.

A market correction or an increase in book value could be indicated by the PBV's decline from 9.09 to 4.04. In contrast to the global trends noted by Ramelli and Wagner (2020), this points to possible Indonesian market-specific causes. Diminished DPS and DPR indicate preserved or enhanced dividend policy, in contrast to overall patterns of dividend reductions noted by Pettenuzzo et al. (2020) amidst the pandemic.

H1: Earnings Per Share (EPS) has a significant effect on stock prices.

In this study, it shows EPS remains highly significant in both periods, suggesting it's a crucial factor in stock valuation. The slight decrease in t-value during the pandemic might indicate a minor reduction

in its impact, possibly due to increased market uncertainty, because the EPS value in the healthcare industry for the 2016-2021 period is on average 0.06, 0.25, 0.36, to 0.86, while a good/ideal PER value is 15-18, meaning that this value can make investors believe that the economy of a business entity has a bright future. According to Signaling theory, companies with high EPS values can signal to investors that they are a good investment. An organization is more appealing to investors on the off chance that it can deliver a greater net profit per share, which is indicated by a higher EPS number. The company's prospects may profit from this, especially in the healthcare sector. The right to one share is represented by EPS, and a higher EPS value indicates that the business may offer greater advantages to shareholders. An investor's assessment of a company's success can be influenced by its profit per share (EPS). A higher EPS value may be indicative of a more confident future for the business, which could lead to a rise in demand for the shares. A greater EPS indicates that more investors are eager to purchase the stock, which may raise the price of the stock. EPS also indicates the amount of net profit that can be delivered to shareholders. A company's ability to pay out income to its shareholders is a vital indicator of its performance, and a higher EPS can inspire investor confidence and desire to place money into the organization. EPS was a critical component at all times, suggesting that investors were still primarily concerned with profitability. This analysis confirms other studies that indicated EPS significantly affects stock prices, including those by Hartini (2017), Ardiyanto et al. (2020), Ariyani et al. (2018), Baqizzarqoni and Bati (2020), and Mazur et al. (2021).

H2: Stock valuation has insignificant effect on stock prices.

Based on the P/E ratio (PER) test results, apparently investors may have turned their attention away from traditional valuation indicators during the pandemic and toward alternative considerations. since the company's slower development rate is indicated by the lower PER value. If the price-to-earnings (PER) ratio is high or increases, the stock price will develop along with the return on investment in stocks (Tendi, et al., 2005). The results of this study corroborate the findings of Arslan and Zaman (2014) and Sari (2021), who demonstrated that PER has a significant impact on stock prices. Conversely, a low PER ratio suggests that a company's shares have poor performance and chances for development. Investors use this indicator to identify the stocks that will yield significant returns in the future. If the price-to-earnings (PER) ratio is high or increases, the return on investment in stocks will also increase and the stock price will climb accordingly (Tendi et al., 2005). The results of this study corroborate the findings of Arslan and Zaman (2014), Ramelli and Wagner (2020), and Sari (2021), who demonstrated that PER has a significant impact on stock prices. Conversely, a low P/E ratio suggests that a company's shares have poor performance and chances for development. The decline in significance of traditional valuation indicators, such as PER, suggests that investors may have been valuing healthcare businesses based on other considerations, presumably related to the pandemic. However, compared to some other industries, such as biotechnology or technology, the healthcare industry is frequently less cyclical and more stable, as indicated by pre-pandemic p-value data. The stock price volatility of stable enterprises is generally lower because their demand is usually stable. Emotions of investors and market psychology influence investment decisions. In the early phases of the pandemic, particularly in early 2020, stress and uncertainty over the virus' possible consequences on the economy dominated the global stock markets during that time. Governments everywhere, including Indonesia, enacted social measures and travel restrictions. This led to downturns in the economy, a decrease in consumer spending, and disruptions in the supply chain. Investors may occasionally be willing to pay more for stocks in a particular industry, regardless of the P/E ratio, due to an optimistic outlook or development projections. Many Indonesian investors consider the health of the local economy and market when deciding which investments to make.

During the pandemic, the P/B ratio (PBV) went from substantial to marginally significant, a reduction in significance. This points to a possible change in investor attention during the crisis from book value to other indicators. With a sig. value of $0.000 < 0.05$, this study shows that PBV has a significant impact on the stock prices of manufacturing businesses in the healthcare subsector that are listed on the

Indonesia Stock Exchange between 2016 and 2021. The PBV ratio may provide investors positive signals or information, in accordance with signaling theory (Khairudin and Wandita, 2017). The book value of a company's shares can be figured out using PBV (Nasihah, 2017). A high PBV ratio indicates that investors are optimistic about a company's future prospects, according to Lestari and Susetyo (2020). A high PBV ratio number indicates strong financial performance. On the off chance that the business is successful, the P/B ratio will increase (Cahyaningrum and Antikasari, 2017). When making investments, investors should consider PBV as a significant financial metric as it provides information about a company's entire book value. The market's trust in the company's prospects is reflected in the stock prices, which rise in tandem with the company's PBV value, offering investors optimism for larger earnings. On the other hand, investors will make less money the lower the PBV value and the lower the stock price. The results of this investigation align with those of studies by Asmiranto and Yuliawati (2015), Rendra Akbar (2015), Erifa Eldiena and Muhammad Hanif al Hakim (2019), Daniswara and Daryanto (2019), Bustani, Kurniati, Widiawati (2021), Brina Putri Hartaroe, Ronny Malavia Mardani, and M. Khoirul ABS (2017), and others that show the substantial influence of PBV on stock prices.

However, while the P/B ratio may not have been particularly significant during the pandemic, it is important to remember that many healthcare businesses — particularly those involved in marketing and branding — possess valuable intangible assets like brand value, customer loyalty, and intellectual property. Because these assets are often undervalued in the book value, the P/B ratio is unable to accurately represent the true value of the company. The fundamental concepts of agency theory may have an impact on investor confidence and stock valuation, even however the theory itself has no direct bearing on stock prices. The outlook of investors and their expectations for a company's future development potential can also significantly affect the price of its stock. On the off chance that investors have great expectations for a company's future success, they can be willing to pay more for its shares regardless of the P/B ratio.

H3: Dividend Policy has a significant effect on stock prices.

In this study, we investigate the significant effect on stock prices in manufacturing businesses in the healthcare sub-sector listed on the IDX for the 2016-2021 period using the Dividend Per Share (DPS) and the Dividend Payout Ratio (DPR) as notations. It's interesting to note that DPS increases in importance during the pandemic. This may suggest that investors are paying more attention to dividend-paying equities as a reliable source of returns in erratic times. During a pandemic, DPR changes from being negligible to considerable. This is consistent with DPS's growing significance and implies that dividend policies were given more consideration throughout the crisis.

The stock prices have significantly increased as a result of these findings. The Bird-In-The-Hand Theory and earlier studies by Anandasayanan and Thirunavukkarasu (2016), Cristea and Cristea (2017), Habumugisha and Mulyungi (2018), and Kanakriyah (2020) are consistent with this finding. Furthermore, a high DPR reduces agency costs because larger profit payments lower the required rate of return and raise the company's worth. It is evident from the DPR, which provides an overview of the company's earnings and dividends, that the dividend policy significantly improves corporate performance. Nonetheless, it should be acknowledged that each company's management is in charge of the DPR, and investors typically steer clear of high-risk businesses. A company's choice to announce a dividend payout is interpreted under the signaling theory as an indication of its potential for future profitability. The DPR, which is used to express the percentage of earnings given to shareholders in cash, describes the company's ability to distribute its profit outcomes (Lestari and Susetyo, 2020). Consequently, more market demand leads to higher share prices and increased investor interest to purchase the company's stock (Ermiati et al., 2019). Because variations in the DPR may have an impact on the company's profit-sharing arrangement, the DPR is an important financial metric that influences investors' choices about where to place their capital. Considering this, it could be concluded that a

higher DPR increases profit sharing and, consequently, investor interest in buying the company's dividend-paying stock. A higher dividend payout ratio could be interpreted as a sign of optimism about the business' future, which could elevate investor mind-set and the stock price. The market may view dividend policy as a message regarding the company's financial stability and management's expectation of future cash flows. During the pandemic, investors' attention has shifted to dividend-related indicators (DPS and DPR), perhaps indicating a desire for more concrete returns in uncertain times.

Share prices rise as a result of higher market demand. The findings of this study are corroborated by research by Pettenuzzo et al. (2020), Devi et al. (2017), and Rahmawati (2015), which demonstrates that the Dividend Payout Ratio has a positive impact on stock prices. In contrast to the overall DPR results, which indicate that the pre-pandemic DPR had little effect on stock prices, the healthcare sector is frequently less cyclical and more stable than some other areas, such as biotechnology or technology. The stock price volatility of stable enterprises is generally lower because their demand is usually stable. Agency theory suggests that stockholders and managers could have competing interests. Shareholders want to get the most out of their investment, even however management may follow their goals. Since they value the income stream, these investors may be less sensitive to changes in the dividend payout ratio in the healthcare sector, since many companies provide steady cash flows and payouts. The performance of the healthcare sector may also be impacted by macroeconomic concerns, government regulations, and currency exchange rates.

5. Conclusion and future scope

We looked closely at the relationship between stock prices and the earnings per share, stock valuation, and dividend policy of manufacturing companies in the healthcare sector. Our analysis revealed that a number of independent variables had a significant beneficial influence on stock prices between 2016 and 2021. In particular, we observed that the performance of manufacturing companies in the healthcare sector on the Indonesian Stock Exchange was highly influenced by dividend policy and stock valuation. The reason for this was that investors favored companies that demonstrated consistent and robust profitability in terms of earnings and dividend disbursement. Our findings demonstrate that the dividend distribution strategy focused on evaluating performance using market valuation and that the majority of institutions paid dividends in order to increase their profits from purchasing the company's stock. We find that, in contrast to pre-pandemic data, the signaling theory is not supported by stock valuation as measured by the P/E ratio and dividend payout ratio. During a pandemic, macroeconomic factors, investor perception, and market emotion frequently affect stock prices. Investor sentiment is frequently influenced by psychological factors. When faced with a catastrophe, optimism can rapidly recover assuming that one believes that the worst is over and things will get better.

Our model indicates that all of the variables under investigation have a strong association, which accounts at the firm stock cost as indicated by the adjusted R-value of 76.3 for the study model. This implies that 76.3% of the variance in financial performance can be explained by the model. These significant findings demonstrated a significant correlation between market valuation and dividend yield and payout ratio on the one hand, and both on the other. Managers of the company will find this model helpful in assessing financial performance and dividend policies, and investors will find it helpful in comprehending management's goals.

Companies should concentrate on boosting liquidity to enhance future financial performance and draw in investors in order to preserve and improve asset management effectiveness. When forecasting stock prices, investors should also take into account other variables including beta, firm size, the ratio between book and market prices, seasonal trends, credit limits, international stocks, market ups and downs, and general socio-political and economic conditions. It is crucial to remember that this strategy is not appropriate for industrialized economies and will work better in emerging ones. This analysis sheds light on how Indonesian healthcare stocks performed during the COVID-19 epidemic, pointing

out the two parallels and divergences with international trends. The results highlight that it is so crucial to take into account market-specific elements in developing nations when assessing sector performance in times of crisis.

Lastly, we accept that the scope of our analysis was limited to the essential components of the company and that it didn't assess extraneous factors like inflation or legal requirements. These results will be a valuable resource for research in the future. Consequently, any further research must take into account outside variables influencing the stock price. The quantity of samples and other variables that have not yet been examined, such as return on investment (ROI), economic value added (EVA), and external factors like risk factors and macroeconomics, should be added by future researchers. In order to obtain more diverse outcomes and elucidate factors that may impact stock prices.

Conflict of interest

The authors state that none of their known financial conflicts or interpersonal connections might have had an impact on the work presented in this paper.

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Reference

- [1] Akbar, R. (2019). Pengaruh price earning ratio (per), price book value (pbv) dan debt to equity ratio (der) terhadap return saham (studi terhadap perusahaan properti dan real estate yang listing di indeks saham syariah indonesia). *JESTT*, 2(9), 14.
- [2] Ardiyanto, Agil., Wahdi, N., dan Santoso, A. (Januari 2020). Pengaruh return on assets, return on equity, earning per share dan price to book value terhadap harga saham (studi pada indeks Iq-45 di bursa efek indonesia periode 2014-2018). *Jurnal Bisnis dan Akuntansi Unsurja*. Vol. 5, No. 1. Semarang: Fakultas Ekonomi, Universitas Semarang.
- [3] Ariyani, Liya., Andini, R. dan Santoso, E.B. (2018). Pengaruh eps, cr, der dan pbv terhadap harga saham dengan kebijakan dividen sebagai variabel intervening (studi pada perusahaan manufaktur yang terdaftar di bei tahun 2011-2015). Semarang: Fakultas Ekonomika dan Bisnis Universitas Pandanaran Semarang.
- [4] S. Neelima, Manoj Govindaraj, Dr.K. Subramani, Ahmed ALkhayyat, & Dr. Chippy Mohan. (2024). Factors Influencing Data Utilization and Performance of Health Management Information Systems: A Case Study. *Indian Journal of Information Sources and Services*, 14(2), 146–152. <https://doi.org/10.51983/ijiss-2024.14.2.21>
- [5] Arslan, Muhammad., dan Zaman, Rashid. (2014). Impact of dividend yield and price earningratio on stock returns: a study non-financial firms of pakistan. *Research Journal of Finance and Accounting*, Vol. 5, No. 19. ISSN: 2222-2847. Pakistan: BahriaUniversity Islamabad
- [6] Asmirantho, Edhi., dan Yuliawati, Elif. (2015). “Pengaruh dividen per share (dps), dividen payout ratio (dpr), price to book value (pbv), debt to equity ratio (der), net profit margin (npm) dan return on asset (roa) terhadap harga saham pada perusahaan manufaktur sub sektor makanan dan minuman dalam kemasan yang terdaftar di bei. *Jurnal Ilmiah Akuntansi Fakultas Ekonomi*, Vol.1, No. 2. (halaman 95-117). Bogor: Universitas Pakuan.
- [7] Amiruzzaman, M., Islam, M. R., Islam, M. R., & Nor, R. M. (2022). Analysis of COVID-19: An infectious disease spread. *Journal of Internet Services and Information Security*, 12(3), 1-15.
- [8] Baek, S., Mohanty, S.K., and Glambosky, M. (2020) COVID-19 and stock market volatility: An industry level analysis. Vol. 37 101748, November
- [9] Baqizzarqoni and Bati B. (2020) Pengaruh net profit margin, gross profit margin, earning per share, debt to assets ratio terhadap harga saham pada perusahaan subsektor konstruksi dan bangunan yang terdaftar di bursa efek indonesia. *Jurnal Manajemen Ekonomi Sains Vol 2, No 1*.
- [10] Bulutoding, L., Parmitasari, R. D. A., & Dahlan, M. A. (2018). Pengaruh return on asset (roa) dan debt to equity ratio (der) terhadap harga saham dengan kebijakan dividen sebagai variabel intervening (studi empiris pada perusahaan yang terdaftar di jakarta islamic index (jii) periode 2010-2016). *Journal of Chemical Information and Modeling*, 53(9), 1689–1699.
- [11] Bustani, Kurniaty, dan Widyanti R. (2021) The effect of earning per share, price to book value, dividend payout ratio, and net profit margin on the stock price in indonesia stock exchange. *Jurnal Maksipreneur: Manajemen, Koperasi, dan Entrepreneurship Vol. 11 No. 1 December* p. 1 – 8
- [12] Cahyaningrum, Y. W., & Antikasari, T. W. (2017). Pengaruh earning per share, price to book value, return on asset, dan return on equity terhadap harga saham sektor keuangan. *Jurnal Economia*, 13(2), 191–200.
- [13] Daniswara, H.P. and Daryanto, W.M. (2019) Earning per share (eps), price book value (pbv), return on asset (roa), return on equity (roe), and indeks harga saham gabungan (ihsg) effect on stock return. *South East Asia Journal of Contemporary Business, Economics and Law*, Vol. 20, Issue 1 (DEC) ISSN 2289-1560

- [14] Dewi. Ernawati. (2015). *Pengaruh earning per share, net profit margin, debt to asset ratio, return on equity, dan inflasi terhadap harga saham* (pada perusahaan otomotif dan komponennya yang terdaftar di bursa efek indonesia periode 2012 – 2015). *Skripsi*, Trunojoyo Journal Of Economics.
- [15] Devi, S.K., Mardani, R.M. dan Salim, A. (2017). pengaruh dpr, roe, fl dan per terhadap harga saham. (studi kasus pada perusahaan healthcare yang terdaftar di bursa efek indonesia periode 2012-2016). *E-Jurnal Riset Manajemen*, Malang: Universitas Islam Malang.
- [16] Ding, W., Levine, R., Lin, C., & Xie, W. (2021). Corporate immunity to the COVID-19 pandemic. *Journal of Financial Economics*, 141(2), 802-830.
- [17] Eldiena, E., & Hakim, M. (2019). The impact of companies' internal factors on the performance of their stock returns. *Journal Of Islamic Economic Law*, 2(1), 25.
- [18] Ermiahi, C., Amanah, D., Harahap, D. A., & Siregar, E. S. (2019). pengaruh kebijakan dividen terhadap harga saham perusahaan sub-sektor otomotif dan komponen yang terdaftar di bursa efek indonesia periode 2008-2017. *Niagawan*, 8(2), 131– 139.
- [19] Harahap, S. S. 2016. *Analisis Kritis Atas Laporan Keuangan*. PT Raja Grafindo Persada. Jakarta
- [20] Hartaroe, B., Mardani, R., & ABS, M. (2017). Pengaruh price book value (pbv), price earning ratio (per), debt to equity ratio (der) dan return on asset (roa) terhadap return saham (studi empiris pada perusahaan healthcare yang terdaftar di bei periode 2012-2016). *Prodi Manajemen*, 12
- [21] Hartini, T. (2017). Pengujian koalisi debt to equity ratio (der) dan earnings per share (eps) terhadap harga saham. *I-finance*
- [22] Indonesia Invests in Quality Healthcare Access - Asia Actual: <https://asiaactual.com/blog/indonesia-boosts-medical-device-sales-prospects/>
- [23] Kanakriyah (2020). *Dividend Policy and Companies' Financial Performance*. *Journal of Asian Finance, Economics and Business Vol 7 No 10*, 531–541
- [24] Kasmir, (2016). *Analisis Laporan Keuangan*. Jakarta : Prenada media.
- [25] Khairudin, K., & Wandita, W. (2017). analisis pengaruh rasio profitabilitas, debt to equity ratio (der) dan price to book value (pbv) terhadap harga saham perusahaan pertambangan di indonesia. *Akuntansi & Keuangan*, 8(1), 68–84.
- [26] Ahmad, A.S., Ahed, A., Al-smadi, M.K., & Al-smadi, A.M. (2024). Smart Medical Application of Deep Learning (MUNet) for Detection of COVID-19 from Chest Images. *Journal of Wireless Mobile Networks, Ubiquitous Computing, and Dependable Applications (JoWUA)*, 15(1), 133-153.
- [27] Kusumawardhani, Ratih., dan Yuninda. (2021). the effect of roa, capital, growth assets, ldr and der on share prices in registered banking sectors in indonesia stock exchange period 2010 – 2018. *International Journal of Economics, Business and Accounting Research (IJEBAR)*. Vol. 5, Issue-3. E-ISSN: 2614-1280. Yogyakarta: Fakultas Ekonomi, Universitas Sarjanawiyata Tamansiswa Yogyakarta.
- [28] Lestari, A. P., & Susetyo, A. (2020). Pengaruh npm , eps , der dan pbv terhadap harga saham pada perusahaan terdaftar idx hidiv20 dengan dpr sebagai variabel intervening. *Jurnal Ilmiah Mahasiswa Manajemen, Bisnis dan Akuntansi*, 2(4), 184–196.
- [29] Luo S., and Tsang, K.P. (2020). China and world output impact of the hubei lockdown during the coronavirus outbreak. *Contemporary Economic Policy, Volume 38, Issue 4* Pages 583-592.
- [30] Mazur, M., Dang, M., & Vega, M. (2021). COVID-19 and the march 2020 stock market crash. Evidence from S&P1500. *Finance Research Letters*, 38, 101690.
- [31] McKibbin W.J. and Fernando R. (2020) Global macroeconomic scenarios of the covid-19 pandemic. *CAMA Working Paper No. 62*
- [32] Mujati S, Yuniep dan Meida Dzulqodah. (2016). Pengaruh earning per share dan price earning ratio terhadap debt to equity ratio dan harga saham pada perusahaan sektor makanan dan minuman di bursa efek indonesia. *Jurnal Riset Ekonomi dan Bisnis STIE Dewantara*. Volume. 11, No.1.
- [33] Nasihah, L. (2017). Price earning ratio (per) dan price to book value (pbv) terhadap return saham dengan earning per share (eps) sebagai variabel moderasi: studi pada perusahaan telekomunikasi yang listing di bei periode 2011-2016. *Undergraduate Thesis*, Universitas Islam Negeri Maulana Malik Ibrahim, 1(3), 43. H
- [34] Pettenuzzo, D., Sabbatucci, R., & Timmermann, A. (2020). Dividend suspensions and cash flow risk during the COVID-19 pandemic. *Journal of Empirical Finance*, 59, 96-115.
- [35] Pranata, Gede; Purnamawati I Gusti Ayu dan Adiputra I Made Pradana. (2015). Pengaruh tarif pajak dan kebijakan dividen terhadap harga saham (studi kasus pada pt. telekoomunikasi indonesia, tbk periode 2001-2014). *e-journal SI Ak Universitas Pendidikan Ganesha*. Vol 3, No 1, Tahun 2015.
- [36] Ramelli, S., & Wagner, A. F. (2020). Feverish stock price reactions to COVID-19. *The Review of Corporate Finance Studies*, 9(3), 622-655.
- [37] Sari, R. (2021). The multiple regression effect of financial ratio on the stock prices of state-owned enterprises. *Golden Ratio of Finance Management, Vol.1, Issue. 1*
- [38] Sugiyono. (2016). *Metode Penelitian Pendidikan (Pendekatan Kualitatif, Kuantitatif, dan R&D)*. Alfabeta: Bandung: Penerbit CV.
- [39] Tresnawati, Diah Ajeng. (2017). Pengaruh eps, per, dan roa terhadap harga saham (studi empiris pada perusahaan asuransi di bursa efek indonesia tahun 2012-2014)”. *Skripsi*. Universitas Muhammadiyah Surakarta.
- [40] Healthcare Resource Guide - Indonesia - International Trade Administration: <https://www.trade.gov/indonesia>

- [41] Utami, M.R. and Darmawan, A. (2019). Effect of der, roa, roe, eps and mva on stock prices in sharia indonesian stock index. *Journal of Applied Accounting and Taxation Vol. 4, No. 1*, March, 15-22
- [42] Wicaksono, Reza Bagus. (2015). “Pengaruh eps, per, der, roe dan mva terhadap harga saham”. *Jurnal Akuntansi*. Semarang: Program studi Akuntansi, Universitas Dian Nuswantoro Semarang.
- [43] Bobir, A.O., Askariy, M., Otabek, Y.Y., Nodir, R.K., Rakhima, A., Zukhra, Z.Y., Sherzod, A.A. (2024). Utilizing Deep Learning and the Internet of Things to Monitor the Health of Aquatic Ecosystems to Conserve Biodiversity. *Natural and Engineering Sciences*, 9(1), 72-83.
- [44] Yusrizal and Juneris (2018). The effect of return on equity (roe), earning per share (eps), price to earning ratio (per), debt to equity ratio (der) and operating profit margin (opm) to stock price (study on mining sector listed in indonesia stock exchange period 2012-2016). *Bilancia: Jurnal Ilmiah Akuntansi Vol.2 No. 1*, Maret