



Analysis of the Impact of the Covid-19 Pandemic on Stock Prices in the Construction Sector in Indonesia

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Abstract: The construction sector represents a significant investment choice in the stock market. However, data indicates a decline in the average stock prices of construction sector companies in Indonesia. This study aims to analyze the impact of the Covid-19 pandemic on stock prices in the construction sector in Indonesia and evaluate the sustainability of investing in these stocks. The outbreak of the pandemic has caused significant disruptions and uncertainties in various industries, including construction, making it crucial to understand its effects on stock prices. This study is a quantitative approach and utilizing statistical techniques such as paired sample test and regression analysis. This research finds that all companies in the construction sector have experienced a decrease in stock prices and there is a significant difference in stock prices before and after the pandemic, with the average stock prices being higher before the pandemic conditions. After the pandemic, the data also shows that construction sector tend to decrease.

Keywords: Construction Sector, Stock Prices, Indonesia, Pandemic, Quantitative Approach.

INTRODUCTION

All countries around the world are currently facing a major problem, the outbreak of the Coronavirus Disease 2019 or Covid-19. This virus first emerged in Wuhan, China and has alarmed the entire global population due to its rapid transmission rate, while a complete solution is yet to be achieved (World Health Organization [WHO], 2020). As of August 1, 2021, data from Worldometer indicates that the number of active Covid-19 cases worldwide has reached 217,782,942, with a death toll of 4,514,161 individuals (Worldometer, 2021).

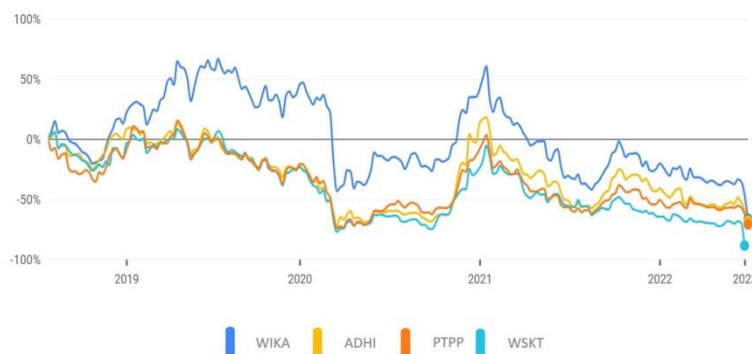
The resulting impact is both severe and widespread across various aspects of human life, including the world of investment. Following the announcement of Covid-19 cases in

Indonesia, the Indonesian Composite Index (IHSG) experienced a decline in 2020 (Rahman, 2020). The fluctuations in the capital market have had an impact on investment behavior among the public. This is because market analysis goes beyond simply looking at numbers; it also considers the financial behavior aspects of investors (Odean, 1999). As of the second quarter of 2021, specifically on July 31, 2021, the IHSG trend started to stabilize at around 6,070 with a market capitalization value of Rp. 7,233,760 (Indonesia Stock Exchange [IDX], 2021). While the IHSG trend began to show stability, the phenomenon of weakening stock prices in the construction sector continued.

According to Big Alpha's report in December 2020, the prospects for infrastructure stocks in 2021 will be greatly influenced by several catalysts. Firstly, the infrastructure budget plays a significant role. In the 2020 State Budget, the infrastructure budget decreased significantly compared to 2019, as a portion of the government's budget was redirected towards addressing the Covid-19 pandemic (Ministry of Finance, 2020) Secondly, the government will establish this institution in accordance with the mandate of the Omnibus Law on Job Creation, Law Number 11 of 2020, to attract investments in various sectors such as infrastructure, energy and resources, health, tourism, and technology, reducing dependence on the state budget for infrastructure development (Presidential Secretariat, 2020). Lastly, there are the National Strategic Projects (PSN) listed in Presidential Regulation Number 109 of 2020 concerning the Acceleration of National Strategic Project Implementation, which includes 201 projects and 10 programs covering 23 sectors. The government has targeted the completion of 38 projects worth Rp. 464 trillion in 2021 (Presidential Secretariat, 2020). The PSN includes projects such as toll roads, ports, airports, industrial zones, dams, clean water supply, and others. These major projects are undertaken by national construction companies.

(Sahminan et al., 2019) Infrastructure is also important to economic growth. Infrastructure can develop and connect all of the regions in the country. (Irfan Tuasikal & Susianti, 2022) Indonesian government has a plan to move the nation's capital from Java Island to Kalimantan, it means that government need costs to make it happens. At the same time Health Ministry of Indonesia said that covid 19 cases were decreased. Data shows that stock prices from some construction sector such as WSKT, WIKA, PTPP and ADHI were not stable and tend to decrease on 2022 until 2023.

The following is a graph of the stock price comparison of the four BUMN Karya in the construction sector.



Source : google finance

Figure 1. Comparison of construction stock charts (WSKT, WIKA. PTPP, and ADHI)

From the data above, we can conclude that in the last five years, the construction sector had poor performance. The construction sector suffered losses and a significant decline in stock prices. The average stock price did not grow and instead experienced a decrease or minus of

more than 73.24%. By comparison, in August 2018, WIKA's stock price was still around Rp. 1,570, - to Rp. 498,- or – 66.46%. ADHI's stock s fell from Rp. 1,408, - to Rp. 515,- or minus 68.11%. PTPP stocks from Rp. 1,950 to Rp. 635, - or decreased by 69.76%. Meanwhile, WSKT's stock s fell from Rp. 1,848, - to Rp. 202,- or minus 88.64%.

The topic is chosen because of the ongoing Covid-19 pandemic has had profound effects on various sectors, including the construction industry. It is importance of studying investor sentiment and decision-making patterns because of these fluctuations. This study also indicates the importance of examining the effects of these initiatives on the stock prices of construction companies especially to evaluate the effectiveness of government policies and investments in the sector.

This research examines the COVID-19 pandemic's impact on sectors like construction, focusing on stock price dynamics to illuminate investor behavior during crises (Baker et al., 2020). By examining the impact of the pandemic on the stock prices of the construction sector in Indonesia, this research aims to contribute to the existing knowledge base and provide valuable insights for investors, policymakers, and researchers in the field. The the questions of this research are the impact of the Covid-19 pandemic on stock prices in the construction sector in Indonesia, the significant difference in stock prices of the construction sector in Indonesia before and after the Covid-19 pandemic, and suggestion for sustainibility of investing stock in construction sector.

METHODS

This study adopts a quantitative approach to analyze the impact of the COVID-19 pandemic on stock prices in the construction sector in Indonesia. The quantitative approach provides a systematic and structured method to analyze numerical data and draw reliable conclusions. The population and sample are 17 construction companies that have been listed in J211 Indonesia Stock Exchange 2 years before COVID 19 happened in Indonesia. The sample includes those construction sector companies consistently listed on the Indonesia Stock Exchange from March 2018 to February, 2023, and not involved in any corporate actions. The data sources include official financial websites and databases such as Yahoo Finance and Indonesia Stock Exchange (IDX).

This study used the t-test for paired samples to examine the stock prices' differences before and after the Covid-19 outbreak in Indonesia. The analysis involved calculating normality test and the average stock prices for all companies and specifically for the construction sector. By discerning the stock prices' difference pre- and post-Covid-19 outbreak and calculating the standard deviation, we were able to quantify the variation extent. The standard deviation was determined using data from both periods.

RESULT AND DISCUSSION

Results

Signaling Theory

Signaling theory is considered one of the fundamental theories in understanding financial management (Gumanti, 2009). In general, signals can be defined as indicators or messages conveyed by a company (management) to external parties (investors). These signals can take various forms, either directly observable or requiring in-depth analysis for understanding. Therefore, the selected signals must possess informational strength to alter the external evaluation of the company (Gumanti, 2009).The signaling theory examines how signals relate to the quality they reflect and which elements, both inherent to the signal and the surrounding community, make the signal convincing and attractive. Additionally, this theory also considers the consequences when the signaled message is not entirely convincing or the level of uncertainty that can be tolerated before the signal becomes meaningless (Gumanti, 2009). Potential competitors may signal their strength to

other competitors, leading to the weaker ones taking no action, engaging in costly direct competition, or even avoiding competition altogether. In the economic and financial literature, the signaling theory explicitly reveals that corporate insiders (consisting of officers and directors) generally possess better information about the company's condition and future prospects compared to external parties such as investors, creditors, governments, and even shareholders. In other words, corporate entities have a greater mastery of information compared to external stakeholders, resulting in information asymmetry (Gumanti, 2009).

Stocks

(Herninta & Rahayu, 2021) Stocks can be defined as a representation or ownership interest of an individual or entity in a company. More specifically, a stock certificate signifies that the holder of the certificate owns a portion (in any proportion) of a company that issued the certificate, as indicated by the ownership stake specified on the stock. The primary objective of an investor when investing in stocks is to maximize profits, despite the inherent risks associated with stock investments. The stock price reaction during COVID-19 reveals that investors may not always make optimal decisions in response to signals, disregarding the fundamental impact of the company's financials, even after considering risk adjustments (Gumanti, 2009). This behavior can be categorized as irrational or influenced by external factors (Nugroho & Pertiwi, 2021).

BUMN Karya

BUMN Karya refers to a group of Indonesian state-owned enterprises (SOEs) specifically involved in the construction and infrastructure sector. (Correia & Ribeiro, 2022) Construction is one of country's economic growth indicator. Companies under BUMN Karya play a pivotal role in infrastructure development across Indonesia. They are involved in an array of projects, including road construction, energy sector infrastructure, property development, and more. BUMN Karya companies are crucial to the progress of infrastructure development in Indonesia. However, like any investment, potential investors should thoroughly research and evaluate the financial performance and prospects of these individual companies before making investment decisions.

Discussion

Before conducting the difference test on construction companies' stock price movements, a data normality test was performed. The following outlines the Data Normality Test:

**TABLE 1
DATA NORMALITY TEST**

Perusahaan (24 Months)	Normality Test		Information
	PrePandemic Normal/Abnormal	PostPandemic Normal/Abnormal	
ACST1	Abnormal	Abnormal	Reject
ADHI2	Normal	Normal	Accept
BUKK3	Normal	Normal	Accept
DGIK4	Abnormal	Abnormal	Reject
IDPR5	Abnormal	Normal	Reject
JKON6	Abnormal	Normal	Reject
JSMR7	Normal	Abnormal	Reject
NRCA8	Abnormal	Abnormal	Reject
PBSA9	Abnormal	Normal	Reject
PTPP10	Normal	Normal	Accept
PPRE11	Abnormal	Normal	Reject
SSIA12	Normal	Normal	Accept
TOPS13	Abnormal	Abnormal	Reject
TOTL14	Normal	Normal	Accept
WEGE15	Normal	Normal	Accept
WIKA16	Normal	Abnormal	Reject
WSKT17	Normal	Normal	Accept

Source : SPSS Data Processing (attachment)

Based on the results of the data normality test, there were abnormal data both before and after the covid 19 pandemic in several construction companies. This data abnormality is due to the movement in the share prices of construction companies falling during the Covid 19 pandemic, even during Covid 19 there was also bankruptcy for companies and moving slowly after covid 19, causing stock prices to differ greatly from the average price before covid 19.

Table 2. Difference Test or Paired Sample Test

Movement of Construction Company Share Prices before and after the Covid 19 Pandemic in a period of 24 Months

Test Results	Stock Price Movement		Information
	PrePandemic	PostPandemic	
Mean	1,143.64	643.11	There was a decrease in the average share price after the Pandemic
N	168	168	Normal Data Sample
Std.Deviation	652.961	367.650	Decreased distribution of data after the pandemic.
Std.Error Mean	50.377	28.365	Decrease in average standard error
Correlation	0.819		Significantly influenced stock movements before the pandemic and after the pandemic
Significant	0.000		
Paired-Sample t test			
Mean	500.530		The average difference between stock movements before and after the pandemic
Std.Deviation	410.461		Standard Deviation The difference between stock movements before and after the pandemic
Std.Error Mean	31.668		Average Standard Error before and after the pandemic
t test	15.806		There is a real difference (Sig.0.000) in the movement of Construction Company stock prices during the 24 month period before and after covid 19
Sig (2 tailed)	0.000		

Source : SPSS Data Processing (attachment)

A different test was carried out using a different test t-test with paired/related samples (related samples) on construction companies that have normal data because statistically the requirements for a data test must be normally distributed because the statistics used are parametric in the form of stock price data (nominal figures). The data shows that t test value is $15.806 > 0,000$, it means that there is significantly difference stock prices before and after the pandemic.

CONCLUSION

Analyze the findings obtained from the statistical tests that all companies in the construction sector have experienced a decrease in stock prices. There is a significant difference in stock prices before and after the pandemic, with the average stock prices being higher before the pandemic conditions. After the pandemic, the data shows that construction sector tend to decrease. It is signal for the investors to choose cutting loss than loose deeper. It is still worth it to invest after conducting a thorough evaluation, but this serves as a warning for investors to re-evaluate the financial performance, as well as conduct technical and fundamental analyses of these companies before making long-term investment decisions. It's also necessary to consider the actions taken by the government, especially because these companies are state-owned enterprises.

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