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Developing country stock market immunity during Covid-19 pandemic

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Abstract. This study aims to examine the empirical research literature on the impact of the Covid-19 pandemic on capital markets in developing countries. In descriptions, research will provide an overview of immunity of the stock market in the face of a pandemic. Starting from the development of the Covid-19 case in developing countries, the impact of the outbreak on stock markets in developing countries, the resilience of developing countries' stock markets compared to developed countries, and the negative/positive impact of government policies to fight Covid-19 on the stock markets of developing countries. This study is a conceptual paper sourced from secondary data published on the theme of the paper and aims to describe the effects of a pandemic that leads to a health crisis on the resilience of a stock market in developing countries. Research papers selected for review were accessed only from high ranking journals. This review is intended to guide future researchers to improve the power of the tests examined.

Keywords. stock market, developing countries, Covid-19

1. Introduction

It only took 4 months since the first case report, SARS-CoV-2 (otherwise known as Coronavirus/ Covid-19) was confirmed by the World Health Organization or WHO to be a global pandemic. According to who, Covid-19 is not only a public health crisis, which in a matter of months has infected millions of people around the world. But this pandemic can also be a crisis that will affect every sector. The International Monetary Fund (IMF) also projects that the world will experience its worst financial crisis since the Great Depression of the 1930s due to the spread of the Covid-19 pandemic. The global economy is expected to contract to -4.4% in 2020 and the economic recovery will slow in 2021, or grow 5.2%. Economic growth for 2021 is already trimming from the previous 5.4% in the initial projection **(Figure 1).**

The crisis triggered by Covid-19 is primarily driven by its highly contagious nature (R0 = 2-5), which means that one patient can infect two to five people. The symptoms of COVID-19 are flu-like symptoms, such as colds, fever, dry cough, pneumonia, diarrhea that is mainly caused and the environment (Wang et al., 2020). A number of studies have shown governments in various countries are ambitious to reduce the rate of transmission of Covid-19 through strict policy restrictions (Ashraf, 2020; Baker, et al., 2020; Sharma, et al., 2021).

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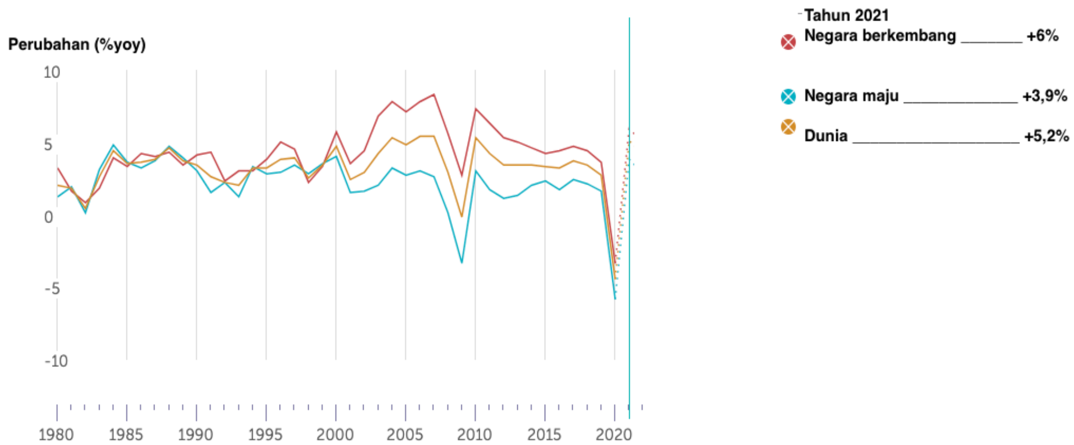

Figure 1. Projected global economic growth during the Covid-19 pandemic (Source: IMF, 2020)

This surprising wide-scale change due to Covid-19 has a negative effect that extends to global operations. Due to the hanging of financial markets in various countries that have been badly hit by sudden changes to both demand and supply in the economy. This has hampered stock indices around the world, whose performance has been further underperformance driven by a 30% fall in world oil prices (Liu, et al., 2020; Richardson, 2020). Investment losses during the spread of Covid-19 make investors more likely to sell panic stocks to make things worse (Phan and Narayan, 2020).

This study will focus on the impact of Covid-19 on emerging markets, which are still under-studied compared to developed countries. The developing countries in question are 24 emerging market economies based on the Morgan Stanley Capital International (MSCI) classification (Zaremba, Kizys, Tzouvanas, et al. (2021). These countries include Argentina, Brazil, Chile, China, Colombia, Czech Republic, Egypt, Greece, Hungary, India, and Indonesia. In addition there are Korea, Mexico, Pakistan, Peru, Philippines, Poland, Qatar, Russia, South Africa, Taiwan, Thailand, Turkey and United Arab Emirates. But the literature used for this study also combines previous studies with objects of developed countries. The integration of the two stock market categories (advanced and emerging) is usually the basis for determining the potential hedging of the stock market (Jin, et al., 2020).

Overall, this paper reviews the impact of Covid-19 on capital market behavior in developing countries as well as factors that drive the resilience/vulnerability of listed companies on the exchange. There are several parts of this study that are 1. spread of Covid-19 in developing countries, 2. impact of Covid-19 on emerging markets, 3. immunity (durability or vulnerability) of listed companies in emerging markets, and listed companies, and 4. government strategy of tackling the Covid-19 pandemic.

This study presents previous studies that have the scope of pandemics, measures of uncertainty, methodologies and different analyses. This study is expected to be an overview of the importance of capital market strength and listed companies in it in a developing country in anticipation of a health crisis due to future pandemics.

2. Discussion

2.1. Covid-19 Pandemic in Developing Countries

The world's attention is considerable to the rate of confirmation of Covid-19 cases in developed countries. Whereas widespread infections also occur in developing countries also need to be highlighted. Since covid-19 was first reported in China at the end of 2019, the country has continued to make great efforts to suppress the spread of the virus. However, there is a significant danger of the continuous spread of COVID-19 cases.

Developing countries also have difficulty in implementing high effectiveness for strict social restriction policies. In other words, the rules to force people to stay at home have no significant effect in reducing the number of positive case confirmations and the number of deaths. Due to the 'high cost' of a lockout policy, many people working in the informal sector have to leave home for a living and they do not have access to an adequate safety net. Lockout measures should be taken in addition to other policies that reduce the cost of housing opportunities, actually affecting the spread of the disease in developing countries (Bonardi, et al., 2020).

It is possible that at a later stage, several CENTERS for the spread of COVID-19 appear in developing countries, as seen from the explosion in the number of cases. Developing countries are becoming vulnerable to the Covid-19 outbreak because these countries do not have sufficient medical supervision so as to increase local and global viral outbreaks (Lau, et al., 2020). Lack of adequate personal protective equipment, lack of flexibility of health care resources due to limited numbers, and inadequate insurance facilities can be an additional burden in developing countries (Heymann and Shindo, 2020).

The country's fiscal limitations encourage developing countries to turn their brains to seek more funding for the health sector during the Covid-19 pandemic. In Indonesia, Covid-19 was first reported in early March 2020 and the spread is expanding. The government under the leadership of President Joko Widodo also took the policy of widening the budget deficit because there is uncertainty about how Covid-19 will affect the economy in the coming months. This budget deficit is used to massively reduce the impact of Covid-19 on the economy and society, even the government also needs to save something for the future if the situation worsens (Olivia, Gibson, and Nasrudin, 2020).

In many developing countries, there are many challenges to put the brakes on the rate of Covid-19 cases. One reason for this is that stimulus may be less effective because monetary transmission is weak and fiscal space and fiscal multipliers are often small. A more viable goal for macroeconomic policy in developing countries is to avoid procyclicality, ensure the sustainability of public services for the economy, and support the vulnerable. Because COVID-19 is truly a global shock, international coordination is critical, in economic policy, health care and science, as well as containment and mitigation efforts. Critical times require well-designed government action and effective delivery of public services — preserving, rather than ignoring, proper macroeconomic and governance stability practices that function in good times and bad (Loayza and Pennings, 2020).

2.2. **Impact of Covid-19 on Emerging Market**

Emerging market stocks are more vulnerable to health risks than developed countries' stock markets (Salisu, Sikiru, and Vo, 2020). Through comparison of the time period before the Covid-19 pandemic (May 2016 to December 2019) and when the pandemic lasted (January to July2020), the results of stock exchange performance in 24 developing countries received a greater negative impact compared to the performance of exchanges in 21 developed countries. This is related to the fading of investor confidence in the pandemic that makes them avoid risk.

Mishra, Rath, and Dash (2020) assessed that the health crisis caused by Covid-19 had a negative impact on the performance of all sectors that make up the Indian stock exchange. Using daily stock returns, net foreign institutional investment, and exchange rate data from January 3, 2003 to April 20, 2020, the pressures caused by the Covid-19 outbreak are more severe than the

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stock market correction resulting from two recent structural changes of the Indian economy: demonetization and application of the Goods and Services Tax (GST).

Meanwhile, investors in Korea and Japan are adjusting their existing investment portfolios and investing in the medical industry that will benefit from the Corona virus to avoid the risk of economic policy uncertainty (Sun, Bao, and Lu, 2021). Because China as a major producer of intermediate products in the world has a *stronger spillover* effect on global economic stability, which means increased uncertainty in China's economic policy could trigger pessimistic investor sentiment (Zhang, 2018).

Switch to the stock exchange in Indonesia known as the Composite Stock Price Index (JCI), where the domestic exchange tends to follow a global pattern of sharp declines followed by sharp fluctuations **(Figure 2).** JCI cut nearly a third of its value, from a high of nearly 6,400 points in January to slightly below 4,000 points in mid-March 2020. This condition finally began to improve in April-May, when JCI began to appreciate a further 10% until June 12, 2020. However, in mid-June the index was still almost 30% lower than the previous six months (Olivia, Gibson, and Nasrudin, 2020).

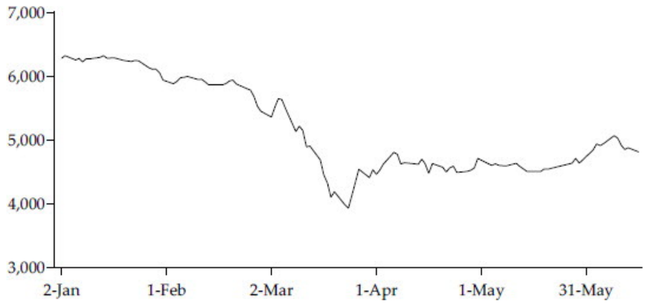

Figure 2. Correction of IHSG during the Covid-19 pandemic in the period 1 January-12 June 2020
(Source: CEIC in Olivia, Gibson, and Nasrudin, 2020)

In fact both markets in both developing and developed countries showed a certain level of tolerance to health risks during the COVID-19 outbreak, with developed markets showing a much higher level of tolerance. This study corroborates previous literature from Su, et al. (2019) and Qadan (2019). Lower durability during the Covid-19 pandemic makes investing in emerging markets not a safe haven option for potential investors (Dutta et al., 2020; Ji et al., 2020). Ultimately, investors need to manage risk in emerging markets through a strategy of diversifying into more conservative assets such as gold (Salisu, Sikiru, and Vo, 2020).

Another hedging statement was also put forward by Ji, et al. (2020) which compared the hedging performance of global Energy, Finance, Industry and Technology ETFs. Where global financial ETFs (Global Industry ETFs) are the most suitable hedges for ETFs of developing countries / BRICs (ETFs of developed countries). Both sectors of the ETF provide higher hedging effectiveness in crisis periods than in normal periods.

2.3. Immunity of Emerging Market Listed Companies

Rising stock market uncertainty in developing countries could hamper the investment of listed companies. Zaremba, Kizys, Tzouvanas, et al. (2021) explained that there are factors that can encourage immunity or immunity as well as the vulnerability of listed companies in the stock market to pandemic, namely:

2.3.1 Listed company expansion strategy

Companies that have conservative policies such as opposing aggressive investment policies are able to better address pandemics. Large investment funds and corporate cash flow will be affected by external and internal financing as well as the ability to raise funds more challenging during the pandemic. A similar opinion was also expressed by Ding et al. (2020) in which the durability of the company during the pandemic was influenced by its financial condition. Therefore, there is an important role of low debt, high profitability, and considerable cash reserves.

2.3.2 Maintained stock market valuations

Exchange-listed companies that have a maintained market valuation (relatively low valuation to expected profit) will tend to perform better. In other words, companies with low *forward earning to price* (FEP) ratios tend to be more immune to the Covid-19 pandemic than companies with high FEP.

A number of sectors of companies listed on the exchange were able to survive the pandemic also described in other research. Research by He, et al. (2020) reveals that not all sectors on the Chinese stock exchange, the first country to report the Covid-19 pandemic, are under severe pressure. According to him, the transportation, mining, electricity and heating industries, as well as the environment became the sectors most harmed by the presence of Covid-19. However, there are still industrial sectors that survived this pandemic such as manufacturing, information technology, education and health care.

2.4. Impact of Emerging Market Government Policy on Stock Market during Covid-19 Pandemic

Government policy during the Covid-19 pandemic has a greater impact on the stock market than any other health outbreak has ever existed, even in developed countries. Baker's research, et al. (2020) revealed that government restrictions on business operations and voluntary social distance, have a strong effect in a service-oriented economy. This is the main factor the United States stock market reacted much more strongly to COVID-19 than the previous pandemics in 1918-1919, 1957-1958 and 1968. In other words, there have been no previous outbreaks of infectious diseases, including the Spanish Flu, that have had an impact on the stock market as strong as the COVID-19 pandemic.

The research is in line with Ashraf's research (2020) which noted that the strategy of limiting social activities during the Covid-19 pandemic directly negatively impacts the returns provided by the stock market because it contributes to suppressing domestic economic activity. But this policy in a certain period of time will be able to suppress the addition of Covid-19 cases, which indirectly can have a positive effect on the stock market.

Governments in developing countries need to be more vigilant in making policy. From a policy and regulatory perspective, low levels of market liquidity can decrease the ability to conduct trade and purchase transactions so as to disrupt financial stability, especially in turbulent times such as the COVID-19 pandemic. Therefore, how government policy interventions affect liquidity should be monitored by policymakers and regulators (Zaremba, Kizys, Tzouvanas, et al., 2021).

There are a number of emerging government policies that are able to respond well to the Covid-19 pandemic through directed coordination involving various aspects of coordination. For example, in Vietnam, there was the establishment of a National Steering Committee on the Prevention and Control of COVID-19 dubbed the 'General Headquarters' — referring to the existing military coordinating body until the War ended in 1975. While in Argentina, the Chief

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Cabinet Minister is responsible for the 'General Coordination Unit of the Comprehensive Plan for the Prevention of Internationally Important Public Health Events' (Chowdry and Jomo, 2020).

Important factors of government policies that can support capital market performance include increased public awareness to contribute to suppressing Covid-19 cases and improving tests, tracking, and patient care such as self-quarantine. In addition, the stimulus to continue to support people's purchasing power will also boost stock market appreciation (Ashraf, 2020). Although major steps have been taken to prevent the spread of the virus, including quarantine, lockdown, and travel restrictions, more efforts and resources should be dedicated to developing new vaccines as soon as possible (Lau, et al., 2020).

The dramatic stock market downturn is a direct risk from the pandemic itself. While government intervention is actually aimed at continuing to support stock market prices, it could ultimately have a negative effect in the short term. However, the government still needs to monitor the impact of its policies in order to be on target to restore the health sector so that it can restore economic performance, especially the stock market in the future.

2.5. Study in Next Research

Border closures and traditional trade due to the COVID-19 pandemic are expected to have long-term financial impacts, including in the stock market (O'Donnell, Shannon, and Sheehan, 2021). Therefore, more research is needed on the impact of early interventions and policies of governments and financial regulators related to stock markets in developing countries in the event of a future 'wave' of COVID-19 or extreme social disruption in the future. Research by including stock market conditions in the period March 2021 and above (one year after Covid-19 was announced as a global pandemic) is expected to review it better.

Research is also not only developed through quantitative methods, namely the processing of stock market performance data, or qualitative through news analysis in conventional media and social media. However, research can be expanded through in-depth interviews with regulators related to stock markets in developing countries to investors on strategies for dealing with the Covid-19 pandemic as well as steps towards economic recovery.

3. Conclusion

Stock markets in developing countries have lower immunity or immunity than developed countries. This is based on an analysis of the vulnerability of emerging economies and finances, stock market performance, investor sentiment, durability of listed companies, and the effectiveness of government authority regulations in suppressing the positive confirmation rate of Covid-19. It will take more research going forward on stock market immunity in developing countries in the future to see the process towards a sharply falling stock market recovery at the beginning of the Covid-19 pandemic.

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