

The Financial Resilience of IDX-MES BUMN17 Companies in Response to COVID-19 Crisis and Economic Recovery

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Submitted: 12/09/2024; Accepted: 12/02/2025; Published: 13/02/2025

Abstract—The COVID-19 pandemic has significantly disrupted global financial markets, emphasizing the importance of investments that balance financial returns with ethical and sustainable principles. In Indonesia, the Islamic capital market and state-owned enterprises (BUMN) have become crucial components of the nation's economic sustainability efforts. However, limited research has examined the impact of financial performance and market capitalization on stock prices of BUMN companies during and after the pandemic. This study focuses on IDX-MES BUMN17 companies, analyzing data from 17 state-owned enterprises over the period of 2020 to 2022. Using regression analysis and trend analysis through Statistical Package for the Social Sciences (SPSS), this research investigates the relationship between financial performance variables (e.g., profitability, liquidity) and market capitalization on stock prices during periods of economic crisis and recovery. Preliminary findings indicate a significant influence of financial performance and market capitalization on stock price trends, highlighting the role of sustainable investment principles in shaping investor behavior and market resilience. For example, in 2021, the regression model achieved an R^2 value of 97.1%, demonstrating that 97.1% of the stock price variance was explained by financial performance variables and market capitalization. Similarly, in 2022 and 2023, R^2 values of 89.3% and 96.5% were recorded, respectively, indicating strong predictive power. This research aims to deepen understanding of Indonesia's capital markets and provide actionable insights for investment decision-making and risk management in a post-pandemic era.

Keywords: Sustainable Investments; Financial Performance; Market Capitalization; IDX-MES BUMN 17; COVID-19

1. INTRODUCTION

In times of economic uncertainty, the COVID-19 pandemic has shaken the foundations of global financial markets, reinforcing the need for investments that are not only financially beneficial, but also promote ethical and sustainable principles (Naeem et al., 2023). In Indonesia, as a rapidly growing economy, the focus on economic sustainability has been further strengthened, particularly through two key pillars: the Islamic capital market and state-owned enterprises (BUMNs). In Indonesia, as a rapidly growing economy, state-owned enterprises (BUMNs) play a significant role in the development of the Islamic capital market, as evident in the data on Islamic securities issuance by BUMNs (OJK, 2020).

The selection of state-owned companies as the focus of the study has a strong rationale due to their strategic role in the Indonesian economy. As state-owned enterprises, BUMNs have a significant impact on various economic sectors, ranging from infrastructure to public services (Kemenkeu, 2020). Islamic investments that are based on the principles of Islamic economics are also increasingly attracting investors who are looking for sustainable solutions in the management of their funds. However, in the Indonesian context, particularly in the Islamic capital market, research considering the financial performance and market capitalization of BUMNs amid the COVID-19 pandemic is limited.

Data from Bank Indonesia (BI) indicates that Indonesia's GDP growth slowed to 3.5% in 2021 due to the pandemic's economic repercussions (Bella, 2021). During this time, the Jakarta Composite Index (JCI) experienced significant volatility, reflecting investor reactions to the rapidly changing economic landscape (Rizaldy & Rahayu, 2021). To mitigate these challenges, the government implemented fiscal stimulus and accommodative monetary policies, which played a crucial role in supporting the economy. Nonetheless, market volatility persisted, influenced by global economic conditions and lingering uncertainties surrounding COVID-19 (Malini & Putri, 2020).

As signs of recovery emerged in 2023, with Indonesia's GDP growth showing improvement, understanding the dynamics of financial markets during and after the pandemic has become increasingly important for making informed investment decisions and managing risks (Candera & Indah, 2021). This research will analyze the relationship between financial performance and market capitalization of state-owned enterprises listed on the IDX-MES BUMN17 index. By examining trends and patterns during economic crises and recovery periods, the study seeks to provide insights into how these factors influence investor behavior and the future stock values of BUMNs, particularly within the framework of Islamic economics (Aryati et al., 2023). Over time, there has been a gradual recovery in Indonesia's financial markets. The latest data from the Central Bureau of Statistics (BPS) shows that Indonesia's economy began to recover in 2023, with GDP growth picking up gradually. Nonetheless, market volatility remains a challenge, with various factors affecting stock prices, including global economic conditions, government policies, and uncertainty related to COVID-19 (Ullah et al., 2023). As such, an in-depth understanding of Indonesia's financial market dynamics during and post COVID-19 is important in the context of investment decision-making and risk management. Furthermore, during COVID-19 pandemic, companies' resilience was crucial to navigating the crisis and ensuring long-term survival. The level of resilience can be assessed through key indicators such as financial performance and market capitalization, which reflect the company's ability to adapt and recover (Er-Rami et al., 2024; Jandhana & Agustini, 2024; Mita et al., 2024; Soufi et al., 2023).

This study aims to analyze the factors of financial performance and market capitalization to understand their interaction and impact on the stock prices of state-owned companies in Indonesia. The focus will be on IDX-MES BUMN17, a selected group of state-owned enterprises listed in Indonesia's Islamic capital market index. The analysis will cover both the period during and after the pandemic of Coronavirus Disease 2019 (henceforth referred to as "the pandemic"), with the goal of identifying emerging patterns and trends in times of economic crisis and recovery. The examination of financial performance and market capitalisation as pivotal determinants seeks to furnish a more profound comprehension of how capital market dynamics influence investor behaviour and the future stock values of BUMNs, particularly within the context of the Islamic economy. The findings of this study offer valuable insights for policymakers and investors seeking to explore the impact of economic crises, such as the pandemic, on the financial performance and market capitalisation of state-owned companies. Furthermore, the study's findings can inform the formulation of future strategies aimed at enhancing the resilience and attractiveness of BUMN stocks within Indonesia's Islamic capital market, thereby contributing to the promotion of sustainable investment decisions.

2. RESEARCH METHODS

2.1. Research Approach

This study uses a quantitative approach to analyze the relationship between financial performance variables, market capitalization, and stock prices of state-owned companies in Indonesia, specifically on IDX-MES BUMN17, during and after the COVID-19 pandemic. This approach allows researchers to collect data in a structured manner and conduct statistical analysis to identify patterns and trends in the data. The type of data used is time series data for regression analysis and identifying patterns each year and panel data for trend analysis.

2.2. Data Collection Technique

Data for this study will be obtained from secondary sources, including public financial reports and capital market data. Financial data on state-owned companies will be obtained from annual reports published by state-owned enterprises (BUMNs) and financial reports listed on the Indonesia Stock Exchange (IDX). Share price data will be obtained from legitimate stock trading platforms. In addition, data regarding market capitalization will be obtained from the same source.

2.3 Data Analysis Method

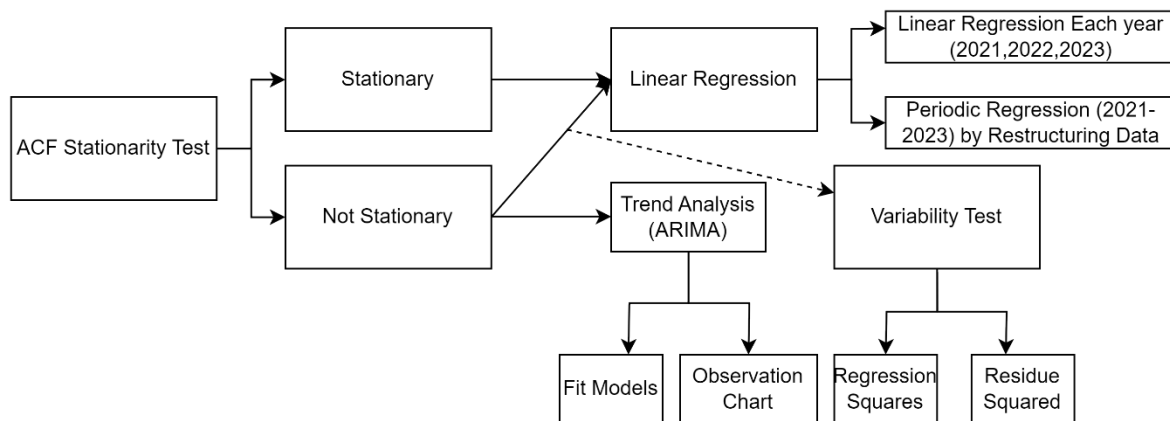


Figure 1. Flowchart

- Figure 1 presents the research methodology flowchart, illustrating the analytical steps undertaken in this study. The data obtained will be analyzed using regression and trend analysis techniques. Regression analysis and trend analysis methods are two statistical approaches commonly used in economic and financial research to understand and predict the relationship between variables. Combining regression analysis with trend analysis can provide a more comprehensive picture of stock price behavior (Tsay, 2010;Enders, 2014). Regression analysis is a statistical technique used to model the relationship between one dependent variable and one or more independent variables (Fama & French, 1993; Gujarati, 2004; Wooldridge, 2012). Regression analysis includes individual year linear regression and combined year periodic regression by restructuring the data (Hamilton, 1994; Pesaran, 2015; Shumway & Stoffer, 2017). Data restructuring requires dummy variables. In this study in the form of COVID-19. Trend analysis is a statistical technique used to analyze data collected in a specific time sequence. This analysis helps identify patterns and long-term changes (Hamilton, 1994;Chatfield, 2000; Box et al., 2015).
- Before conducting regression analysis and trend analysis, it is important to ensure that the data used are stationary. Dickey & Fuller (1979) and Phillips & Perron (1988) say that the stationarity test ensures that the basic statistics of the time series do not change over time, which is an important prerequisite for time series analysis. The stationarity test performed is by using the ACF Test. The ACF (Autocorrelation Function) test is performed to measure the

correlation between values in a time series separated by various lags. ACF is used to identify patterns in time series data and determine whether the data is stationary or non-stationary (Hamilton, 1994; Gujarati, 2004; Box et al., 2015; Shumway & Stoffer, 2017)

- c. If the data is not stationary, the study can still continue using the ARIMA Model for trend analysis. As for regression analysis, even if the data is not stationary, a variability test can still be performed that compares the regression squared and the ratio squared to show how strong a model is in explaining the data. Gujarati & Porter (2009) explain that in regression models, the F-statistic measure is used to test the significance of the model. If the regression squared value is statistically significantly greater than the residual squared, it indicates that the variability explained by the regression model is much greater than the error variability, which suggests the model is quite strong in explaining the data.

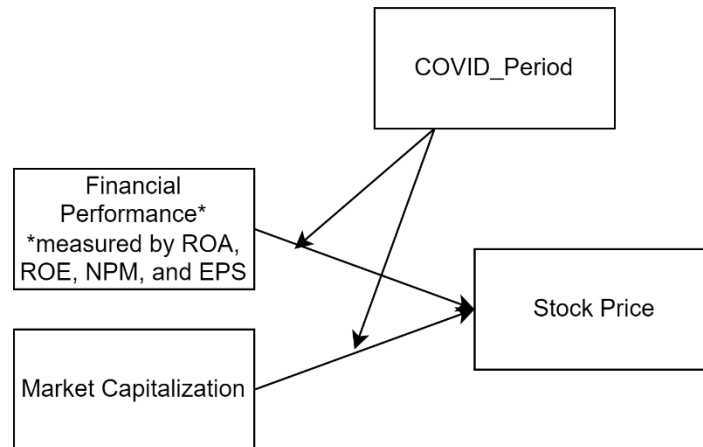


Figure 2. Regression Equation Model

Figure 2 illustrates the regression model framework used in this study. The regression equation (Equation 1) models stock price as a function of financial performance indicators, market capitalization, and the impact of the COVID-19 period. The regression equation is as follows:

$$\text{Stock Price} = \beta_0 + \beta_1 \times \text{ROA} + \beta_2 \times \text{ROE} + \beta_3 \times \text{NPM} + \beta_4 \times \text{EPS} + \beta_5 \times \text{Market Capitalization} + \beta_6 \times \text{COVID-19} + \epsilon(1)$$

Description:

$\beta_1, \beta_2, \beta_3, \beta_4, \beta_5, \beta_6$ are regression coefficients to be estimated.

ROA is Return on Assets

ROE is Return on Equity

NPM is Net Profit Margin

EPS is Earnings Per Share

Market Capitalization is Market Capitalization

COVID-19 is a dummy variable that takes the value of 1 if in that period COVID-19 (2021-2022), and 0 if not (2023).

ϵ is random error

2.4. Interpretation of Results

The results of the analysis will be interpreted to understand the impact of financial performance and market capitalization on the share price of BUMNs in Indonesia. The findings will be analyzed in the context of capital market dynamics during and after the COVID-19 pandemic, with a focus on the implications for investor behavior and the future value of BUMNs' shares, especially in the context of Islamic economics.

3. RESULTS AND DISCUSSION

3.1 ACF Stationarity Test

Table 1. ACF of 2021 Stock Price

Lag	Autocorrelation	Std. Error	Box-Ljung Statistic		
			Value	df	Sig.
1	-,262	,256	1,047	1	,306
2	,160	,244	1,478	2	,478
3	-,130	,231	1,793	3	,616
4	-,011	,218	1,795	4	,773

5	,054	,204	1,865	5	,867
6	-,261	,189	3,769	6	,708
7	-,115	,173	4,211	7	,755
8	-,002	,154	4,211	8	,838
9	,038	,134	4,291	9	,891
10	,042	,109	4,441	10	,925

Based on Table 1, the ACF values for 2021 show that the stock prices exhibit weak autocorrelation over time. The highest negative autocorrelation occurs at lag 1 (-0.262), indicating that price changes tend to reverse slightly. However, the subsequent lags display relatively minor fluctuations, suggesting no strong persistence in stock price movements. The Box-Ljung statistic values further support this, as none of the significance levels fall below the 0.05 threshold, meaning there is no significant autocorrelation.

Overall, the results suggest that stock prices in 2021 were largely independent, with no clear trend or cyclical pattern in the time series. The weak autocorrelation implies that past stock price movements had little predictive power for future prices, reinforcing the notion of stationarity in the dataset.

Table 2. ACF of 2022 Stock Price

Lag	Autocorrelation	Std. Error	Box-Ljung Statistic		
			Value	df	Sig.
1	-,339	,256	1,750	1	,186
2	,054	,244	1,800	2	,407
3	-,026	,231	1,812	3	,612
4	-,017	,218	1,818	4	,769
5	,067	,204	1,925	5	,859
6	-,219	,189	3,272	6	,774
7	-,075	,173	3,460	7	,839
8	,000	,154	3,460	8	,902
9	,032	,134	3,519	9	,940
10	,024	,109	3,568	10	,965

Based on Table 2, the ACF values in 2022 show a stronger negative autocorrelation at lag 1 (-0.339) than in 2021, suggesting that price reversals were slightly more pronounced. However, beyond the first lag, autocorrelation values remain weak and inconsistent. The Box-Ljung test results reinforce this, as all p-values remain above 0.05, indicating that stock price movements were not significantly correlated over time. These findings suggest that while some mean reversion may have been present at short lags, overall, the stock prices in 2022 did not exhibit any strong dependency patterns. This further confirms that the data follows a stationary behavior, where past values provide little insight into future price movements.

Table 3. ACF of 2023 Stock Price

Lag	Autocorrelation	Std. Error	Box-Ljung Statistic		
			Value	df	Sig.
1	-,413	,256	2,606	1	,106
2	,132	,244	2,899	2	,235
3	-,118	,231	3,160	3	,368
4	,020	,218	3,169	4	,530
5	,045	,204	3,217	5	,667
6	-,250	,189	4,969	6	,548
7	,077	,173	5,171	7	,639
8	-,068	,154	5,365	8	,718
9	,109	,134	6,028	9	,737
10	-,040	,109	6,163	10	,801

Based on Table 3, In 2023, the stock price series exhibits even stronger negative autocorrelation at lag 1 (-0.413), further reinforcing the trend of mean reversion seen in previous years. However, the subsequent lags do not display any significant patterns, and the Box-Ljung test p-values remain above 0.05, indicating that the stock price changes were largely independent.

In examining the characteristics of stationary data, it is generally anticipated that the autocorrelation function (ACF) remains close to zero across all lags. Nevertheless, an analysis of the stock price series reveals the presence of notable autocorrelation values that deviate significantly from zero at various lags. Specifically, during the year 2021, the autocorrelation at lag 1 is observed to be -0.262, and at lag 6, it is -0.261. Similarly, in 2022, the autocorrelation at lag 1 is -0.339, while in 2023, this autocorrelation value further increases to -0.413.

Despite the Box-Ljung Statistic yielding a p-value exceeding the 0.05 threshold across all instances, suggesting an initial implication of stationarity, the discernible significant autocorrelation values imply the existence of underlying patterns or trends within the data, thereby hinting at potential non-stationary characteristics.

Furthermore, an analysis of the accompanying table elucidates the presence of specific lags exhibiting significant negative or positive autocorrelation values. These findings collectively suggest a non-random pattern within the data set, which further corroborates the inference of non-stationarity in the observed stock price series.

Since the data is not stationary, the ARIMA model is used for trend analysis. As for regression analysis, even though the data is not stationary, a variability test can still be performed that compares the regression squared and the ratio squared to show how strong a model is in explaining the data. If the sum of squares is greater than the sum of residual squares, it indicates that the model has a good ability to explain the variability in the data. This is supported by the statement of Gujarati & Porter (2009) which explains that in the regression model, the F-statistic measure is used to test the significance of the model. If the regression squared value is statistically significant greater than the residual squared, this indicates that the variability explained by the regression model is much greater than the error variability, which indicates the model is strong enough to explain the data.

3.2 Regression Test

Table 4. The Coefficient of Determination in 2021

R	R Square	Adjusted R Square	Std. Error of the Estimate
,985	,971	,946	463,26027

Based on Table 4, the regression model built using the independent variables (Market Capitalization 2021, EPS 2021, ROE 2021, ROA 2021, NPM 2021) has a very high level of accuracy in explaining variations in the dependent variable. The high R² value (0.971) and the high Adjusted R² value (0.946) indicate that this model is very good at predicting the dependent variable based on existing data. However, it is also worth noting the standard error value to evaluate how good this model is in terms of individual prediction accuracy.

Table 5. Simultaneous Test Result in 2021

	Sum of Square	df	Mean Square	F	Sig.
Regression	42420604,445	5	8484120,889	39,533	,000 ^b
Residuals	1287660,472	6	214610,079		
Total	43708264,917	11			

Based on Table 5, this regression model significantly explains the variation in 2021 share price, due to the high F value (39.533) and very low p value (<0.001). In other hand, 2021 Market Capitalization, 2021 EPS, 2021 ROE, 2021 ROA, and 2021 NPM collectively make a significant contribution in predicting 2021 stock prices. The large regression sum of squares (42420604.44) compared to the residual sum of squares (1287660.472) indicates that the model has a good ability to explain the variability in the data. Overall, these results indicate that the regression model used is a robust and significant model for predicting 2021 stock prices based on the selected variables.

Table 6. Partial Test in 2021

Variable	Coefficient	Std. Error	Sig
C	780,894	3,521	,013
ROA 2021	-,933	-3,358	,015
ROE 2021	,051	,240	,818
NPM 2021	-2,527	-5,335	,002
EPS 2021	1,929	11,414	,000
Market Capitalization 2021	2,732	6,218	,001

Based on Table 6, the regression analysis reveals that several variables have a significant impact on the stock price in 2021. Return on Assets (ROA) 2021, Net Profit Margin (NPM) 2021, Earnings per Share (EPS) 2021, and Market Capitalization 2021 are all identified as significant contributors to the stock price for that year. However, Return on Equity (ROE) 2021 does not show any significant effect on the stock price. In terms of the direction of influence, both ROA 2021 and NPM 2021 demonstrate a negative relationship with stock prices, meaning that as these financial metrics increase, the stock price tends to decrease. On the other hand, EPS 2021 and Market Capitalization 2021 have a positive effect on stock prices, indicating that improvements in these factors are associated with higher stock prices. Overall, the model highlights the importance of various financial indicators, namely ROA, NPM, EPS, and Market Capitalization in influencing stock prices. Interestingly, ROE 2021 does not play a significant role in this context.

Table 7. The Coefficient of Determination in 2022

R	R Square	Adjusted R Square	Std. Error of the Estimate
,945 ^a	,893	,803	938,75256

Based on Table 7, the regression model constructed using the independent variables (Market Capitalization 2022, EPS 2022, ROE 2022, ROA 2022, NPM 2022) has a high degree of accuracy in explaining the variation of the dependent variable, with an R^2 value of 0.893 indicating that the model is very good at explaining most of the variation in the data. The Adjusted R^2 of 0.803, although slightly lower, still shows excellent predictive power while accounting for the number of variables in the model, indicating that the model is not overfit.

Table 8. Simultaneous Test Result in 2022

	Sum of Square	df	Mean Square	F	Sig.
Regression	43919663,769	5	8783932,754	9,968	,007 ^b
Residuals	5287538,231	6	881256,372		
Total	49207202,000	11			

Based on Table 8, the results of the analysis demonstrate that the regression model is statistically significant, with a p-value (Sig.) of 0.007, which is well below the conventional threshold of 0.05. This suggests that there is a significant relationship between at least one of the predictor variables (Market Capitalization 2022, EPS 2022, ROE 2022, ROA 2022, NPM 2022) and the dependent variable, Share Price 2022. In terms of the model's predictive power, the F value of 9.968 indicates that the model provides a strong explanation for the variance in the data. A higher F value implies that the model effectively explains a significant portion of the variance in share prices compared to the unexplained variance. Overall, these ANOVA results confirm that the regression model is not only statistically significant but also possesses substantial predictive power in accounting for the variance in Share Price 2022 based on the chosen predictor variables.

Table 9. Partial Test in 2022

Variable	Coefficient	Std. Error	Sig
C	890,293	1,529	,177
ROA 2022	-,336	-,594	,574
ROE 2022	-,241	-,410	,696
NPM 2022	-2,980	-3,150	,020
EPS 2022	2,330	5,809	,001
Market Capitalization 2022	2,884	3,605	,011

Based on Table 9, the regression analysis identifies Net Profit Margin (NPM) 2022, Earnings per Share (EPS) 2022, and Market Capitalization 2022 as statistically significant variables in influencing stock prices for 2022. Conversely, Return on Assets (ROA) 2022 and Return on Equity (ROE) 2022 do not exhibit a significant effect on the 2022 share price. In terms of the direction and magnitude of influence, NPM 2022 exerts a negative impact on stock prices, suggesting that an increase in NPM corresponds to a decline in stock price. On the other hand, EPS 2022 and Market Capitalization 2022 demonstrate positive influences on stock prices, indicating that higher values in these variables lead to an increase in stock price. Notably, EPS 2022 has the highest Beta coefficient (2.330), highlighting that among the significant predictors, it has the strongest influence on stock prices after all variables are normalized. Overall, the model underscores the importance of EPS 2022 and Market Capitalization 2022 as key determinants of stock price, while ROA 2022 and ROE 2022 do not make a meaningful contribution within the context of this model.

Table 10. The Coefficient of Determination in 2023

R	R Square	Adjusted R Square	Std. Error of the Estimate
,982a	,965	,935	432,40863

Based on Table 10, the model demonstrates exceptional strength, with a correlation coefficient (R) of 0.982, reflecting an extremely strong relationship between the predictors and the dependent variable. This high R value underscores the model's efficacy in elucidating the variation within the data. Furthermore, the coefficient of determination (R^2) of 0.965 signifies that the model accounts for nearly all the variability in the 2023 stock price based on the predictor variables, affirming its robustness in explaining the dependent variable. The adjusted R^2 of 0.935, while marginally lower than R^2 , remains substantial, indicating that the model is not overfitted and successfully captures most of the variation even after accounting for the number of predictors. The standard error of 432.40863 further supports the model's prediction accuracy, as it signifies minimal deviation between predicted and actual stock prices, thus validating the model's reliability in forecasting.

Table 11. Simultaneous Test Result in 2023

	Sum of Square	df	Mean Square	F	Sig.
Regression	30662603,635	5	6132520,727	32,798	,000 ^b
Residuals	1121863,365	6	186977,228		
Total	31784467,000	11			

Based on Table 11, the p-value (Sig.) of 0.000, substantially below the 0.05 threshold, indicates that the overall regression model is highly significant, suggesting that at least one of the predictor variables—Market Capitalization 2023, ROA 2023, EPS 2023, ROE 2023, or NPM 2023—exerts a significant linear relationship with the dependent variable, Share Price 2023. Additionally, the F value of 32.798 underscores the model's substantial predictive power, with a higher F value reflecting an enhanced ability to account for the variance in the data compared to the unexplained variance. Collectively, these ANOVA results demonstrate that the regression model is highly significant and effectively elucidates the majority of the variance in the 2023 stock price, highlighting the strong collective influence of the predictor variables on the stock price.

Table 12. Partial Test in 2023

Variable	Coefficient	Std. Error	Sig
C	433,825	2,219	,068
ROA 2023	,104	,489	,642
ROE 2023	-,587	-2,843	,029
NPM 2023	-3,404	-5,329	,002
EPS 2023	1,510	10,818	,000
Market Capitalization 2023	3,565	5,906	,001

Source: Authors (Processed using IBM SPSS)

Based on Table 12, the analysis reveals that ROE 2023, NPM 2023, EPS 2023, and Market Capitalization 2023 are statistically significant in affecting the 2023 stock prices, whereas ROA 2023 does not exhibit a significant impact on the stock price. Specifically, ROE 2023 and NPM 2023 exert a negative influence on stock prices, while EPS 2023 and Market Capitalization 2023 have a positive effect. Among these predictors, EPS 2023 demonstrates the highest Beta coefficient of 1.510, signifying its greatest influence on stock price relative to other variables after normalization. Overall, the model highlights EPS and Market Capitalization as critical positive predictors of stock price, in contrast to the negative influence of ROE and NPM. ROA, however, does not significantly affect stock price in this model.

Table 13. The Coefficient of Determination

R	R Square	Adjusted R Square	Std. Error of the Estimate
,932 ^a	,868	,841	754,47349

Based on Table 13, the correlation coefficient (R) of 0.932 signifies a very strong relationship between the independent variables COVID_Period, NPM, ROA, EPS, ROE, and Market Capitalization, and the dependent variable, with a value close to 1 indicating a robust association. The coefficient of determination (R²) of 0.868 suggests that approximately 86.8% of the variation in the dependent variable is explained by the model, demonstrating its substantial explanatory power. The adjusted R² value of 0.841, which accounts for the number of predictors in the model to prevent overfitting, indicates that around 84.1% of the variation in the dependent variable is still explained by the model. The standard error of the estimate, at 754.47349, reflects the dispersion of the observed data around the regression line, with a smaller value suggesting more accurate predictions. Overall, the model exhibits a strong relationship between the independent and dependent variables and effectively explains the majority of the data variability, though about 13.2% of the variance remains unexplained according to the R² value.

Table 11. Simultaneous Test Result

	Sum of Square	df	Mean Square	F	Sig.
Regression	109000453,748	6	18166742,291	31,915	,000 ^b
Residuals	16507677,224	29	569230,249		
Total	125508130,972	35			

Table 12. Partial Test

Variable	Coefficient	Std. Error	Sig
C	923,442	3,594	,001
ROA	-,401	-1,746	,091
ROE	-,259	-1,246	,223
NPM	-2,282	-5,773	,000
EPS	1,763	11,349	,000
Market Capitalization	2,446	6,851	,000
COVID Period	-,020	-,283	,779

Based on Table 12, this study shows that the Return on Assets (ROA), Return on Equity (ROE), and COVID-19 period variables have a negative but insignificant effect on stock prices, while variables such as Net Profit Margin (NPM), Earnings per Share (EPS), and market capitalization have a significant impact. These results are in line with the findings of Shahid (2014), who stated that ROA has no significant effect on stock prices. In addition, ROE was also found to be

insignificant, which reflects that investors do not only focus on the company's internal ability to generate profits, but also take into account external risks and market dynamics (Egam et al., 2017). These external risks include inflation, tariff increases, economic policy changes and political fluctuations, all of which affect capital market conditions and ultimately stock prices. Supply and demand in the capital market play a role in investment decisions, which often trigger fluctuations in stock prices.

The insignificant effect of ROE is mainly because this ratio measures internal performance without considering external factors, such as market conditions and inflation. ROE does not reflect real changes when inflation occurs, as equity is not directly affected by inflation, thus making comparisons between years less representative. Furthermore, while ROE depicts the profit a company generates for investors, a low level of ROE does not necessarily reflect poor performance. Some companies may have financial policies that favor low levels of debt, which in turn results in higher equity on the liabilities side of the balance sheet (Amanah et al., 2014). Thus, variations in financial policies between companies influence how ROE is interpreted.

Earnings Per Share and market capitalization have a positive and significant impact on stock prices because fundamentally reflect the financial condition and future prospects of the company. This finding is consistent with (Ruhani & Junoh, 2022; Sharma et al., 2022) research. EPS, which is obtained by dividing net income by the number of outstanding shares, is an indicator that illustrates the extent to which a company is able to generate earnings per share. An increase in EPS indicates an improvement in financial performance, which in turn encourages investor optimism regarding the company's growth potential. Investors usually respond positively to an increase in EPS, as it is perceived as a signal of increased profitability, which in turn increases stock prices through market confidence in the company's future.

Market capitalization, which is the total market value of all outstanding shares, also plays an important role in determining stock prices. Market capitalization reflects the scale of a company in the capital market, where large capitalization companies are often perceived as more stable and less risky than small capitalization companies. Therefore, large capitalization companies often attract the attention of institutional investors, which in turn increases the demand for shares and drives up the price. Market capitalization is also often used as a parameter in assessing a company's valuation, so the larger the market capitalization, the more attractive the company's shares are to investors.

Conversely, Net Profit Margin (NPM) can have a negative and significant influence on stock prices when an increase in net profit margin is perceived by the market as a signal of limited growth prospects. While NPM measures a company's efficiency in generating net profit from revenue, in the context of companies in high-growth sectors, an increase in NPM may be interpreted as a reduction in investment in innovation, expansion, or new product development. Investors in these sectors tend to pay more attention to revenue growth and market share than short-term profit efficiency, so an increase in NPM may be seen as a sign that the company is reducing capital expenditure and expansion efforts.

In some cases, an excessively high increase in NPM in a particular sector may indicate a stagnant competitive environment or a market that has reached saturation point, where new growth opportunities are becoming increasingly limited. As a result, the market may react by lowering stock valuations as high NPM does not necessarily reflect better growth prospects. Therefore, the negative effect of NPM on stock price arises when large profit margins are seen as an indication of reduced dynamism and future expansion opportunities for the company.

The Coefficients table elucidates the contributions of each independent variable to the dependent variable, Share Price, with a focus on the period during and after COVID-19. Specifically, the COVID Period variable has a coefficient of -77.496, suggesting a decline in stock prices during the COVID-19 period. However, the p-value of 0.779 indicates that this decline is not statistically significant, implying insufficient evidence to assert that the COVID-19 period had a substantial impact on stock prices. This p-value suggests that the null hypothesis, which posits no significant effect of the COVID-19 period (2021-2022) on stock prices compared to the post-COVID-19 period (2023), cannot be rejected. Consequently, stock price fluctuations during and after COVID-19 are likely influenced by factors beyond those captured by the model.

Supporting literature reinforces this interpretation, with Bai et al. (2020) indicating that pandemics like COVID-19 can affect long-term stock market volatility, though the impact varies based on individual countries' responses (Waldkrich, 2021). Additionally, Haroon & Rizvi (2020) noted that media coverage and policy uncertainty during the pandemic influenced financial markets, with effects differing across sectors and countries (Regev & Tavor, 2024). Other studies emphasize that while the pandemic initially caused a significant drop in stock prices, long-term effects are shaped by a range of factors including government policies, market responses, and evolving global economic conditions (Angraini et al., 2022; Buszko et al., 2021; Zaeni & Utama, 2022)

Practically, this indicates that while the COVID-19 pandemic had a discernible initial impact on stock prices, additional elements such as economic recovery, fiscal stimulus, monetary policy changes, and business adaptations are crucial in determining stock prices during and after the pandemic. Thus, a regression model that only includes COVID-19 as a dummy variable may not fully capture the complexity of factors affecting stock prices during this period.

3.3 Trend Analysis (ARIMA)

Table 16. Model Fit

Fit Statistic	Mean	SE	Minimum	Maximum	95%
Stationary R-squared	,182	,314	,000	,545	,545
R-squared	,182	,314	,000	,545	,545

RMSE	1706,769	283,195	1427,095	1993,359	1993,359
MAPE	173,563	100,635	64,256	262,371	262,371
MaxAPE	868,074	726,275	171,660	1620,918	1620,918
MAE	1253,433	294,421	935,187	1516,111	1516,111
MaxAE	4096,330	570,880	3542,574	4682,917	4682,917
Normalized BIC	15,073	,334	14,734	15,402	15,402

Based on Table 16, the models for the years 2021 and 2023 exhibit Stationary R-squared and R-squared values of 0, indicating that these models fail to explain the variability in the stock price data for these years. Conversely, the model for 2022 shows a Stationary R-squared and R-squared of 0.545, demonstrating that it accounts for approximately 54.5% of the variability in the stock price data for that year. The ARIMA(0,0,0) model yielded inadequate results for both 2021 and 2023, with an R-squared of 0, suggesting poor explanatory power. Although the ARIMA(0,0,0) model for 2022 performed somewhat better, the prediction error remains substantial, as evidenced by high Mean Absolute Percentage Error (MAPE) and Maximum Absolute Percentage Error (MaxAPE) values. To enhance forecasting accuracy, it may be necessary to explore ARIMA models with alternative parameters or other forecasting methodologies. Despite these limitations, forecasting can still be informed by analyzing observation charts for fluctuation patterns, seasonal trends, volatility, and consistency in data patterns.

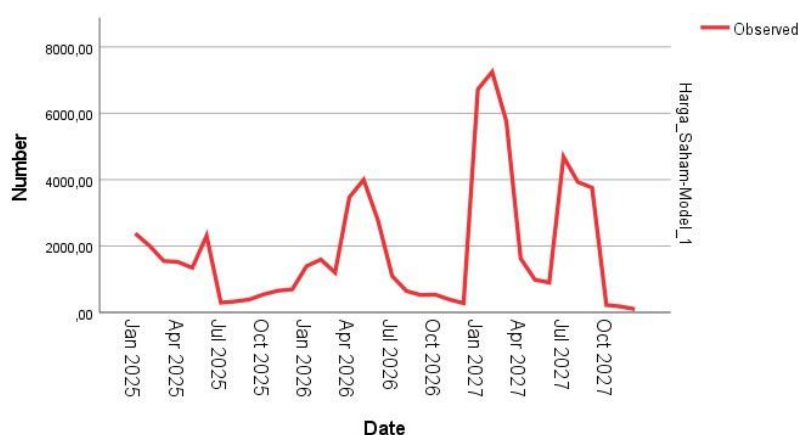


Figure 3. Observation Chart.

Based on Figure 3, the graph forecasting the Stock Prices from January 2025 to October 2027 reveals a series of notable fluctuation patterns. Initially, the values show a moderate level of activity with minor peaks and troughs. For instance, there is a slight increase around April 2025, followed by a decline towards July 2025. This pattern of minor fluctuations continues until January 2026, where a more pronounced peak is observed. The values then drop significantly, indicating a period of instability. This early phase of the graph suggests that the model experiences frequent but relatively small changes in value, reflecting a volatile yet somewhat contained market behavior. As we move further into the timeline, particularly from mid-2026 onwards, the graph exhibits more distinct seasonal trends. A sharp increase is observed around January 2026, followed by a steep decline, indicating a possible seasonal effect or external influence impacting the values. This pattern repeats with another significant peak around January 2027, which is the highest point on the graph, followed by a rapid drop. These recurring peaks around the start of each year suggest that the model's values are influenced by seasonal factors, possibly related to annual market cycles or economic events that cause these sharp increases and subsequent declines. The latter part of the graph, from January 2027 to October 2027, highlights the high volatility and lack of consistency in the model's values. After the peak in January 2027, the values drop sharply, then rise again around April 2027, only to fall once more by July 2027. This period is marked by dramatic swings, indicating a highly volatile market environment. The values do not stabilize, and the fluctuations become more pronounced, reflecting an unpredictable and unstable trend. By October 2027, the values have dropped to their lowest point, underscoring the inconsistency and volatility that characterize the entire observed period. This analysis suggests that the Stock Prices is highly sensitive to various factors, resulting in significant fluctuations and a lack of stable, predictable patterns.

4. CONCLUSION

This research investigates how financial performance and market capitalization affect stock prices in the IDX-MES BUMN17 index during and after the COVID-19 pandemic. Over the three-year period from 2021 to 2023, stock prices exhibited a recurring seasonal trend, peaking mid-year, particularly in August, before experiencing a decline. This suggests that annual cyclical events influence stock movements. The study also identified high volatility in stock prices, with significant monthly fluctuations driven by factors such as market conditions, corporate financial performance, economic policies, and external events. While larger companies tend to have more stable stock performance, they are still susceptible to these fluctuations. Initially, the pandemic significantly disrupted the market, but it has since adjusted to the

new conditions. Projections for stock prices from January 2025 to October 2027 anticipate marked fluctuations, with seasonal trends and high volatility leading to the lowest prices by the end of the period. This research highlights the importance for investors and policymakers to understand external factors affecting stock volatility, which can assist in developing robust investment strategies, risk management approaches, and regulatory measures. The analysis emphasizes the complexity of forecasting and the necessity of accounting for external influences to craft resilient financial strategies and make informed decisions.

While the findings provide valuable insights, several limitations should be noted. First, the study relies on secondary data, which may limit the granularity and accuracy of the analysis. Second, the focus on IDX-MES BUMN17 index companies excludes other sectors that could provide broader insights into market dynamics. Third, the period analyzed (2021–2023) may not fully capture the long-term effects of the COVID-19 pandemic on stock prices. Lastly, external factors such as political stability, global economic trends, and sector-specific developments were not explicitly analyzed, which might influence stock price volatility and investor behavior. Future research could address these limitations by incorporating primary data, expanding the scope to include other sectors, and examining the broader socio-economic factors influencing stock markets.

ACKNOWLEDGMENT

Thank you to those who have supported the implementation of this research.

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