

## **CHAPTER II**

### **THEORITICAL BACKGROUND**

#### **2.1 Literature Review**

##### **2.1.1 Corona Virus (COVID-19)**

The 2019-nCoV or Corona Virus is officially called SARS-CoV-2, and the disease is named COVID-19. Coronaviruses (CoVs) are named for the crown-like spikes on their surface and belong to the family Coronaviridae within the order Nidovirales. Coronaviruses broadly infect vertebrates, including humans, birds, bats, snakes, mice, and other wild animals (Weiss & Leibowitz, 2011). Since the mid-1960s, there are several human coronaviruses (HCoVs) have been identified. Four commonly disclosed HCoVs are 229E, OC43, NL63, and HKU1 (Na Zhu, 2020). In one study, 229E and OC43 accounted for roughly 15–29% of respiratory pathogens with approximately low virulence in humans (Su, et al., 2020). Another epidemiological study in adults considers that coronavirus causes about 15% of common colds. Other severe causes of upper respiratory infections include influenza virus, rhinovirus, parainfluenza virus, Group A Streptococci, EBV, and respiratory syncytial virus (RSV). The three other tensions of HCoVs, relentless acute respiratory syndrome coronavirus (SARS-CoV), Middle East respiratory syndrome coronavirus (MERS-CoV), and relentless acute respiratory syndrome coronavirus 2 (SARS-CoV-2), have different pathogenicity and lead to higher mortality rates in human populations (Baric, 2020). Both SARS-CoV and SARS-CoV-2 were first recognized in China.

This world epidemic started in Wuhan at the end of December 2019, Wuhan Municipal Health Commission, China, revealed a cluster of pneumonia cases in Wuhan, Hubei Province. A novel coronavirus was eventually identified. At the time, authorities assumed the virus stemmed from something sold at a city's wet market. However, it is now clear that early in what is now a pandemic, some infected people had no contact with the market. That included one of the earliest cases from December 1, 2019, in an individual who had no link to that seafood market (Bryner, 2020). Reportedly to (World Health Organization, 2020), this virus globally has led to the confirmed cases of 40.665.438 people in all the world, including 1.121.843 deaths as of 5:47 pm CEST, October 21, 2020. As of this date, the number of confirmed and suspected cases is still increasing, as is the number of deaths, although there is a significant increase in the number of recovered patients.

The disease is mostly affecting the elderly or those with an underlying chronic disease or immunosuppressed state. Most people affected with the COVID-19 virus will feel mild to moderate respiratory illness and recover without desiring special treatment. Older people and those with underlying medical problems like cardiovascular disease, diabetes, chronic respiratory disease, and cancer are more likely to develop severe illness (World Health Organization, 2020). Certain forms transmit the virus, including close person-to-person contact, aerosol transmission, and conveyance by touch (Malik, 2016). The virus is considered to be transmitted to other people by respiratory droplets during coughing or sneezing. Droplet transmission can occur when an infected person sneezes or coughs, at which point virus-containing droplets are driven up to 3 feet through the air and deposited on the mouth's mucous

membranes, nose, or eyes of persons who are nearby. However, a recent report suggests that transmission through the ocular surface is also possible. The other avenues for the spread of the virus are shaking hands with an infected person, touching an infected object or surface, frequent touching of the nose or mouth or coming into contact with a patient's excreta (Lu, Liu, & Jia, 2020). Moreover, this is the severe third virus outbreak in less than 20 years, following SARS in 2002-2003 and MERS in 2012.

### **2.1.2 Stock Return**

Since the emergence of the current COVID-19 epidemic, global stock return have encountered trillion dollar losses. This is because stock return and economic activities are fraught with diverse risks such as the notable 2008 financial crisis that brought global stock return and financial markets melting (Dang, 2020). Studies have also considered the impact of the ongoing COVID-19 pandemic. Many of them suggest that reactions to COVID-19 are driven by behavioural factors such as fear and unfamiliarity. For instance, (Gormsen & Koijen, 2020) find that the fall in share prices far exceeds the expected reduction in growth, implying that other factors such as a shift in risk aversion is impacting market reactions. (Ramelli & Wagner, 2020) document that the magnitude of the returns is too great to be driven by changes in cashflows, but rather by changes in the discount rate due to increased uncertainty. Others find that prior experience with previous outbreaks, such as SARS, impacts market reaction. (Ru, Yang, & Zou, 2020) document that countries with SARS experience react with faster and sharper drops in market prices, while (Hassan, van Lent, Hollander, Tahoun, &

Webster, 2020) show that firms with SARS experience are more positive in their ability to deal with COVID-19.

The stock return can be an apparatus tool for society. It provides a particular view of the expected future of a firm and the economy. That is because the value of a firm derives from all future expected cash flow. It is modified to the present to adjust for time and uncertainty. Following (El-Wassal, 2013), the stock return's leading task is to play a system for revolutionizing savings into financing for the actual sector. From a theoretical point of view, stock return can quicken financial development by mobilizing and boosting domestic reserve funds and progressing the amount and quality of investment. Way better savings mobilization may increment the rate of saving, and if stock return apportion investment funds to venture ventures yielding higher returns, the expanding rate of return to savers will make savings more alluring. Thus, more savings will channel into the corporate segment. Proficient stock return make enterprises compete on a break-even with the premise for funds and help make investment more efficient.

Return of stock is the income that investors are entitled to for investing their funds. Return allows investors to compare the actual or expected returns provided by various investments at the desired rate of return. A rational investor will pay close attention to stock returns because stock returns are an indicator to determine the success of an investment (Yocelyn & Christiawan, 2012).

The Total stock return or combined stock return includes the total return on the investor's stock investment (Bringham, Eugene, & Houston, 2011). Typically the firm

will declare a dividend for the stock annually, and the value of the stock could increase, though it may also decrease. Total return ratio is generated denoted by the formula:

$$\text{Total Stock Return} = \frac{(P_1 - P_0) + D}{P_0}$$

$P_1$  = Initial Stock Price

$P_0$  = Ending Stock Price

D = Dividends

The formula for the total stock return is the appreciation in the price plus any dividends paid, divided by the original price of the stock. The income sources from a stock is dividends and its increase in value. The first portion of the numerator of the total stock return formula looks at how much the value has increased ( $P_1 - P_0$ ). The denominator of the formula to calculate a stock's total return is the original price of the stock which is used due to being the original amount invested.

The relation between stock prices and economic activity is circular. On the one hand, stock prices depend on a firm's performance and its growth prospects so that to the degree that a firm's performance improves and the rate of return increases, stock prices rise in turn. On the other hand, stock prices should reflect the present discounted value of expected future dividends or expected future growth. From this perspective, stock prices serve as a leading indicator of future changes in real economic activity. Effectively, the stock return is an incentivized survey of future expected outcomes. It is precisely in complex and fast-evolving situations that the stock return provides beneficial information (Wagner, 2020).

### 2.1.3 Corona Virus in Indonesia

On March 2, 2020, Indonesia President Joko Widodo announced the first two confirmed cases in Indonesia after diagnosing two women living in Depok, West Java, who contacted a Japanese man coming from Malaysia who was infected with the virus (WHO Indonesia, 2020). Ministry of Health (MoH), as well as the National Board for Disaster Management (BNPB) to advance a national response plan for COVID-19, including critical preparedness and response actions, with the whole of society approach. Confirmed cases have been reported throughout the archipelago and classified into zones to track a risk-zone area. The entire county has divided into several zones, such as the red zone, orange zone, yellow zone, and green zone—the zone based on the number of infected individuals residing in these regions. The red zone is the area with substantial numbers of mild cases; the following orange zone are areas with moderate risk, and the yellow zone is the area with a low risk of positive cases. Thus, the green zone is the area that has no positive cases and is not affected by COVID-19. Therefore, tightening it to enter other areas makes it more difficult to suppress the spread of the virus. PT Jasa Marga noted that the volume of motorized vehicle traffic on the toll road in the Eid al-Fitr 2020 period decreased 62 percent from the previous year (Kurniawan, 2020).

Effectively in mid-March 2020 Covid-19 succeeded in forcing 180 countries to close their schools and universities until an unspecified time as an initiative to slow the spread of the virus that may reduce in casualties due to COVID-19 infection. According to (Abidah , Hidayatullaah, Simamora , Fehabutar, & Mutakinati, 2020), the absence of Indonesia' students in the classroom due to the national policy of learning from home

for corona virus reasons, this indeed it needs special studies to ascertain whether schools can also be a place to spread viruses such as normal cases of spread in a crowd outside. Investigating the impact of the spread of the corona virus on learning achievement among students, (Owusu-Fordjour, Koomson, & Hanson, 2020) has suggested the low learning outcomes of students in some school and university were main cause of low learning achievement. The study revealed that more students could have passed their home learning period with lack of facilities and parents supervision. Similarly to most Indonesian families from low economic background who could not effort to learning supports as needed to succeed could be a cause most student's learning hardship from home. This is a reality in many part of school in Indonesia. Ideally, it becomes the national concern that all stake holders to help solve this learning gap among Indonesia students.

In late March 2020, the Indonesian Task Force for COVID-19 (Gugus Tugas Percepatan Penanganan COVID-19) issued the Guidelines for Medical Rapid Response and Public Health Aspects of COVID-19 in Indonesia. The guide targets the medical force and general public in terms of informing the means to mitigate the impacts and death rates. Information includes protocols for rapid tests using RDT, lab testing, patient handling, and out- reach/communications means. The protocols for rapid testing and lab testing recognize three levels of risks: without symptoms (asymptomatic), person under surveillance (ODP/Orang Dalam Pemantauan), and patient under surveillance (PDP/Pasien Dalam Pengawasan). The test involves isolation of the suspected person, rapid testing, and ultimately, when required, PCR. Therefore, after a



year in a pandemic, on 2021, Indonesia' government started to give the COVID-19 vaccination.

#### 2.1.4 National governments' responses

On March 31, 2020, , the President of Indonesia issued one decree and two fundamental regulations on the last day of March 2020 as this article goes to print. These regulations include (Table 2.1): First, regulation on National budgeting policy and the stability of budgeting system for Covid-19 pandemic disaster and/or Managing threats for national economy and/or the stabilisation of budgeting system; Second, a declaration of community health emergency situation for Covid-19; Third, big scale social restriction for accelerating COVID-19 eradication.

Issuing agency	Government regulation
Health sector	<ol style="list-style-type: none"> <li>1. Protection of health workers.</li> <li>2. Upgraded 132 referral hospitals for the treatment of Covid-19 patients.</li> <li>3. Incentives for doctors.</li> <li>4. Compensation for the death of medical personnel.</li> </ol>
Social sector	<ol style="list-style-type: none"> <li>1. Logistical support for basic needs.</li> <li>2. The pre-employment cards.</li> <li>3. Exemption of 3 months of electricity costs of 450 VA and subsidized for 900VA.</li> </ol>



Fiscal Policy and Tax Incentives	<ol style="list-style-type: none"> <li>1. The relaxation of the maximum limit of the APBN deficit.</li> <li>2. Exemption of Import taxpayers for 19 specific sectors.</li> <li>3. Decrease the corporate income tax rate to 22%.</li> <li>4. Postponement of principal and interest payments for all People's Business Credit schemes.</li> </ol>
Export-Import Trade Policy	<ol style="list-style-type: none"> <li>1. Simplified export restrictions.</li> <li>2. Simplification of limited prohibitions</li> <li>3. Acceleration of export-import process services through the national logistics ecosystem.</li> </ol>
Micro small and Medium Enterprises (UMKM)	<ol style="list-style-type: none"> <li>1. Providing stimulus for debtors through credit quality assessment of up to 10 billion based on accuracy of payment</li> <li>2. Restructuring for all loans regardless of the credit limit.</li> </ol>
Big scale social restriction (PSBB)	<ol style="list-style-type: none"> <li>1. Government Regulation No 21/2020 about Big Scale Social Restriction for Accelerating COVID-19 Eradication.</li> <li>2. Regulation of Health Ministry No 9/2020 about big scale social restriction guidelines for the acceleration of handling COVID-19.</li> <li>3. Decision of Health Ministry approved the big scale social restriction to be implemented in DKI Jakarta.</li> </ol>

Law sector	The Ministry of Law and Human Rights (Kemenkumham) has released 22,158 prisoners and children.
Other Policies	<ol style="list-style-type: none"> <li>1. Built quarantine facilities to control Covid-19 infection at Galang Island.</li> <li>2. Wisma Atlet Kemayoran was inaugurated as a Covid-19 emergency hospital.</li> </ol>

Table 2.1 List of regulations created to handling COVID-19

Source: (<https://kemlu.go.id/>)

### 2.1.5 Jakarta Lockdown

The continuously rising number of confirmed novel coronavirus (COVID-19) cases in the province of DKI Jakarta, which is the political and economic heart of Indonesia, has made the DKI Jakarta Provincial Government decide to impose a partial lockdown (heavy social and business restrictions, locally known as 'PSBB'). To control the spread of this highly contagious disease, the majority of countries worldwide, including India, imposed quarantine and social isolation. Quarantine and social isolation can be major stressors that can contribute to widespread change in the population's lifestyle. The implementation of partial lockdown is carried out during the most extended incubation period, 14 days. If there is still evidence of spreading in the form of new cases, it can be extended within 14 days from discovering the last case. The partial lockdown in Jakarta takes place twice phases.

The first phase was started on April 10, 2020, to April 23, 2020. The second phase of lockdown in Jakarta was re-imposed on June 1, 2020 with weighs easing

lockdown to save the economy. The second phase itself start on June 1, 2020 until June 15, 2020 (Aditya, 2020). Thus, the reopening of Southeast Asia's largest economy in phases starting from June 15, 2020, as job losses accelerate, and businesses struggle to survive amid strict social-distancing rules against coronavirus. The partial lockdown was imposed in large cities, including the greater Jakarta area.

Problematically, since late-August 2020, it has become increasingly common to see over 1,000 newly daily confirmed COVID-19 cases in Jakarta. The increase of the COVID-19's patient is bringing pressure on medical facilities. Nevertheless, several regulations have become much more stringent on partial lockdowns in the second phase, both those that apply to business activities, offices, worship, community activities, to transportation. Although, in general, the regulations that apply to the second phase of Jakarta partial lockdown resemble those of the first phase of the partial lockdown period, there are still several differences. Besides, there are some new technical provisions in the second phase of partial lockdown. For example, there is the Decree of the Head of Jakarta Transportation Agency Number 156 of 2020, which contains technical provisions regarding restrictions in the transportation sector (Idhom, 2020). Thus, the Government has improved COVID-19 testing to counts of confirmed cases to window onto the pandemic and its spreading.

### **2.1.6 Global Economic Impact of Virus Outbreak**

The impact of the pandemic on society and the economy can be witnessed from the lockdown of cities worldwide, labour mobility restrictions, travel bans, airline suspensions, and, most importantly, the slowdown of the economy. The COVID-19 crisis went global from February 21 to March 24, 2020, and still, the number of cases is proliferating every day. It is predicted that the COVID-19 outbreak will have significant ramifications for global GDP growth. (Siu & Wong, 2004) studied the spread of Hong Kong's SARS epidemic, addressed its economic impact, and suggested that the most severe negative impacts were seen on the consumer side, with the short term severely affected by local expenditure and the export of tourism and air travel-disclosed services. The economy did not face any supply shock, as the manufacturing base present in the Delta of the Pearl River was straightforward, and products were regularly exported to Hong Kong (Liu, Manzoor, Wang, Zhang, & Manzoor, 2020).

(Azimli, 2020) also researched the impact of coronavirus on the degree and structure of risk-return dependence in the US by using quantile regression. The results point out that following the COVID-19 outbreak, the degree of dependence between returns and market portfolio has lifted in the higher quantiles that lower diversification benefits. According to (Baker, Bloom, & Davis, 2020) in his study, found that there is a dramatic fall in oil prices by 70-80 percent. It is severe than the financial crisis of 2008/2009. The COVID-19 pandemic is a severe issue for the economy as the country is highly dependent on oil revenue. There is a massive gap between the depreciated exchange rate, i.e., 20 percent, and the fall in oil prices, i.e., 70-80 percent. According to (Herfero, 2020), the third wave of the COVID-19 pandemic has hit the emerging

economy worst, resulting in a decrease in business activities. This unprecedented shock increases the risk-averse nature, which increases the financial cost.

According to International Labour Organization (ILO), almost 25 million people worldwide could lose their jobs— loss of workers' in-come of as much as USD 3.4 trillion (International Labour Organization, 2020). Estimates suggest the U.S. would lose three million jobs by mid-summer in 2020; the trend in Europe and other parts of the world will be similar (Siddiqui, 2020). The COVID-19 will have a more profound effect on developing countries, making it much more difficult for them to implement effective stimulus without facing binding foreign exchange constraints (UNCTAD, 2020). Most vulnerable countries have weak health infrastructure, heavily dependent on trade and tourism sectors, are heavily indebted, and depend on unstable capital flows (World Bank, 2020). Controlling the COVID-19 outbreak will revive the economy, but the risk of continued financial stress is very high even after 2020. Further, it has also been estimated that poverty is likely to increase by around 11 million people. Although the economic impact is continuing and is increasingly unpredictable, it is clear that developing economies will get worse before it gets better.

### **2.1.7 National Economic Growth Impacted by COVID-19**

Based on the Government Press Release (Bank Indonesia, 2020), The COVID-19 pandemic sceptically crashed national economic growth in Indonesia during the second quarter of 2020. Therefore, Indonesia's economy contracted 5.32% (YoY) in the Q2/2020 period after expanding 2.97% (YoY) in Q1/2020. The recent recession is consistent with global economic weaknesses deriving from the COVID-19 pandemic

and regulation parts in the form of large-scale social restrictions to break the domestic chain of transmission.

Domestic economic growth has forborne across all GDP components from the expenditure side. Household consumption contracted 5.51% (YoY) compared with positive 2.83% (YoY) in the first quarter of 2020. Furthermore, investment posted an 8.61% (YoY) contraction, down from 1.70% (YoY) in the previous period. Muted government stimuli in line with seasonal trends have also fed through to a 6.90% (YoY) contraction of government consumption, falling steeply from 3.75% (YoY) in the first quarter of 2020. Besides, exports experienced an 11.66% (YoY) contraction in the reporting period due to the shrinking global economy and sliding international commodity prices. On the other hand, import sides recorded a 16.96% (YoY) contraction in the reporting period.

Indonesian Ministry of Finance noticed at least eight losses caused by the outbreak of the virus. Until 11 April, more than 1.5 million workers layoff or terminated employment and was devised. Where 1.2 million workers appeared from the formal sector, 265,000 from the informal sector. Secondly, the Indonesian Purchasing Managers Index (PMI) underneath the 50 levels is 45.3 in March 2020. Thirdly, more than 12,703 flights at 15 airports were cancelled throughout January-February, with 11,680 domestic flights and 1,023 international flights. Fourth, over Rp 207 billion lost revenues in the air service sector, with roughly Rp 48 billion lost donated by China's flights. Fifth, tourist numbers diminished to 6,800 per day, mostly tourists from China. Sixth, the Indonesian Hotel and Restaurant Association estimates that declining occupancy rates around 6,000 hotels in Indonesia can reach 50%. This

decline could affect the decline of foreign tourism exchange more than half a year ago. Seventh, Indonesia's imports throughout January-March 2020 decreased 3.7% year to date (YTD). Eighth, inflation in March 2020 reported at 2.96% year on year (YoY) was donated by gold price increases in jewellery and some food prices soaring. However, there is deflation on various chili commodities and air freight rates (Santoso, 2020).

In general, the impact of COVID-19 is quite significant to the Indonesian economy. The global economic throttling and manufacturing industry performance will have an impact on export performance in Indonesia. The decline in economic productivity is 20 to 25 percent, which led to China's 5 percent economic growth, led to various conditions (CSIS Indonesia, 2020). All economic sectors accomplished a contraction in the second quarter of 2020, excluding information and communications, education, financial services, health, water supply, and agriculture. Economic moderation has primarily driven by transportation and storage, trade and accommodation, and manufacturing. In contrast, the information and communications sector posted more substantial growth in line with greater digital media uptake in response to Work from Home (WFH) and School from Home (SFH) protocols. Furthermore, the agricultural sector has been boosted by the ongoing harvesting season.

### **2.1.8 Impacts on Stock return Performances**

Given the COVID-19 pandemic and the considerable amount of related news, stock return worldwide have suffered enormous losses in the first three months of 2020. According to Bloomberg, “through 1 p.m. on March 18, the S&P 500 index was off 27% for the year to date, Germany’s DAX was down 38%, and Japan’s Nikkei was off



29%.” Consequently, governments worldwide have undertaken a series of stimulus packages to offset the pandemic's damages and regain investor's confidence. Although the major stock return indexes have partially recovered in the middle of April 2020, a great deal of financial uncertainty remains.

Accordingly, the stock return historical performance has appeared in many research literature, which document the effect of influenza and/or different types of epidemics on stock return and general economic performance of stock return and nations across the world. Several findings have emerged from previous studies which examined influence of past epidemics on the stock return; for instance some researchers found that SARS weakened regional stock return in the Asian region (Chen, Lee, & Lin, 2018) A recent research by (Kim, Kim, & Lee, 2020) explored the impact of disease pestilence episodes on the financial growth of the café business. The study applied nine events on four pandemic sickness episodes during 2004-2016. The event study technique and Mann-Whitney U test were utilized to evaluate the impact of three firm qualities (brand dependability, promoting impacts, and administration types) on firms' value. This investigation affirmed the negative impact of epidemic episodes on the café business, and recognized how all the three firm qualities serve as hazard relieving factors. Another related investigation on the effect of flu epidemic on stock return analysis by (Dong, 2014) gives an immediate proof that constrained consideration brought about by exogenous interruption affects the stock return participants and general investors. In particular, they looked at the progressions of expert forecast conduct during flu pandemics when investigators are confronting

limitations caused by interruption of encountering influenza side effects by their relatives, family members, associates, and themselves.

Some researchers (Chen, Lee, & Lin, 2018) examined the effect of severe acute respiratory syndrome (SARS) pandemic on the link between China and other four Asian stock exchange markets. They applied two main analytical methods namely the time varying cointegration model and the difference-in-difference method to investigate if SARS pandemic affect the long-run relationship between China's stock return and other four stock return in Asia five years before and after the SARS pandemic. They found that indeed, the SARS epidemic affect the stock price in these markets and that it reduced the relationship between four Asian markets and the Chinese stock return. They concluded that disease epidemics can affect the financial integration or linkages between regional economic block of countries.

Generally, the financial crisis or pandemic crisis will cause asset prices to plunge across markets and create speculative runs and capital flight, leading to considerable market instability (Wen, Wei, & Huang, 2012). Moreover, it will produce a massive loss of confidence in investors, which will jeopardize economic growth. In short, no previous infectious disease episode led to daily stock return swings that even remotely resemble the response in 2020 to COVID-19 developments. While other periods have seen large declines or increases in equity markets over several weeks or months, the COVID-19 period stands out for a too high frequency of sizeable daily stock return moves.

(Shehzad, Xiaoxing, & Kazouz, 2020) conducted a study to analyse the non-linear behaviour of the financial market of the U.S., Italy, Japan, and China market

return by applying the Asymmetric Power GARCH model. The study confirmed that COVID-19 harm the stock returns of the S&P 500 declined to 30 percent. According to (Azimili, 2020) increased uncertainty affects the required rate of return and the current market value of stocks. However, it revealed a negligible impact on the Nasdaq Composite index. An empirical study was conducted by (Cepoi, 2020) on the relationship between COVID-19 related news and stock return returns across the topmost affected countries. This study found that the stock return presents asymmetry dependence on COVID-19 related information. (Adenomon, Maijamaa, & John, 2020) by applying Quadratic GARCH and Exponential GARCH models with dummy variables, the COVID-19 hurt the stock returns in Nigeria and recommended a stable political environment, the incentive to indigenous firms, diversification of economy, and flexible exchange rate regime implemented to improve the financial market.

According to (Baker S. R., et al., 2020) , the early-phase impact of COVID-19 looks comparative to the effect of other irresistible illness flare-ups within the past 35 a long times. In January 2020, for the case, the Infectious Disease EMV tracker is as it was unassumingly hoisting, and the rate of EMV and EPU reports that examine COVID-19 advancements is generally in line with past encounters amid the SARS and Ebola epidemics. By February, in any case, COVID-19 improvements started to overwhelm daily paper coverage of stock advertise instability and figure conspicuously in daily paper discussions of financial approach vulnerability. By March 2020, COVID-19 improvements consider in more than 90% of all daily paper discussions of market volatility and policy uncertainty, and this design endures through April. This information affirms the uncommon impact of the COVID-19 widespread as a driver of

U.S. stock showcase volatility. The stock return provides a view of what investors expect for the future. It is precisely in complex situations such as the COVID-19 outbreak that the market's prescience is incredibly valuable (Wagner, 2020).

### **2.1.9 Impact of the COVID-19 partial lockdown on stock return**

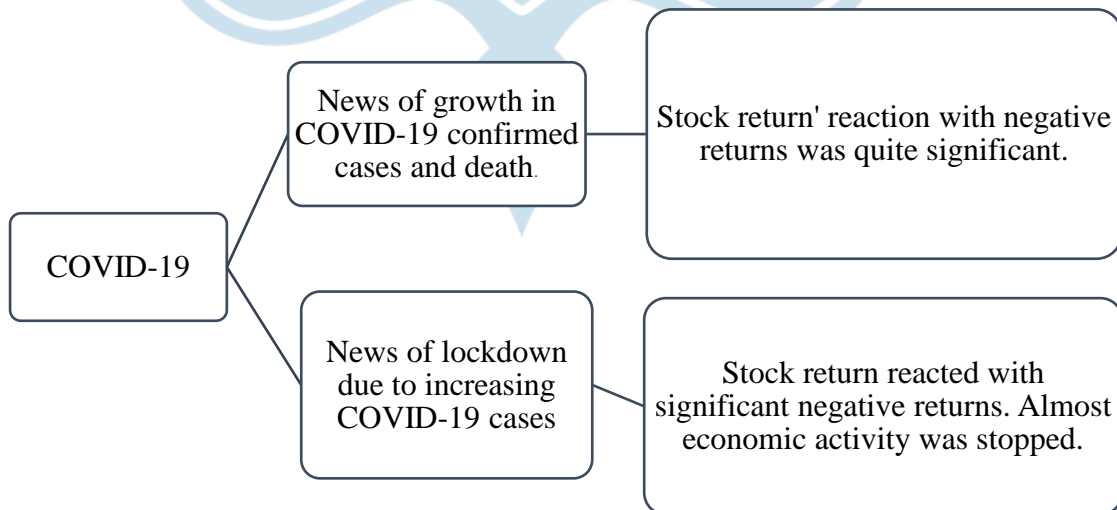
The COVID-19 pandemic was a remarkable event that necessitated one-third of the world's population to experience some form of lockdown (Hoof, 2020). Due to partial lockdown measures, the firms' productivity gets adversely affected, leading to a decrease in revenue, higher operating costs, and cash flow challenges. Several studies have paid attention to the impact of the COVID-19 lockdown on stock return performance. For example, according to (Baig A. , Butt, Haroon, & Rizvi, 2020), when assessing the effects of COVID-19 and its lockdown on the US stock return, explain that the lockdown devoted to a decline in the market's stability and liquidity. (Ozini & Arun, 2020) have conducted an empirical study on the effect of partial lockdown adopted to prevent the spread of the coronavirus, based on four continents: North America, Africa, Asia, and Europe. The study found that 30 days of social distancing policy or lockdown hurts the economy through its negative impact on stock prices.

Countries in partial lockdown will have to ensure incomes for those losing employment. Otherwise their recession will deepen into a depression. Governments will have to do this directly, through direct cash transfers and this has been announced in countries like the US, Norway and the United Kingdom. However, due to the lockdown, the availability of essentials will be critical, and the government must ensure this via a public distribution system, perhaps with the help of the army and police

(Kumar, 2020). Reported from (Mandel & Veetil, 2020) indicates that World output falls by 7% at the early stage of the crisis when only China is under lockdown and by 23% at the peak of the crisis when many countries are under a lockdown. These direct impacts are amplified as the shock propagates through the world economy because of buyer-seller relations.

By (Eleftheriou & Patsoulis, 2020) measured the effects of the COVID-19 lockdown and social isolation on the stock return indexes of 45 nations. This research finds negative relationships between the lockdown and the performance of international stock return. However, no research predicts the impact of the COVID-19 lockdown in Indonesia, a fast-developing economy, and a country that has managed to control the pandemic and revive the stock return.

## 2.2 Conceptual Framework



### 2.3 Previously Research

There are some summary of researches that have previously been done by other

researchers, they are :

No .	Title of Journal	Author	Name of Journal	Problem of the Research	Hypothesis	Result
1.	The Impact of the COVID-19 Lockdown on Stock return Performance: Evidence from Vietnam (2020)	1. Dao Le Trang Anh 2. Christopher Gan	Journal of Economic Studies	The effects of the COVID-19 outbreak and its following lockdown on daily stock returns in Vietnam.	H1: The daily increase in the number of confirmed cases and deaths due to COVID-19 adversely affected stock returns of all firms. H2: The outcomes of COVID-19 on stock return of multiple countries and find a negative impact of the pandemic on stock returns.	The study confirms the adverse impact of the daily increasing number of COVID-19 cases on stock returns in Vietnam. Though COVID-19 pre-lockdown had a significant, negative impact on Vietnam's stock returns, the lockdown period had a significant, positive influence on stock performance of the entire market and the different business sectors in Vietnam. The financial sector was hardest hit on the Vietnam stock return during the COVID-19 outbreak.
2.	Death and contagious infectious diseases: Impact of the COVID-19 virus on stock return returns (2020)	1. Abdullah M. Al-Awadhi 2. Khaled Alsaifi 3. Ahmad Al-Awadhi 4. Salah Alhammadi	Journal of Behavioral and Experimental Finance	Investigates whether contagious infectious diseases affect stock return outcomes.	H1: Significant negative effect of both measurements on stock returns across all firms included in the Hang Seng Index and Shanghai	The daily growth in total confirmed cases and in total cases of death caused by COVID-19 have significant negative effects on stock returns across all firms.

					Stock Exchange.	
3.	Stock return' reaction to COVID-19: Cases or fatalities? (2020)	Badar Nadeem Ashraf	Research in International Business and Finance	Examine the stock return' response to the COVID-19 pandemic from 64 countries.	H1: Stock return react strongly with negative returns to growth in confirmed cases. H2: Stock return react strongly during early days of confirmed cases and then between 40 and 60 days after the initial confirmed cases.	Stock return responded negatively to the growth in COVID-19 confirmed cases. It returns declined as the number of confirmed cases increased and reacted more proactively to the growth in number of confirmed cases as compared to the growth in number of deaths. Overall, the results suggest that stock return quickly respond to COVID-19 pandemic and this response varies over time depending on the stage of outbreak.
4.	COVID-19 and finance: Agendas for future research (2020)	John W. Goodell	Finance Research Letters	The enormous economic and social impact of COVID-19.	H1: COVID-19 highlights the possibility, or indeed the likelihood, of contagious disease events that will have tremendous negative impacts on global domestic demand.	The COVID-19 crisis is informing investors, policy makers and the public at large that natural disasters can inflict economic damage on a previously unprecedented scale. The COVID-19 pandemic is causing a direct global destructive economic impact that is present in every area of the globe.
5.	COVID-19 Lockdown Intensity and	1. Konstantinos Eleftheriou	MPRA Paper	The impact of governments' social	H1: The outbreak offers a unique	Stock return returns and the intensity of lockdown measures are negatively related.



	Stock return Returns: A Spatial Econometrics Approach	2. Patroklos Patsoulis		distancing measures against the novel coronavirus disease 2019 (COVID-19) on 45 major stock return indices.	opportunity to assess the impact of an exogenous shock (infectious disease) on the stock return by estimating the effect the containment measures had on markets.	
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## 2.4 Hypothesis Development

The pandemic is causing a massive impact on real economic activity. The examination of COVID-19 pandemic impact on several areas such as social trust and concomitant transaction costs, social security, costs of capital and political stability (Goodell, 2020). The positive relationship between lockdown and stock returns not only resulted from the lockdown itself but also investors' confidence and trust in the government's reaction to the pandemic (Anh & Gan, 2020). If the investors continue to be worried and are afraid of the future, lockdown would make stock performance worsen (Eleftheriou & Patsoulis, 2020).

Based on the description above, the first by (Al-Awadhi, Al-Saifi, Al-Awadhi, & Alhamadi, 2020), hypothesis can be formulated as follows:

Ha: Stock return returns and the intensity of lockdown measures are positively related.