

# COVID-19 Outbreak Impact on Stock Return in Indonesia and Malaysia

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## Abstract

The COVID-19 outbreak drastically impacts the worldwide economy including the stock returns. This study uses Indonesia and Malaysia cases with a total of 141.585 and 219.381 observations in 2020. The measurement of COVID-19 of this study uses daily new confirmed cases and daily death cases from each country. To test the hypothesis, an unbalanced panel and multiple regression are used to test the crowded data. The results show different results for each country. In Indonesia, we found that the COVID-19 outbreak is a strong negative effect on stock return, in contrast, Malaysia found it to be less influence. Furthermore, the effect of Monday and Friday was used to test any impact of the day during the pandemic on stock return. Surprisingly, the effect of Friday affects different from Monday. The weekend effect still occurs in a pandemic situation and the investor mood sentiment to Indonesia's stock market. This could be one of the aspects for investors consider when making investment decisions during a pandemic.

**Keywords** : COVID-19; stock return; day effect

**JEL Classification** : G11, G15

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## 1. INTRODUCTION

The COVID-19 outbreak remains a major global issue. The Wuhan City Health Commission reported the first case of pneumonia identified as Coronavirus in November 2019 and WHO declared Coronavirus disease (COVID-19) as a global pandemic on March 11, 2020 (Nurchayono et al., 2021). The spread of COVID-19 has been very fast, someone who has been infected can be easily infected by others by saliva. Then, it attacks the respiratory system and develops into a disease that is quite serious, especially for the elderly and those with chronic medical problems (Herwany et al., 2021). In addition, recent research has found that a new variant of COVID-19 has mutated to become more rapidly spreading in infecting people and is feared to have more serious consequences (Wise, 2020). (Iacobucci, 2021) argued the new variant of the virus is associated with an increased risk of death.

Since the WHO (World Health Organization) has declared COVID-19 a global health emergency, the world economy has been drastically depressed (Xu, 2021). Sales are declining, consumers are changing their behavior, production is falling, companies are in serious financial trouble, and unemployment is rising worldwide. The pressures faced by small businesses cause forced closures that are temporary or even permanent, causing many individuals to lose their jobs and end up going bankrupt (Cheng, 2020).

Moreover, the first lockdown or quarantine policy was implemented in Indonesia on April 10, 2020, when the case of positive confirmation reached out of 3.000 cases and 300 people died (Nurcahyono et al., 2021). Strict regulations from the government, such as quarantines and lockdowns signal an increase in cases that are getting worse (Xu, 2021). Because most firms are prohibited from remaining fully functioning during the quarantine, they prefer to reduce labor costs by firing employees (Mazur et al., 2021). This affects and slows down the economic cycle in Indonesia, especially in the fields of transportation, tourism, in-store sales, and others.

On the other side, the first positive case was confirmed in Malaysia on January 25, 2020 (Shah et al., 2020). It spread quickly to infected people in Malaysia. This can be seen as on March 31, 2020, a total of 2766 confirmed cases was reported to the Ministry of Health (Shah et al., 2020). The issue of economic topics also occurs in Malaysia. On March 18, 2020, the Malaysian government implemented the first lockdown decision. This was precipitated by a 73.9% growth rate of cases each day (Chia et al., 2020). As a result of this policy, most firms demand employees work from home, and some workers are forced to quit working.

The COVID-19 epidemic has caused massive social distress as well as significant economic disruption. The COVID-19 outbreak affected the economy in various sectors, including the impact of stock prices, lockdowns, and travel restrictions, resulting in economic instability in the country (Shah et al., 2020). A previous study found that news and event can affect stock markets and the dynamics of the price (Al-Awadhi et al., 2020; Dilla et al., 2020; Herwany et al., 2021).

Malaysia's Bursa having fallen 20.52% since the start of the year, sunk to its lowest numbers in a decade (Chia et al., 2020). COVID-19 outbreak also impacts a major effect on stock return in Indonesia's market. Indonesian Composite Stock Price Index (IHSG) drop to IDR 3,900 or -35.8% in March 2020 from the beginning of 2020 (IDX, 2020). This also occurred to Global markets have dropped by at least 25% from their highs the previous month by the end of March 2020 (Ciner, 2021). The drop in stock prices in March 2020 was one of the world's largest stock market collapses in history (Mazur et al., 2021).

Afterwards this study also adds the relationship between days and stock returns during the pandemic. The addition of today's effect is interesting because many studies have found that various effects of Monday and Friday (as weekend day) affect stock returns, especially during a pandemic. The previous study by Smirlock & Starks (1986) which stated that the tendency of investors' mood on Mondays tends to decrease while increasing on weekends. How about in pandemic? The negative effect of the pandemic can change the intensity of investors because health issues are considered more important, causing fear of business sentiment. The future that is difficult to measure will be even more unpredictable due to the pandemic conditions that have led to a lot of speculation. Robin (2021) examines the effect of investor behavior on Friday during the pandemic. The results show that investors lose fewer negative stock returns on Friday

compared to other days. This can be considering that effect of day still occurs during pandemic.

Indonesia and Malaysia were chosen because Malaysia has conditions similar to Indonesia and the same as a developing country (Harlina & Khoiruddin, 2018). Malaysia is a neighboring country to Indonesia and both are in the same scope, namely ASEAN. The comparison between the two is reliable because almost similar economic conditions are also influenced by almost similar cultures. As a result, this research will look at the impact of the COVID-19 outbreak on stock returns in more than one country, as well as the impact of the day on investor behavior's during the pandemic. With this topic, this study can fill a gap in research on stock returns during a pandemic with sample comparisons from different countries, and the effect of the day, that is still a topic of discussion in few studies during a pandemic. The findings of the study will be able to contribute new findings to the day of the week effect and provide a theoretical contribution to stock returns. The findings of this study are also done to support investors in making investment decisions based on the day of the week influence during pandemic.

November 2019
The Wuhan City Health Commission reported the first cases of coronavirus
January 25, 2020
First case confirmed in Malaysia
March 2, 2020
Indonesia government announced first confirmed Covid-19 cases in Indonesia
March 11, 2020
WHO declared the COVID-19 as the global pandemic issue
March 18, 2020
Lockdown policies applied in Malaysia
March 2020
Indonesia's stock market falls to 25% while Malaysia's fall to 20.52%
April 10, 2020
Indonesia's COVID-19 cases reached out 3000 confirmed and 300 death cases, first lockdown regulate implemented in Indonesia

Source: Proceed data, 2021

Figure 1. Timeline of COVID-19 outbreak in Indonesia and Malaysia

## 2. THEORETICAL FRAMEWORK AND HYPOTHESIS

In the face of the enormous impossibility of the coronavirus pandemic's intensity and scope, countries have adopted various containment measures to control the virus's spread, but this has triggered a global economic downturn. The violence and uncertainty surrounding the COVID-19 outbreak caused global financial instability and caused stock market indices drastically fall (P. K. Mishra & Mishra, 2020). Following the pandemic's outbreak, the stock market suffered increased volatility, decreased liquidity, and a significant drop in equities prices. When diseases occur, investors become pessimistic about investment prospects in a given market and sell off stocks in that market (P. K. Mishra & Mishra, 2020). The market sentiment does play a crucial role in explaining the economic and financial effect including the COVID-19 outbreak (Al-Awadhi et al., 2020).

According to panel data, Ashraf (2020) found stock markets responded negatively to the increase of COVID-19 cases. Xu (2021) found COVID-19 outbreak negatively affects the stock market in Canada and US. However, (Narayan et al., 2021) found a positive effect of the COVID-19 pandemic via specific government policies on stock market returns. They suggest that policies mitigate the spread of COVID-19 and subdue public

panics. A previous study by (Robin, 2021) finds that the COVID-19 harms the stock market returns in Indonesia, despite the fact that tight government regulations are in place. Furthermore, Al-Awadhi et al. (2020) also found that daily growth in total COVID-19 confirmed cases and deaths have a negative effect on stock returns in China.

The COVID-19 outbreak has forced the government to choose whether to save the economy or the people first. The government is attempting to prevent the spread of the virus by implementing a lockdown, but the impact is increased unemployment and an economic downturn. The spike in unemployment and income levels in the country makes investors unsure about the expected return on their investments during the pandemic (P. K. Mishra & Mishra, 2020). The higher the number of infected cases and deaths will put pressure on various aspects, such as health, economy, and government. Even though the country's economy is in crisis, the government must act as quickly as possible to halt the spread. Therefore, the increase in this case became one of the factors causing the fall of the stock market index (Robin, 2021). Thus, we developed the hypothesis as:

H<sub>1</sub>: Daily confirmed cases have a negative effect on stock returns

### **The Effect of Day**

This study uses the presence of Monday and Friday to deter any negative effects that occur during the pandemic. Because Mondays and Fridays are the days of the week for which the psychological literature offers the most specific predictions, the major study focuses just on these two days. According to the psychological literature, investor mood rises on Thursdays and Fridays and drops on Mondays (Birru, 2018). Smirlock & Starks (1986) proves that the average return on Monday was notably negative. The average return on Monday was significantly lower than other daily returns (D. B. Mishra, 1999). Meanwhile, various study proves that Friday affects higher return on stock returns due to weekend mood (Birru, 2018).

However, major events are still the main influence that can shake the stock market. Due to the pandemic, the future will be even more unpredictable, causing investors to be frightened in investing. But, if it's linked to the theory of the day effect, does it still have an influence on the investor in stocks even during pandemic? The study by Robin (2021) proved that investors lose their investment in stocks every day, but less fewer on Friday during the pandemic situation. As a result, even during a pandemic, the effect of the day still has an influence in investor behavior's. Therefore, the hypothesis developed as follows:

H<sub>2</sub>: The moderating effect of Monday have a negative effect on stock returns

H<sub>3</sub>: The moderating effect of Friday also affect stock returns negatively

### **3. RESEARCH METHODS**

This study aims to examine the relationship of the COVID-19 outbreak to stock returns in Indonesia and Malaysia. The data of companies included in the Indonesia Stock Exchange (IDX) and Bursa Malaysia (MYX) over the period from the COVID-19 was confirmed (March and January respectively) until December 2020. Data were obtained from Yahoo Finance which includes the stock prices and trading volume with 141.585 observations and 725 stocks for Indonesia also 219.381 observations and 968 stocks for Malaysia. We also obtained the exchange rates of IDR and MYR to USD from Bank Indonesia and Bursa Negara Malaysia respectively. Lastly, we obtained the COVID-19 include of daily confirmed cases and daily death cases data from Our World in Data.

This study unbalanced panel data to avoid a drastically reduced number of samples (Robin, 2021). Incomplete panels are more likely to be the norm in typical economic empirical settings (B. H. Baltagi & Song, 2006). Some of the reasons of unbalancedness in the data occurs because not all stocks are complete for all of observation days (some are new listings, delisting, etc) and different countries had different days of observation caused of public holidays. These typical scenarios lead to "unbalanced" or "incomplete" panels, however, the nominal size of the standardized version of these tests is closer to the true significance value and is recommended (B. H. Baltagi & Song, 2006). Baltagi (2021) suggest that panel data regression reduces estimation bias and multicollinearity, controls for individual heterogeneity, and identifies the time-varying relationship between dependent and independent variables.

### Variables Measurement

COVID-19 was measured by daily confirmed cases ( $NewCases_{t-1}$ ) and daily death cases ( $DeathCases_{t-1}$ ). Both were measured by the daily data and lagged one day (t-1) (Narayan et al., 2021; Robin, 2021). The stock return was measured by simple return formulas from daily stock prices, as follows:  $Return_t = \frac{Price_t - Price_{t-1}}{Price_{t-1}}$ .

The control variable of this study consists of trading volume ( $Volume_{t-1}$ ), previous stock returns ( $Return_{t-1}$ ), the exchange rate ( $Rate_{t-1}$ ), Monday ( $Monday_t$ ), and Friday ( $Friday_t$ ). All the control variables are lagged one day. Linsmeier, Thornton, Venkatachalam, & Welker (2002) research found that trading volume is related to the changes in market prices. The trading volume uses to control the stock return movement during the pandemic. Campbell, Grossman, & Wang (1993) indicates that trading volume can be the basis for an investor to see the trend of stock returns through the magnitude of demand based on trading volume. Similar factor, Ajayi, Friedman, & Mehdiyan (1998), suggest exchange rate and stock may be related because of some underlying economic variables.

The estimated stock returns for this study were developed as:

$$\rightarrow Return_{i,t} = \alpha_0 + \alpha_1 NewCases_{i,t-1} + \beta X_{i,t-1} + \mu_t + \epsilon_{it} \quad (1)$$

$Return_{i,t}$  is representing as a stock return of i at day t, while  $X_{i,t-1}$  represent the control variables that include trading volume, previous stock return, exchange rate, Monday, and Friday. While  $\epsilon$  is the error of the term i and t.

## 4. ANALYSIS AND DISCUSSION

The summary of the data is shown in Table 1. All the variables (exclude Monday and Friday) are winsorized at 1% and 99%. It can be seen the average return on Indonesian stock is very low (0,15%) meanwhile Malaysian stock market shows a high deviation level. The average new case and death cases for both countries show a huge difference. The maximum number of daily death cases in Malaysia are 10 peoples meanwhile compared to Indonesia reach 215 peoples died. From this statement can be assumed COVID-19 was more infected in Indonesia and caused a slow cycle of its stock return.

### COVID-19 on Indonesia and Malaysia Stock Return

Table 2 reports the result of the COVID-19 outbreak on the Indonesia Stock Exchange and Bursa Malaysia market. The coefficient -0.000 indicates there is a strong negative effect of COVID-19 on Indonesia's stock return. The results prove that stock returns in Indonesia are highly sensitive to the increase in the number of confirmed cases

of COVID-19. Investor sentiment was driven by the emergence of infectious diseases (e.g., SARS, Influenza A (H1N1), polio, and Ebola) (Chia et al., 2020). COVID-19 cases are similar to SARS and MERS cases, in that outbreaks of infectious diseases can cause significant losses to the economies of affected countries (Chia et al., 2020).

*Table 1. Summary statistics*

	<b>N</b>	<b>Mean</b>	<b>Min</b>	<b>Max</b>	<b>Std. Dev</b>
<b>Indonesia's</b>					
Return <sub>t</sub>	141585	0,00154	-0,06977	0,21212	0,04003
New Cases <sub>t-1</sub>	140864	2396,15800	0	7903	2013,36400
Death Cases <sub>t-1</sub>	140874	72,61236	0	215	49,24890
Volume <sub>t-1</sub>	114181	1.36e+07	100	2.76e+08	4.08e+07
Return <sub>t-1</sub>	140797	0,00143	-0,06987	0,20567	0,03869
Rate <sub>t-1</sub>	140874	14749,04	14014	16556	598,29560
Monday <sub>t</sub>	140159	0,20720	0	1	0,40530
Friday <sub>t</sub>	140159	0,18186	0	1	0,38573
<b>Malaysia's</b>					
Return <sub>t</sub>	218113	3,07671	-0,99006	100	13,34438
New Cases <sub>t-1</sub>	218411	337,16660	0	2062	539,90520
Death Cases <sub>t-1</sub>	218411	1,40999	0	10	2,09228
Volume <sub>t-1</sub>	188823	5797585	1000	1.14e+08	1.61e+07
Return <sub>t-1</sub>	218411	2,63321	-0,98990	97,75	11,99586
Rate <sub>t-1</sub>	218411	4,30428	4,11250	4,92	0,19010
Monday <sub>t</sub>	218411	0,18941	0	1	0,39184
Friday <sub>t</sub>	218411	0,19385	0	1	0,39531

Winsorized at 1% and 99%

Source: Proceed data, 2021

Meanwhile, it was less influential in Malaysia's stock market. The substantially varied number of instances from the two nations exemplifies this dramatic variance. Malaysia has fewer COVID-19 cases might also imply that COVID-19 has less of an impact on Malaysian stock returns. These findings are in line with Chia et al. (2020) that found COVID-19 through daily death measurement had no significant impact on Malaysia stock return.

This represents the condition of the increase in cases where the condition of stock returns can be affected. In Indonesia, COVID-19 cases are much higher than in Malaysia. High cases caused various sectors of the economy to suffer, as well as stock returns. Stock market stabilization should be an important part of policy as the economy recovers from the COVID-19 crisis (Ciner, 2021). Meanwhile, the global stock market has fallen by up to minus twenty five percent (Ciner, 2021). This clearly shows that investors' pessimistic sentiment regarding the COVID-19 outbreak is a significant factor affecting the performance of the stock market index (P. K. Mishra & Mishra, 2020). The high number of COVID-19 cases in Indonesia affected the economic cycle and impacted stock performance causing concerns to the investor. This finding is similar with (Al-Awadhi et al., 2020; Ashraf, 2020; Robin, 2021; Xu, 2021).

Table 2. Daily confirmed cases on stock return

	(1)	(2)	(3)	(4)	(5)	(6)
<b>Indonesia's</b>						
New Cases <sub>t-1</sub>	-0.0001*** (-4.73)	-0.0001*** (-5.01)	-0.0001*** (-5.02)	-0.0001*** (-4.45)	-0.0001*** (-4.91)	-0.0001*** (-2.84)
Volume <sub>t-1</sub>		0.0001** (2.41)	0.0001** (2.57)	0.0001** (2.56)	0.0001*** (2.62)	0.0001*** (2.63)
Return <sub>t-1</sub>			-0.0078 (-1.64)	-0.0081* (-1.72)	-0.0081* (-1.72)	-0.0084* (-1.77)
Rate <sub>t-1</sub>				0.0001*** (12.90)	0.0001*** (12.78)	0.0001*** (12.77)
Friday <sub>t</sub>					0.0001 (0.34)	
Monday <sub>t</sub>						0.0018*** (5.26)
Constant	-0.0031*** (-7.35)	-0.0038*** (-7.11)	-0.0038*** (-7.20)	-0.1020*** (-13.57)	-0.1015*** (-13.46)	-0.1015*** (-13.51)
Control for:						
Month-FE	YES	YES	YES	YES	YES	YES
N	140.862	114.176	114.169	114.169	113.582	113.582
Adjusted R2	0.0029	0.0034	0.0035	0.0059	0.0058	0.0061
<b>Malaysia's</b>						
New Cases <sub>t-1</sub>	0.0001 (0.38)	-0.0000 (-0.00)	-0.0000 (-0.08)	0.0000 (0.01)	0.0000 (0.03)	0.0000 (0.04)
Volume <sub>t-1</sub>		0.0001*** (6.38)	0.0001*** (6.02)	0.0001*** (6.02)	0.0001*** (6.02)	0.0001*** (6.02)
Return <sub>t-1</sub>			0.0517*** (11.40)	0.0517*** (11.40)	0.0517*** (11.40)	0.0517*** (11.40)
Rate <sub>t-1</sub>				-0.3271 (-1.28)	-0.3232 (-1.26)	-0.3313 (-1.29)
Friday <sub>t</sub>					-0.0846 (-1.04)	
Monday <sub>t</sub>						-0.0310 (-0.38)
Constant	2.4175*** (11.43)	2.6365*** (10.84)	2.5298*** (10.40)	4.1119*** (3.26)	4.0937*** (3.25)	4.1322*** (3.28)
Control for:						
Month-FE	YES	YES	YES	YES	YES	YES
N	217.143	187.605	187.605	187.605	187.605	187.605
Adjusted R2	0.0002	0.0004	0.0026	0.0026	0.0026	0.0026

\* Significance level at 1%, \*\* at 5%, \*\*\* at 1%

Source: Proceed data, 2021

Correspondingly, Malaysia has very few COVID-19 cases than Indonesia, making COVID-19 cases in Malaysia less influential on stock returns on the Malaysia Exchange. Studies from Chia et al. (2020) show that the government's efforts to control the COVID-19 outbreak that accompanies a series of stimulus packages to help the needy and to stimulate the country's economic activity had a positive sentiment from the investor. This is seen from the perspective of investors which see the opportunity for economic revival because efforts to spread the COVID-19 outbreak in Malaysia are more effective when compared to the number of cases. As a result, the hypothesis formation in this study is proven.

**Moderating Effect of day**

Table 3 shows the moderating results of the day. The results show that the moderating effect of Monday and Friday can affect stock returns even during the pandemic in Indonesia. As expected, Monday affects negatively on stock return in infectious diseases events. Therefore, H2 was accepted. Meanwhile, the effect of Friday affects positively stock returns even during the pandemic. This finding was in contrast with our H3. It can be supported by previous literature that the mood of the day can affect the investor sentiment even a major event was happening (Robin, 2021). Smirlock & Starks (1986) said the weekend effect is extensive. This statement was in line with their findings that return on Monday was affected by Friday average returns. It can be shown the effect of the day (Monday and Friday) can't affect Malaysia's stock returns in the pandemic.

Table 3. Moderating effect of day

	Indonesia		Malaysia	
	Monday	Friday	Monday	Friday
New Cases <sub>t-1</sub>	-0.0001*** (-4.43)	-0.0001*** (-7.48)	0.0001 (0.24)	-0.0001 (-0.12)
Monday <sub>t</sub>	0.0058*** (10.90)		0.0154 (0.16)	
New Cases <sub>t-1</sub> X Monday <sub>t</sub>	-0.0000*** (-10.55)		-0.0001 (-0.88)	
Friday <sub>t</sub>		-0.0052*** (-8.93)		-0.1356 (-1.43)
New Cases <sub>t-1</sub> X Friday <sub>t</sub>		0.0001*** (11.88)		0.0002 (0.95)
Volume <sub>t-1</sub>	0.0001*** (2.71)	0.0001*** (2.67)	0.0001*** (6.03)	0.0001*** (6.02)
Return <sub>t-1</sub>	-0.0088* (-1.86)	-0.0081* (-1.71)	0.0517*** (11.40)	0.0517*** (11.40)
Rate <sub>t-1</sub>	0.0001*** (12.40)	0.0001*** (13.50)	-0.3285 (-1.28)	-0.2905 (-1.13)
Constant	-0.0998*** (-13.27)	-0.1056*** (-14.06)	4.1190*** (3.27)	3.9356*** (3.11)
Control for:				
Month-FE	YES	YES	YES	YES
N	113582	113582	187605	187605
Adjusted R2	0.0072	0.0073	0.0026	0.0026

\* Significance level at 1%, \*\* at 5%, \*\*\* at 1%  
Source: Proceed data, 2021



**Robustness tests of COVID-19**

Table 4 represents the robustness test of COVID-19 proxy using daily death cases. It is important to point out that there are a lot of factors driving stock returns. Moreover, independently running the model for each country implies a latent assumption. The assumption is that the two countries are totally independent (Xu, 2021). The objective of the test is to avoid the bias measurement variable of COVID-19. The previous empirical test uses a daily confirmed test as COVID-19 measurement, to test the robustness we replace daily confirmed cases (New Casest-1) with daily death cases (Death Casest-1) as shown in Table 4. The results prove there is no bias with different proxy to test the relation of COVID-19 on stock returns in Indonesia.

This robustness test strengthens studies related to the relationship between COVID-19 cases and stock returns. Whether it's measurement new cases or death cases, both of them have the same impact on stock sentiment. An unpredictable major event like this has an impact on investors. The uncertainty surrounding the COVID-19 cases worries stock markets and their participants (Xu, 2021). This strengthens our findings that the increase of COVID-19 influences negatively on stock return (case in Indonesia).

*Table 4.* Robustness test

	(1)
Death Cases <sub>t-1</sub>	-0.0001*** (-13.02)
Volume <sub>t-1</sub>	0.0001*** (2.67)
Return <sub>t-1</sub>	-0.0083* (-1.76)
Rate <sub>t-1</sub>	0.0001*** (13.38)
Monday <sub>t</sub>	0.0017*** (5.49)
Constant	-0.1059*** (-14.09)
Control for:	
Month-FE	YES
N	113.585
Adjusted R2	0.0074

Source: Proceed data, 2021

**5. CONCLUSION**

This study discusses the effect of COVID-19 on stock return cases taken from Indonesia and Malaysia. We found different results in both countries. Compared to Indonesia, the COVID-19 cases in Malaysia are lower. COVID-19 seems less influence on Malaysia's stock return. In contrast, Indonesia's stock return is strongly related to the increase of COVID-19 cases. If COVID-19 cases are increasing, it will decrease the stock return in Indonesia. The robustness test to avoid bias measurement and the results show the same output.

To test the effect of the day through stock return during the pandemic, we are using the moderate effect of Monday and Friday. A previous study found the effect of weekend

and investor mood can affect the stock return on Monday and Friday. But there is a study that argued whatever the day is still affects negatively on a stock return during pandemic diseases. The result of this study found that Monday affects negatively on stock return, but Friday is the opposite. Even in pandemic diseases the weekend effect still considers the investor sentiment.

## **6. LIMITATIONS**

This study is using two countries to compare the COVID-19 on stock return. Each country may have different infected cases and may affect the results in contrast. Comparing two countries with similar COVID-19 cases or similar graphs will minimize bias in the results. Choosing a country with almost identical infected cases can provide more reliable findings to compare.

This study does not use the company sector classification. A classification by firm sector can give clearer and more accurate comparative findings. By looking at the differences between sectors, it can provide clearer knowledge and input because not all sectors can be evenly matched. During a pandemic, the transportation and health sectors, for comparison, will provide quite different outcomes. Because in plain view, the transportation sector will have a negative impact because of the government's prohibition on traveling, while the health sector will have a positive impact because health issues are being emphasized during the pandemic.

## **7. SUGGESTIONS**

Based on the results of research, discussion, and conclusions, we can provide recommendations to investors and interested parties for effective re-evaluation. During a pandemic, the results are mixed due to regional differences, cases and sentiments will be different. Negative market sentiment regarding COVID-19 cases in Indonesia in 2020 makes it a suggestion for investors to think and evaluate carefully. Whether this is the right moment to invest when the market price is discounting or withdrawing from investing this year, the decision will be returned to investors.

This study contributes to stock returns literature. The Coronavirus disease (COVID-19) hurt the capital market in Indonesia. Also, this study helps to support study about the day effect still occur in the pandemic event, Monday found to be negative effect market while Friday affects positively due to weekend mood of investors. It is expected that this study will attract future researchers who will be able to conduct more research on the topics covered. Additional studies are expected to enable a broader analysis of the state of the market during a pandemic or other event in a country.

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