International Journal of Transdisciplinary Knowlegde
ISSN : 2797-4251 (Online)
Journal Homepage : https://ijtk.iainkendari.ac.id/IJTK

Covid-19: How is the Sharia Hospitality Industry and Health Industry Survive in Indonesia?

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DOI: 10.31332/ijtk.v2i1.37

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Article Info

Keywords:
Covid-19*;*
Hotel and Resort Industry*;*
Healthcare Industry;
Stock Performance;
Fama & French

Abstract

Fama & French explained that company size affects the risk of return on its shares. The larger the size of a company, the more established the company is.Hence, it is not easily swayed by crisis pressures, not only financial pressure but also social pressure. The Covid-19 outbreak hitting the world, especially Indonesia, also had an impact on performance in the capital market. The test results showed that during the Covid-19 outbreak period, the JCI performance decreased by 30 percent. However, further test results showed that the hotel and resort industry did not necessarily show worse performance. Moreover, the results of the panel data regression test using data from 16 companies and 29 weeks period of timeshowed that during the period of the Covid-19 pandemic outbreak in Indonesia from March to June, although it is not statistically significant, the performance of the hotel and resort industry outperforms the health industry, while the performance of the Islamic stock category for the two industries is outperformed by the performance of its alternative stocks. The results of this test strengthen the three-factor model Fama & French as well as the five-factor model Fama & French that companies with large assets in the hotel and resort industry included in the research sample are able to withstand the impact of the Covid-19 pandemic, beating companies which are inferior in terms of company size such as the healthcare industry in Indonesia.

1. INTRODUCTION

Fama & French (1992) andFama & French (1995)have shown that there is ambiguity in the Capital Asset Pricing Model offered by Sharpe (1963), where they propose a new model indicating that the ratio of Price Book Value (PBV) and size is the main variable that explains the average stock return in the capital market. Over the years there have been many empirical types of research that have tried to test this model, as conducted byLam (2002), he tested the relationship between size, a book to market equity ratio, earnings-price ratio, and return on the capital market in Hong Kong. The test showed that beta is not able to explain the average monthly return on a continuous floor in the Hong Kong stock exchange, but they

have succeeded in proving that three variables, namely size, the book to market equity ratio, and earnings-price ratio significantly influence the variation in the average monthly stock return periodically.

The COVID-19 pandemic that has hit the world since December 2019 has had an impact, not only on the quality of the world's public health but also on all sectors such as the economy and the changing conditions of the social order(Yang et al., 2020). In particular, the economic sector that is directly affected by Covid-19 is the tourism industry, especially the hospitality and health industry.Statistically, this hypothesis can be built using data on the capital market that is openly available to the public. The capital market is a paring visible indicatorused to measure the economic impact of Covid-19. Since the first case in Indonesia was discovered in March 2020, until July 2020 the capital market has been corrected by approximately 10 percent, and the composite stock price index has fallen by 25 percent since COVID-19 was first announced in Wuhan, China in December 2019.

The return on stock investment on the capital market is influenced by many indicators and factors, one of which is the investor's perception of one or a lot of information about a major event that will affect world economic activity or a country.Al-Awadhi et al., (2020)found a significant negative relationship between the daily growth of total confirmed cases of COVID-19 and the rate of return on stock prices in all types of companies listed on the Chinese stock exchange.

Studies that link stock returns and major events that will affect economic activity have been carried out by academics. For example, research byBash & Alsaifi (2019) andShanaev & Ghimire (2019)which examines the relationship between stock returns through the stock index on political activity, or its relationship to environmental exploitation(Alsaifi et al., 2020; Guo et al., 2020). The relationship of changes in stock prices to sports(Buhagiar et al., 2018)and disaster(Kowalewski & Śpiewanowski, 2020). Meanwhile, studies that directly examine the relationship between stock price returns and pandemics have not been widely studied by academics. Research on pandemics is only limited to studies in the health science of economic activity as researched by(Chen et al., 2007; Chun-Da Chen et al., 2009)regarding the SARS pandemic in Taiwan or the Ebola pandemic on stock price movements(Ichev & Marinč, 2018).

This study aims to examine the impact of the pandemic currently sweeping the world, Covid-19, on stock returns when investing in the Indonesian capital market. In particular, this study examines the impact of Covid-19 on the performance of stock issuers in the health and tourism industry, especially hospitality. Not just examining the relationship between stock price returns in two industrial sectors as has been conducted byAl-Awadhi et al. (2020), this study also examines the return on Islamic stocks and compares it with the return on common shares for the two types of industrial clusters. The Indonesia Stock Exchange (IDX) was chosen since it has a fairly large size of the Islamic capital market, around 65 percent of shares listed on the IDX has been categorized as sharia stocks(La Pade, 2020a). Islamic stocks are always interesting to investigate in particular. Sharia instruments often show anomalous activities against bad economic cycles, where conventional investment instruments show poor performance, whereas Islamic instruments often show alternative impacts or vice versa.

La Pade (2020)shows that the performance of Islamic stocks is better than conventional stocks during an economic crisis. Meanwhile,Makni et al., (2015)found that Islamic mutual funds have a better performance when compared to the performance of

conventional mutual funds during the financial crisis period. According to them, this happened because the sharia mutual fund investment manager played the role of the hedging mechanism during a crisis in a certain crisis period.

The first case of COVID-19 in Indonesia was identified on March 2, 2020 in Depok, West Java (Ministry of Health, 2020). The two Indonesian citizens are mother and daughter who were exposed to a positive Japanese citizen who contracted COVID-19 in Malaysia. After the first two cases, the addition of positive COVID-19 in Indonesia only occurred on March 8, 2020, this is in line with the seriousness of the Indonesian government in detecting the spread of COVID-19, further data shows the addition of positive COVID-19 every day in Indonesia ((Johns Hopkins University, 2020).

Zach (2005)states that major events, especially pandemics, can affect the rate of return on stock prices in the capital market. When the Indonesian government announced the first case, the composite stock price index fell to the level of 3000 in mid-March 2020. However, the impact of the COVID-19 pandemic has been felt by the Indonesia Stock Exchange since the end of January 2020 in conjunction with the first COVID-19 announcement in Wuhan, China. and confirmation of global outbreaks by WHO(Kannan et al., 2020).

Specifically, the purpose of this study is to examine the impact of the COVID-19 pandemic on the performance of two industrial sectors, namely the tourism and health industry, and its impact on the performance of Islamic stock portfolios and common stock portfolios for both categories of issuers in the Indonesian capital market. The impact of the pandemic is shown by the increase in the number of positive cases every week, the increase in the number of death cases each week, and the number of recovering cases per week. Meanwhile, the yield variable is shown by the change in stock prices per week or return, since the first case was announced in Wuhan until June 26, 2020. To test the impact of the COVID-19 pandemic on stock returns, this study developed a panel data regression model, using positive week data. COVID-19 and data every week patients die, as well as data on patients recovering from COVID-19, announced by the Ministry of Health of the Republic of Indonesia.

2. METHODS

Wooldridge (2002)andBaltagi (2005)explained that the variable testing method with panel data regression is able to reduce the estimation bias and the multicollinearity effect between variables, heteroscedasticity, and is able to identify the relationship between time between the independent variable and the dependent variable. This research applied panel data variable testing, namely the relationship between stock price returns and its relationship to the impact of COVID-19, by controlling the characteristics of Islamic stocks and common stocks.

This research used descriptive analysis and panel data regression. Descriptive statistics are carried out to see the movement of stocks from the healthcare and hotels, resorts, and cruise lines categories by using descriptive charts and tables. Panel data regression is used to see the effect of stock categories, stock types, weekly - market capitalization, book value per share, price/book value ratio, positive cases of covid19, death case of covid19, and recovered case of covid19 on the value of stock returns.

The data analysis steps can be seen as follows: Make a graph of stock return value data for each stock category, Create descriptive statistical tables for each variable in the two

stock categories, Analyze the pooled model panel data, fixed model, and random model. By using return as the dependent variable and stock category, stock type, Weekly - Market Capitalization, Book Value per Share, Price/book value ratio, positive cases of covid19, cases of death of covid19, cases of cured of covid19 as independent variables. Select the best model using the Haustman test.

Panel data regression model as follows

$$Adj_{return} = \alpha_0 + \alpha_1 COV19_{i,tw-1} + \beta_0 Dummy_{i,t} + \beta_1 X_{tw-i} + \varepsilon_{i,tw} \quad (1)$$

$Adj_{return}$is the return on stock i at time t as the dependent variable which is influenced by*time lag*by the predictor, where$COV19_{i,tw-1}$is the independent variable that shows the change in total positive cases and total deaths, and total cases recovered due to COVID-19 cases in the week before the tested share price. The dummy is a variable that shows the characteristics of Islamic stocks in the model, while the variable$X_{i,tw-1}$is a vector of the special characteristics of each company including capitalization and market to book ratio every week, starting from the first week of December 2019 to the third week of June 2020.

3. RESULT AND DISCUSSION

The data used in this study are companies listed on the Indonesia Stock Exchange. The period for stock data is from December 6, 2019 to June 26, 2020. The company's stock ratio and capitalization data are obtained from the Osiris database. This study focuses on the Healthcare category shares and the Hotels, Resort, and Cruise Lines category stocks. The sample data was taken by purposive sampling. Purposive sampling is a non-probability sampling method whose sampling is based on certain considerations or criteria under the research objectives. Sampling is based on the following criteria, (1) The company is included in the Healthcare company category, and the shares in the Hotels, Resort, and Cruise Lines category are continuously listed on the IDX. (2) Healthcare companies and shares of the Hotels, Resort, and Cruise Lines category which are included in the 50 Biggest Market Capitalization (Source: Osiris, 2020). (3) The company's shares are actively traded on the IDX.

From the sampling process, 10 shares of Hotels, Resort, and Cruise Lines companies and 6 healthcare company shares were obtained which can be seen in the following table:

Table 1. Distribution of research data samples

Category	Name of the Company
Hotels, *Resort and Cruise Lines*	Bayu Buana TBK
	Panorama Sentrawisata TBK
	Indonesi Paradise Property TBK, PT
	Bukit Uluwatu Villa TBK, PT
	Destinasi Tirta Nusantara TBK, PT
	Pudjiadi and Sons TBK
	Hotel Sahid Jaya International TBK
	Arthavest TBK
	PT Eastparc Hotel TBK
	Pembangunan Graha Lestari Infah TBK, PT

Healthcare	Enseval Putera Megatrading TBK, PT
	Millenium Pharmacon International TBK
	Sejahtera Raya Anugerah Jaya TBK, PT
	Sarana Mediatama Metropolitan TBK, PT
	Royal Prima TBK, PT
	Prodia Widyahusada TBK, PT

Data on the number of confirmations ofpositive, deaths, and recoveriescases from COVID-19every week are obtained from data published by the Ministry of Health of the Republic of Indonesia which is available daily on the covid19.go.id website.Then, the daily data is accumulated into every week data to adjust to the company's fundamental data provided by Osiris which is then processed using the Eviews 10 software.

Table 2. Descriptive Return Data

	HOTELS, RESORTS & CRUISE LINES	***HEALTH CARE FACILITIES***
Mean	-0.00196	-0.00646
Standard Error	0.006592	0.010145
Median	-0.01547	-0.01571
Standard Deviation	0.035497	0.054635
Sample Variance	0.00126	0.002985
Kurtosis	1.712424	0.792404
Skewness	1.192224	0.093028
Range	0.157811	0.24821
Minimum	-0.05466	-0.1414
Maximum	0.103147	0.106811
Sum	-0.05682	-0.18744
Count	29	29

Table 2 shows the descriptive data of the return distribution of the two stock groups studied in this study. Descriptive data do not show a fundamental difference in the performance of the two groups of stocks during the Covid-19 period in the World and Indonesia. The only visible difference is in the risk level of the two stock groups which can be described from the standard deviation, where the standard deviation of the healthcare stock group is 2% higher than the hotel, resort, and cruise lines stock groups. This is in line with the theory ofFama & French (1993)that company size affects risk so that investors tend to ask for a higher risk premium through the expectation of future returns for companies with smaller stock capitalization in the capital market. Research distributive data shows that the size of the Healthcare stock group companies in Indonesia tends to be smaller than the capitalization of the hotel, resort, and cruise line group companies that are listed on the Indonesia Stock Exchange.

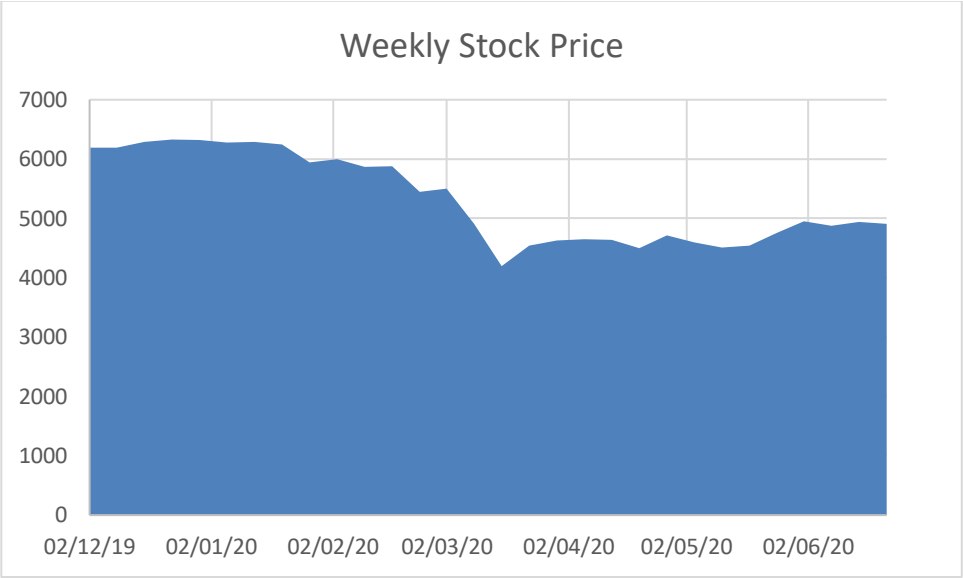

Figure 1. The IHSG weekly graph

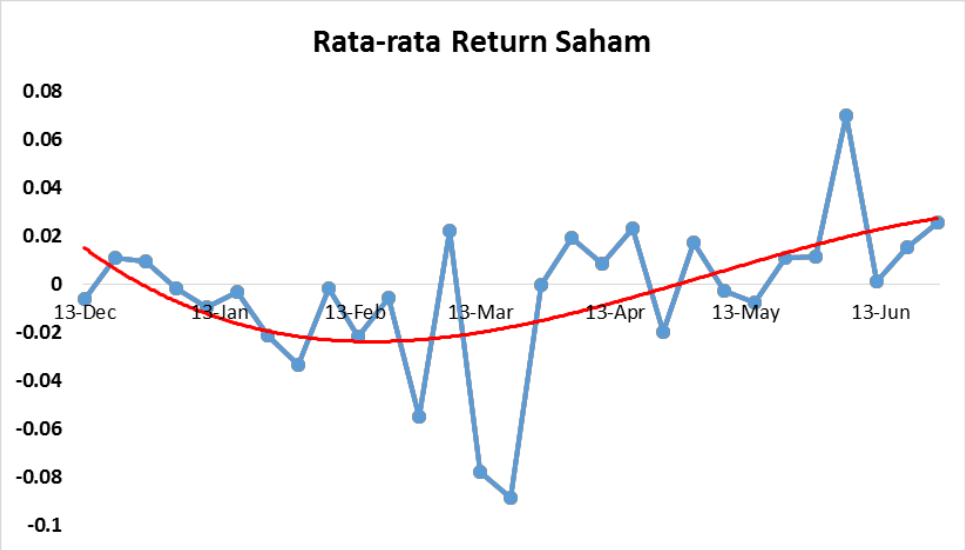

Figure 2. The JCIWeekly Average Returns

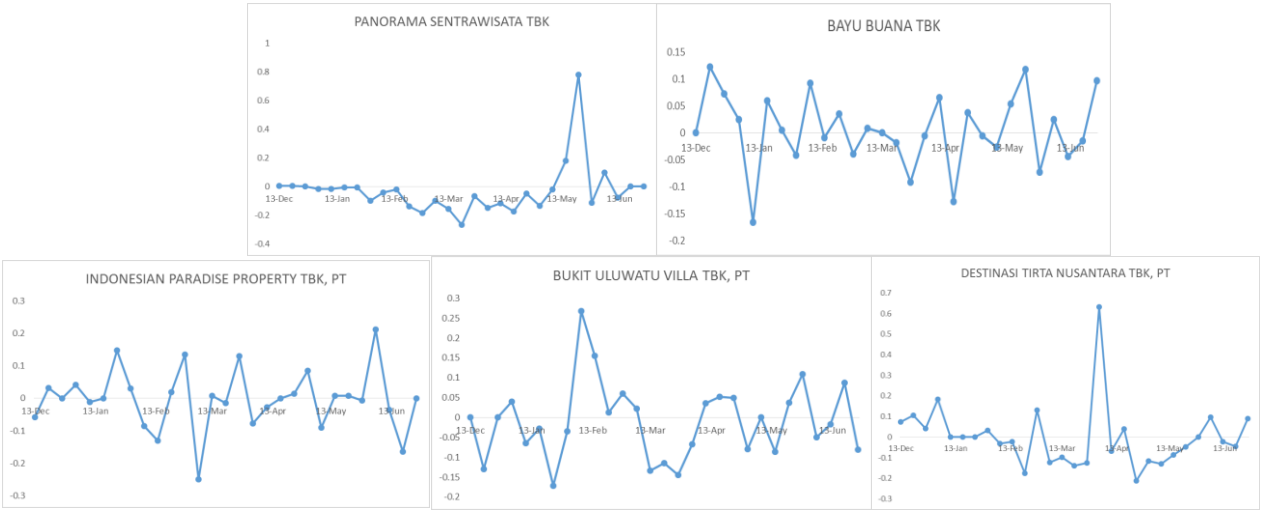

Figure 3. The Graph of Return for Hotels, Resort and Cruise Lines Stock Groups

Figure 4. The Graph ofHealthcare Stock Group Return

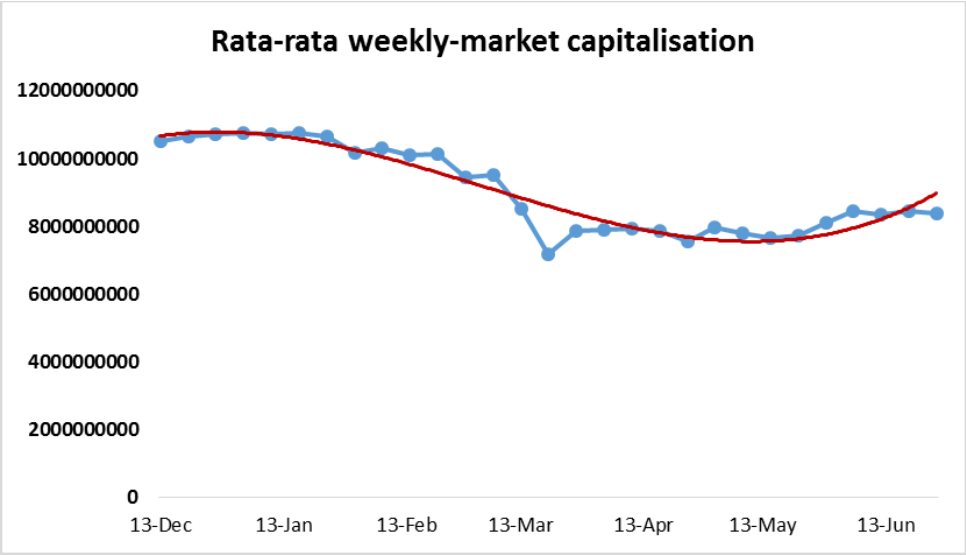

Figure 5. The Weekly Average Stock Capitalization in Indonesia Stock Exchange

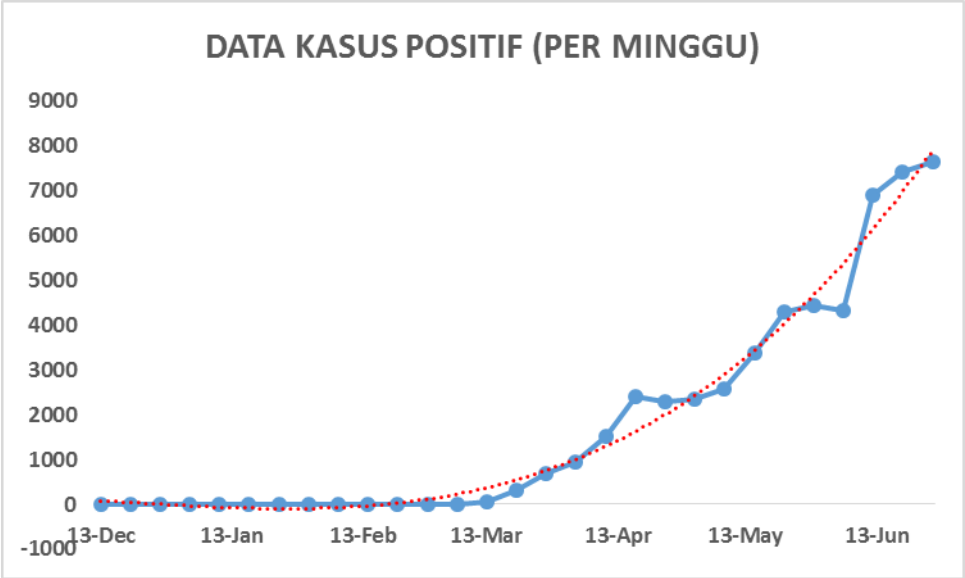

Figure 6.The Weekly data of Positive caseof Covid-19 in Indonesia

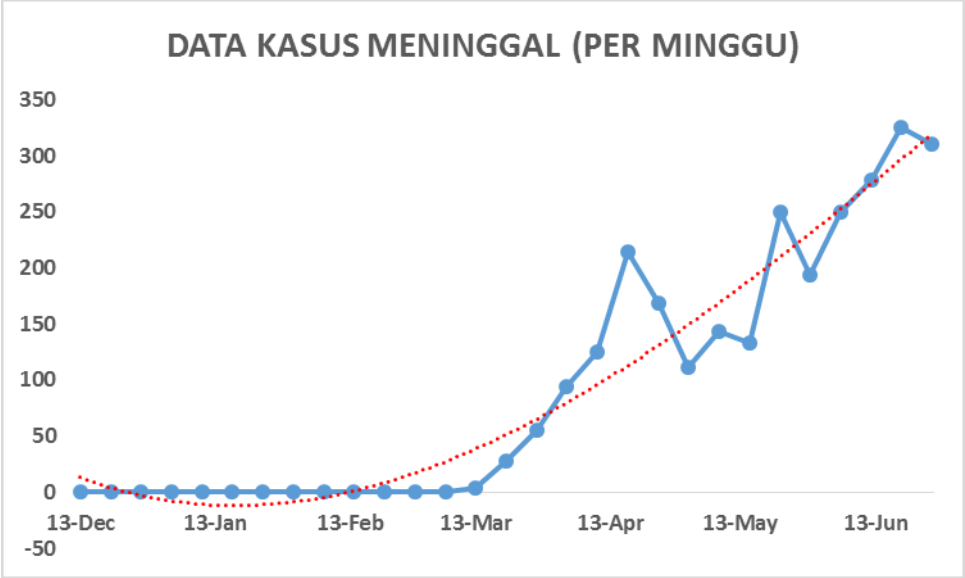

Figure 5. The Weekly Data ofConfirmed Deaths Data of Covid-19 in Indonesia

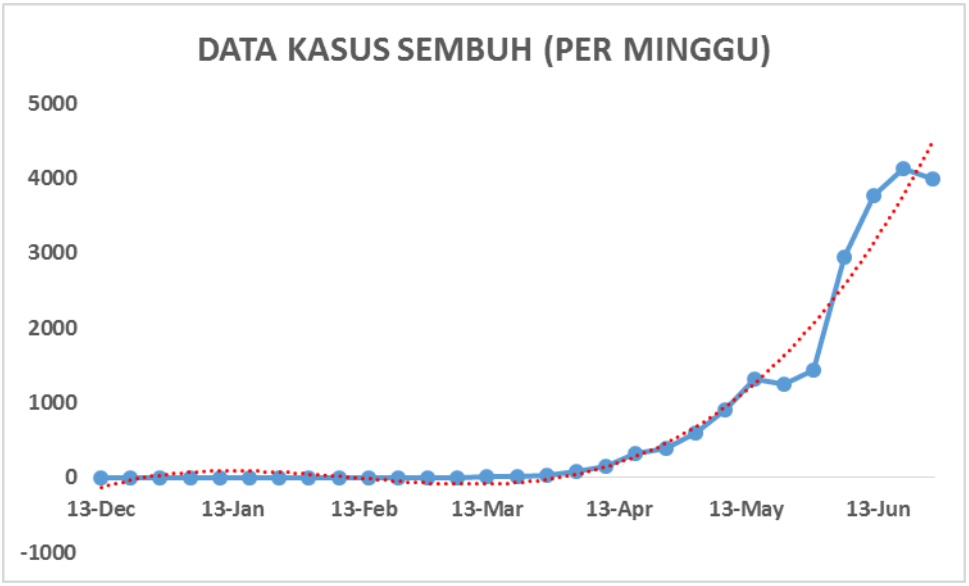

Figure 8. The Weekly data of Patients Recovering from Covid-19 in Indonesia

Descriptively, the return graph data for the Hotels, Resort, and Cruise Lines stock group shows a positive trend. When the Covid case was first announced around December in Wuhan and March in Indonesia, the share price of the Hotels, Resort and Cruise Lines group had decreased, but by mid-April 2020 the share price rebounded or experienced a positive trend, while the healthcare stock group experienced a reverse trend. Nearing the end of the research period in May and June, there was a steep correction in stock movements. Figure 9 and Figure 10 show the average return of the two stock groups, in general, the average return for the healthcare stock group and the Hotels, Resort and Cruise Lines stock groups shows a fairly normal movement, where the movements of the two stock groups do not show excessive pressure activity due to investors' perceptions of Covid-19 in Indonesia.

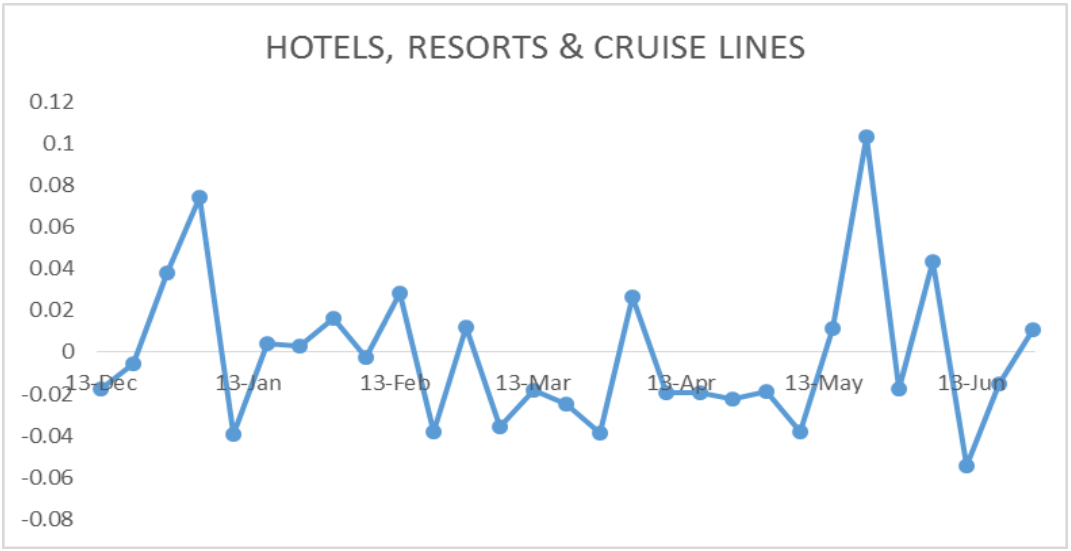

Figure 9. The Graph of the Average Return of the Hotels, Resort and Cruise Lines Stock Group

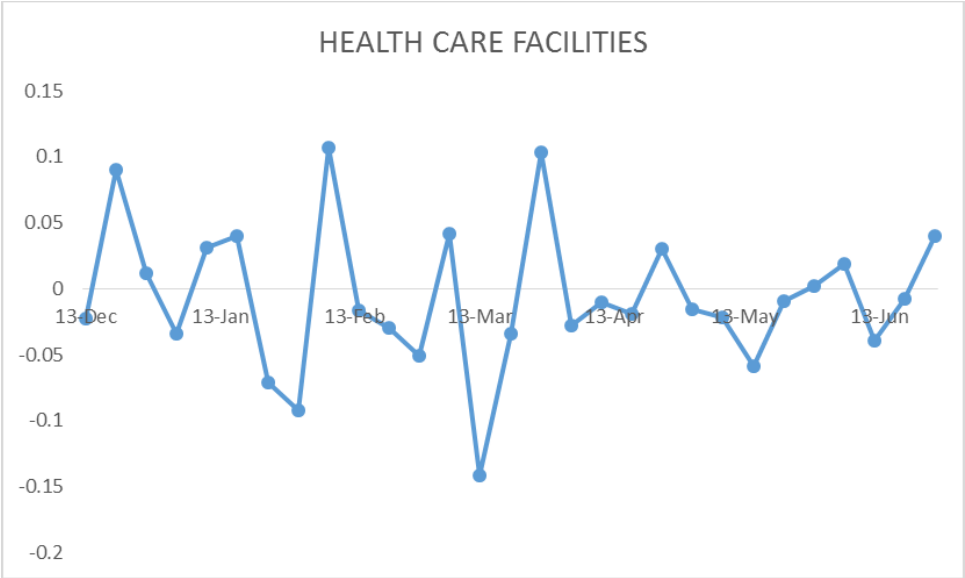

Figure 10. The Graph of Average Healthcare Stock Group Returns

However, even though it is not depicted visually on the graphs of the two groups of stocks, if you pay close attention, at the end of March to June there was a negative trend for the returns of the two groups of stocks. This interpretation is in line with the data that was confirmed positive and died from the Covid-19 case in Indonesia. This is in line with the results of research byAl-Awadhi et al. (2020). They tested the impact of Covid-19 on the performance of the China Stock Exchange, the results were significantly and positively related between positive announcements and the death of Covid on stock returns in China.

Table3

regression testof Panel data

Dependent Variable: *Return*

Variable	Fixed Model	Random Model	PLS
C	-0.129640*** (0.0000)	-0.009528 (0.2401)	-0.001859 (0.9130)
Size	$6.59x10^{-11}$*** (0.0000)	$5.41x10^{-13}$*** (0.0050)	0.010076** * (0.0000)
Syariah	-0.000569 (0.8458)	-0.000375 (0.8978)	-0.019552 (0.2584)
Healthcare	-0.005527 (0.6237)	$-4.51x10^{-15}$ (0.8847)	-0.004668 (0.3452)
PBV	0.000175 (0.2060)	0.000185 (0.1798)	0.000177 (0.2013)
PCASE (-1)	$-8.72X10^{-06}$ (0.5575) (1)	$-1.37x10^{-05}$ (0.3554) (1)	
DCASE (-1)	0.000268 (0.1786) (2)	0.000215 (0.2801) (2)	
HCASE (-1)	$7.87x10^{-07}$ (0.9605) (3)	$8.98x10^{-06}$ (0.5690) (3)	

The results of empirical testing of research models on the relationship between healthcare and hotel, resort and cruise line stock groups through returns to investors' perceptions regarding the information on the number of positive, death, and recovered patient data due to Covid-19 using panel data from companies that take the floor on the Indonesia Stock Exchange every week, shows that statistically does not have a significant effect. However, based on the coefficient of multiple regression test results using panel data, there is an indication that the healthcare company stock category shows underperforming performance compared to the stock performance of the hotel, resort, and cruise line groups. Although there is no direct and empirical relationship between the performance of the stock portfolios of the two groups on the Covid-19 case in Indonesia, the descriptive data JCI movement on the Indonesia Stock Exchange show that there is an influence on investor perceptions due to the Covid-19 pandemic in Indonesia. This is in line with research that states the major events, especially pandemics, can affect company performance in the world(Gnutzmann et al., 2020). Therefore, it can be concluded that healthcare companies in Indonesia are unable to adapt to the effects of the Covid-19 pandemic in Indonesia, at least during the research period, December 2019 to June 2020.

Furthermore, the category of the Sharia stock group of the two stock groups studied in this study showed a different performance from the results of previous research,La Pade (2020b)said that the performance of the Sharia stock portfolio outperformed the performance of ordinary stocks when a crisis occurred, but the test results on Research shows that the Islamic stock group underperformed the common stock group for the two categories of stocks tested.

Additional findings in the study are the variable company size using stock capitalization data on the Indonesia Stock Exchange. The empirical test results show that the size variable significantly and positively affects performance, in this case, the average return of the two groups of stocks tested in this study. Where the test results confirm the three-factor and five-factor model developed byFama &French (2015)and tested by many academics such asBlanco (2012), wherein both models count the size of the company as an important factor in measuring performance as well as being the main consideration for investors in setting the expected yield expectations for a particular company in the future.

4. CONCLUSION

The results of testing and performance analysis between two stock groups on the Indonesia Stock Exchange, between healthcare companies and hotel, resort and cruise line companies during the COVID-19 pandemic, starting December 2019 starting in China and having an impact in Indonesia from March to June 2020, shows that information on the COVID-19 pandemic, both positive data, and death data, does not have a statistically significant relationship to stock returns every week on the Indonesian stock exchange. However, from the correlation coefficient data, the empirical test results show that there is a negative trend between the announcement of Covid-19 and the stock performance of Healthcare companies. Likewise, the results of the submission of Sharia stock groups for the two groups of stocks studied show indications of underperforming compared to common stocks.The results of this test support the theory developed by(Apergis et al., 2011) and (Fama & French, 1993)which proves that company size is an important factor in investigating the risk of expected future returns borne by each company in the capital market. The large company tends to have stronger resources, therefore when hit by a crisis, whether it is an economic, political or even social and health crisis, they have more ability to survive, on the other hand, companies that have small capitalization will be more quickly affected by the

shock of the economic crisis. The company data used in this study is in line with this theory, where health care companies in Indonesia tend to have a smaller capitalization than the hotel, resort, and cruise lines stock groups. Likewise, the Islamic stock group for the two groups of companies studied tended to be a group with a smaller size than the group of ordinary shares that had a larger size.

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