THE COVID-19 PANDEMIC AND ITS IMPACT ON THE YIELDS OF SHARIA STOCK BUSINESS PORTFOLIO IN INDONESIA

Husain Insawan [A], Abdulahanaa[B], Otong Karyono[C], Ida Farida [D]

ARTICLE INFO	ABSTRACT
	Purpose: This research aims to examine the impact of the COVID-19 pandemic on the performance of stock portfolios in Indonesia, particularly the sharia stock portfolios and common stocks in response to information sentiment due to the COVID-19 pandemic on the Indonesian stock exchange. **Theoretical framework:** Research by Bash & Alsaifi (2019) and Shanaev & Ghimire (2019) examined the relationship between stock returns through the stock index on political activity or its connection with environmental exploitation (Alsaifi et al., 2020; Guo et al., 2020). The relationship between stock price changes with sports (Buhagiar et al., 2018) and disasters (Kowalewski & Śpiewanowski, 2020). **Design/methodology/approach:** The data used in this study were 564 stocks, consisting of 356 Islamic stocks and 208 common shares provided by the Osiris database. The model testing used panel data regression with a time lag approach, where information on the number of positive cases, deaths, and recoveries due to COVID-19 each week affected the performance of the stock portfolio on that day. **Findings:** The testing of the performance of sharia and conventional stock portfolios showed that there is no significant difference in response to the COVID-19 pandemic information, but statistical statistics on Islamic stocks have a tendency to be more resistant to pressure from selling by investors in the Indonesian capital market compared to common stock portfolios, this is proven by the sharia stock correlation coefficient shown to be positive, on the other hand, the stock regression coefficient shows the opposite direction. **Research, Practical & Social implications:** This research is expected to be a recommendation material that has benefits for the development of Islamic economics, primarily can be implemented by sharia-based banks in Indonesia and other countries. **Originality/value:** This research focuses on studying the performance of stock portfolios in Indonesia. This research responds to the impact of the Covid-19 pandemic on the performance of stock portfolios, which is focused on Islamic stock portfolios. Doi: https://doi.org/10.26668/businessreview/2022.v7i6.e941

[A] *Associate Professor, Economics Department, Economics and Business Faculty, Institut Agama Islam Negeri Kendar, Indonesia. E-mail: husain.insawan@gmail.com Orcid: https://orcid.org/0000-0002-1610-4432*
[B] *Professor, Economics Department, Economics and Business Faculty, Institut Agama Islam Negeri Bone. E-mail: abdulahanaa@gmail.com Orcid: https://orcid.org/0000-0001-7652-1126*
[C] *Lector, Economics Department, Economics and Business Faculty, Institut Agama Islam Negeri Bone. E-mail: otong.karyono@iain-bone.ac.id Orcid: https://orcid.org/0000-0002-8423-8774*
[D] *Lector, Economics Department, Economics and Business Faculty, Institut Agama Islam Negeri Bone. E-mail: ida.farida@iain-bone.ac.id Orcid: https://orcid.org/0000-0003-4839-8452*

Intern. Journal of Profess. Bus. Review. |Miami, v. 7 | n. 6| p. 01-19 | e0941 | 2022.

1

A PANDEMIA DE COVID-19 E SEU IMPACTO NOS RENDIMENTOS DA CARTEIRA DE NEGÓCIOS DE AÇÕES DA SHARIA NA INDONÉSIA

RESUMO

Objetivo: Esta pesquisa tem como objetivo examinar o impacto da pandemia COVID-19 no desempenho das carteiras de ações na Indonésia, particularmente as carteiras de ações da Sharia e ações comuns em resposta ao sentimento de informação devido à pandemia COVID-19 na bolsa de valores indonésia.

Referencial teórico: Pesquisas da Bash & Alsaifi (2019) e Shanaev & Ghimire (2019) examinaram a relação entre o retorno das ações através do índice de ações sobre a atividade política ou sua conexão com a exploração ambiental (Alsaifi et al., 2020; Guo et al., 2020). A relação entre o preço das ações muda com os esportes (Buhagiar et al., 2018) e desastres (Kowalewski & Śpiewanowski, 2020).

Desenho/metodologia/abordagem: Os dados utilizados neste estudo foram de 564 ações, consistindo de 356 ações islâmicas e 208 ações ordinárias fornecidas pelo banco de dados de Osíris. O modelo de teste utilizou a regressão de dados do painel com uma abordagem de atraso de tempo, onde informações sobre o número de casos positivos, óbitos e recuperações devido ao COVID-19 a cada semana afetaram o desempenho da carteira de ações naquele dia.

Resultados: Os testes do desempenho das carteiras de ações sharia e convencionais mostraram que não há diferença significativa em resposta às informações de pandemia COVID-19, mas as estatísticas estatísticas estatísticas sobre ações islâmicas tendem a ser mais resistentes à pressão de vendas por investidores no mercado de capitais indonésio em comparação com carteiras de ações ordinárias, isso é comprovado pelo coeficiente de correlação de ações da Sharia que se mostrou positivo, por outro lado, o coeficiente de regressão de ações mostra a direção oposta.

Pesquisa, implicações práticas e sociais: Espera-se que esta pesquisa seja um material de recomendação que tenha benefícios para o desenvolvimento da economia islâmica, principalmente pode ser implementado por bancos baseados na sharia na Indonésia e em outros países.

Originalidade/valor: Esta pesquisa se concentra no estudo do desempenho das carteiras de ações na Indonésia. Esta pesquisa responde ao impacto da pandemia de Covid-19 no desempenho das carteiras de ações, que se concentra nas carteiras de ações islâmicas.

Palavras-chave: COVID-19, Ações sharia, Retorno, Desempenho do portfólio.

LA PANDEMIA DE COVID-19 Y SU IMPACTO EN LOS RENDIMIENTOS DE LA CARTERA DE NEGOCIOS DE ACCIONES DE LA SHARIA EN INDONESIA

RESUMEN

Propósito: Esta investigación tiene como objetivo examinar el impacto de la pandemia de COVID-19 en el rendimiento de las carteras de acciones en Indonesia, en particular las carteras de acciones de la sharia y las acciones comunes en respuesta al sentimiento informativo debido a la pandemia de COVID-19 en la bolsa de valores de Indonesia.

Metodología: Los datos utilizados en este estudio fueron 564 acciones, que consisten en 356 acciones islámicas y 208 acciones ordinarias proporcionadas por la base de datos Osiris. La prueba del modelo utilizó regresión de datos de panel con un enfoque de desfase temporal, donde la información sobre el número de casos positivos, muertes y recuperaciones debido a COVID-19 cada semana afectó el rendimiento de la cartera de acciones en ese día.

Conclusiones: Las pruebas del rendimiento de la sharia y las carteras de acciones convencionales mostraron que no hay una diferencia significativa en respuesta a la información de la pandemia de COVID-19, pero las estadísticas estadísticas sobre las acciones islámicas tienden a ser más resistentes a la presión de la venta por parte de los inversores en el mercado de capitales de Indonesia en comparación con las carteras de acciones comunes, esto se demuestra por el coeficiente de correlación de acciones de la sharia que se muestra positivo, Por otro lado, el coeficiente de regresión de stock muestra la dirección opuesta.

Implicaciones de la Investigación: Se espera que esta investigación sea un material de recomendación que tenga beneficios para el desarrollo de la economía islámica, principalmente puede ser implementado por bancos basados en la sharia en Indonesia y otros países.

Palabras clave: COVID-19, Acciones de la Sharia, Retorno, Rendimiento de la cartera.

Intern. Journal of Profess. Bus. Review. | Miami, v. 7 | n. 6 | p. 01-19 | e0941 | 2022.

2

INTRODUCTION

The COVID-19 pandemic is not only causing a worldwide health crisis (Yang, Peng, Wang, Guan, et al., 2020) but also the capital market has an equally large impact. Since Indonesia's first case 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 2020. Profits or returns on the stock market are influenced by many aspects, for instance, the information about a major event is perceived to affect the activities of the world economy 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 affect economic activity have been carried out by academics. For example, research by Bash & Alsaifi (2019) and Shanaev & 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 to disasters (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 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 disease pandemic currently sweeping the world, COVID-19, on returns when investing in the Indonesian capital market. Not only examining the relationship between stock price returns in various types of company categories as was conducted by (Al-Awadhi et al., 2020), this study examined Islamic stock returns and compares it with stock returns in general. The Indonesia Stock Exchange (IDX) was chosen because 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 become research 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 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 a hedging mechanism role 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 was exposed by 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, this study aims to examine the impact of the COVID-19 pandemic on the yields of Islamic and general stock portfolios 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 every week, and the number of cases recovered per week. While the variable returns are shown from changes in stock prices per week or returns, since the first cases were 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 of regression model, using positive week data for COVID-19 and the every week data of death case by COVID-19, as well as data on patients recovering from COVID-19 announced by the Ministry of Health of the Republic of Indonesia.

LITERATURE REVIEW

Academics have conducted studies linking stock returns and important events that will affect economic activity. For example, research by Bash & Alsaifi (2019) and Shanaev & Ghimire (2019) examined the relationship between stock returns through the stock index on political activity or its connection with environmental exploitation (Alsaifi et al., 2020; Guo et al., 2020). The relationship between stock price changes with sports (Buhagiar et al., 2018) and disasters (Kowalewski & Śpiewanowski, 2020). Meanwhile, academics have not widely

Intern. Journal of Profess. Bus. Review. | Miami, v. 7 | n. 6 | p. 01-19 | e0941 | 2022.

4

studied studies directly examining the relationship between stock price returns and pandemics. Research on pandemics is only limited to studies in the health sciences of economic activity as researched by (Chen et al., 2007; Chun-Da Chen et al., 2009; Su & Bangassa, 2011), regarding the SARS pandemic in Taiwan or the Ebola pandemic on movement share prices (Ichev & Marinč, 2018).

Zach (2005) states that significant events, especially pandemics, can affect the rate of return on stock prices in the capital market. Much research has been done rapidly to explain the economic impact of the COVID-19 pandemic on the world. For example, Hassan et al. (2020) examined the pressure of the COVID-19 pandemic on individual companies, then Jordà et al. (2020) discussed the long-term economic impact of a pandemic. Meanwhile, Baker, Farrokhnia, Meyer, et al. (2020) show changes in household consumption behavior during stress due to the COVID-19 pandemic. Ludvigson et al. (2020) found that COVID-19 severely impacted employment and unemployment activities. In addition, the policies of different countries in dealing with the spread of the COVID-19 pandemic are an exciting topic to research. For example, Krueger et al. (2020) examined government interventions and their effectiveness in overcoming pandemics, Caballero & Simsek (2020) challenging the monetary policy on the impact of a pandemic. Moser & Yared (2020) evaluate the economic consequences of the lockdown policy.

Meanwhile, research that explicitly looked at the impact of the COVID-19 pandemic on the stock market was carried out by Baker, Bloom, et al. (2020) show that capital market uncertainty in the United States has reached a historic high. Ru et al. (2020) provide international data and facts that capital markets in countries that have not experienced the SARS pandemic have shown a minor reaction compared to the impact of COVID-19. When the Indonesian government announced the first case, the composite stock price index fell to 3,000 in mid-March 2020. However, the COVID-19 pandemic has been felt by the Indonesia Stock Exchange since the end of January 2020. The first COVID-19 outbreak and announcement of COVID-19 in Wuhan, China, also confirmed a global epidemic by WHO (Kannan et al., 2020).

Previous literature suggests that the viral pandemic is detrimental to several industrial sectors. How will the impact of COCID-19 be on the performance of Islamic stocks and on stocks that are not strictly regulated by sharia by the MUI and OJK in the Indonesian capital market? Yang, Peng, Wang, Yang, et al. (2020) found that there was a positive relationship between the effects of the pandemic on the cumulative abnormal return of stocks before the announcement of the SARS pandemic and showed a negative relationship between cumulative stock abnormal returns and the SARS pandemic after the announcement time.

Islamic stock investment is no different from conventional stock investing. Every investor has the exact profit expectations for the level of risk that will come. The difference in investor expectations is that in addition to paying attention to the level of returns and risks in investing, they also pay attention to ethical and religious principles (Albaity et al., 2020). Investment in Islamic sharia securities is an investment that uses the basic principles of Islamic sharia. Investment with Islamic sharia principles prohibits usury, gambling, and uncertainty activities. It prohibits activities such as producing goods and services not permitted in Islamic sharia, such as pornography, alcoholic drinks, casino business, and others. Based on the Fatwa of the National Sharia Council, the Indonesian Ulama Council, Fatwa Number 40 / DSN-MUI / X / 2002. It says what is meant by Sharia shares or securities are shares or securities that are contracted out, company management, or the way of issuance meets Islamic sharia principles. Contrary to Islamic Sharia principles, business activities are gambling and gaming companies classified as gambling or illicit trade, conventional financial institutions, including traditional banking and insurance, producers or distributors, and traders and producers or distributors of illegal drinks. Provide goods or services that can destroy morale and be detrimental.

Some researchers have different opinions regarding the performance of Islamic and conventional stocks, so no conclusion can be drawn about whether the implementation of Islamic stocks is better than conventional stocks and vice versa. One party said that the difference between Islamic stocks and conventional stocks is statistically minimal (Abbes, 2012). Others argue that conventional stocks should have better performance than Islamic stocks (McGowan, Jr. & Muhammad, 2010). According to them, the strictness of sharia regulations limits a company's ability to use external resources, thereby reducing its ability and potential to continue growing and developing in the future. 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 outperformed traditional mutual funds during the financial crisis period. According to them, this happened because the sharia mutual fund investment manager used Islamic mutual funds as an instrument and as a hedging mechanism during a crisis in a certain period.

In line with this, Boo et al. (2017) concluded that Islamic mutual funds have better risk management because they show better performance than conventional mutual funds only during a crisis and the previous year. On the other hand, Narayan et al. (2017) found that the financial crisis was detrimental to the performance of Islamic mutual funds. Umar (2017) found that investors are interested in Islamic stocks for short-term performance, while conventional stocks are more attractive to investors for long-term performance. Al-Khazali et al. (2014) and

Ho et al. (2014) found that the performance of Islamic stocks was more profitable. They show that Islamic stocks perform better than conventional stocks during crisis periods but not during non-crisis periods. Ashraf & Mohammad (2014); Hoepner et al. (2011) found that Islamic stocks are relatively profitable.

Relevant Concepts and Theories

Stock performance in this study is measured using returns. Return is the level of profit that investors can enjoy for every use of money or investments made, especially in buying and selling shares in the capital market (Husnan, 2001). Stock returns can be calculated using the following equation:

$$Return_{t=0} = \frac{Stock\ Price_{t=0} - Stock\ Price_{t-1}}{Stock\ Price_{t-1}} \times 100$$

In addition to providing additional contributions to understanding the concept of stock performance. Especially the performance of the Islamic law, this study will also examine the grant theory developed by (Fama & French, 1993), which tries to perfect the Capital Asset Pricing Model derived by (Sharpe, 1963) with a three-factor model the following factors:

$$r_{it} - r_{ft} = \alpha_{it} + \beta_1(r_{mt} - r_{mt}) + \beta_2 SMB_t + \beta_3 HML_t + \varepsilon_{i,tw}$$

Where r_{it} is the total return on stock or portfolio "i" at time t, r_{ft} is a risk-free investment, r_{mt} is the total market return at time t, SMB is the premium measure (Small minus Big), while HML is the premium market value stocks (high minus low). Fama & French (1993) explain that the three factors model can explain investors' expectations of market returns in the capital market: company size, the book to market value, and market performance. They assume that companies with small sizes usually provide higher returns than companies with established and stable growth. In comparison, stocks with higher market-to-book ratios give better returns than the market.

Modigliani and Miller (MM) said that the market value of a company is the accumulation of an accurate calculation of its present value cash flow or future income and its underlying assets. This finding also depends on its capital structure (Franco Modigliani; Merton H. Miller, 1958). The theory of MM has initially been based on the assumption that it was not a problem for the company to finance its growth by going into debt, issuing new shares, or reinvesting its profits. They argue that the choice of capital structure for the three or their

Intern. Journal of Profess. Bus. Review. | Miami, v. 7 | n. 6 | p. 01-19 | e0941 | 2022.

7

combination will not affect its actual value. Modigliani & Miller (1963) revised their theory by including the assumption that there was a tax from the government. With this assumption, the approach they built was relevant to the company financing options, assuming that the tax paid to the government is a cost for the company so that debt can be used to save money. Cost of capital because interest on debt can be deducted from corporate taxes.

Before Franco Modigliani and Merton Miller published their findings on the world of finance in 1958, the world assumed that the single best ratio of debt to equity applies to all companies. (Franco Modigliani; Merton H. Miller, 1958) Abolished this traditional approach with the theorem on the capital structure they developed, which states that firm value is not affected by its debt to equity ratio, assuming the absence of taxes, bankruptcy, and agency fees in an efficient market, and information asymmetry. However, the "perfect world" condition described by (Franco Modigliani; Merton H. Miller, 1958) is difficult to find in actual situations. The results of their research raise questions about how companies should finance their operations. This researcher tries to prove which is more profitable if the company limits the financing of the company's assets. Through credit by borrowing as stipulated in the Sharia stock indicator by MUI and OJK for no more than 50 percent of its assets or to give the company as much freedom as possible to optimize the benefits of tax reduction on their capital structure as in conventional stock issuers.

Bhandari (1988) found that the expected stock return positively correlates with the debt to equity ratio. This evidence suggests that the premium associated with a higher debt to equity ratio does not imply the possibility of a "risk premium." Some companies take this aggressive approach to financing corporate growth using borrowed funds to purchase assets on the assumption that the income from the investments will offset the costs of borrowing and the accompanying risks. Shareholders will benefit if this method increases company profits. He found evidence to support this argument. However, if the interest payment starts to be greater than the return, the company will go bankrupt. As a result, there has been a long debate about a healthy balance between debt and equity. In theory, an active company will find the optimal debt to equity ratio and minimize the margin between the actual and optimal ratio.

$$Debt\ to\ Equity\ Ratio = \frac{Total\ Liabilities}{Total\ Equities}$$

Research Sample Construction

The initial research sample was constructed by collecting data on confirmed positive cases of COVID-19, data on deaths due to COVID-19, and data on recovery from COVID-19 in Indonesia from the Ministry of Health of the Republic of Indonesia (Kemenkes RI) and the John Hopkins University (JHU) Coronavirus Resource Center website. Data on covid cases from the Indonesian Ministry of Health and JHU are available daily to collect data according to research needs from December 2019 to May 2020. Then share price data is obtained and downloaded from the Osiris Singapore paid database through the website platform. Available information includes data on weekly stock prices and company fundamental variables. Inadequate research data will be completed through the Indonesian Stock Exchange (IDX) database through The Indonesia Capital Market Institute (TICMI) and other relevant sources such as yahoo finance and investing.com platforms. Data filtering will be carried out, such as ensuring that the data downloaded through Osiris is not disturbed by other downloaded data adjusting research data such as differentiating domestic and conventional stocks. According to data analysis needs, change the data structure and insert additional data and deficiencies through the appropriate method.

DATA AND METHODOLOGY

Wooldridge (2002) and Baltagi (2005) showed that the variable testing method with regression panel data is able to reduce the estimation bias and the effect of multicollinearity between variables, heteroscedasticity, and is able to identify the relationship between time, the independent variable, and the dependent variable. This study applies 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. The research model is as follows:

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

Adj_{return} is the return on i stock at the t time as the dependent variable influenced by time lag by the predictor, where $COV19_{i,tw-1}$ is the independent variable that shows the change in the total of positive cases and total cases of death, and total recovered cases due to COVID-19 cases in the week before the stock price testing. 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 specific

characteristics of each company including capitalization and market to book ratio each week, starting from the first week of December 2019 to the third week of June 2020

RESULTS AND DISCUSSION

Data

The data used in this study are companies listed on the Indonesia Stock Exchange. The index data used are the Composite Stock Price Index (IHSG), Indonesian Sharia Stock Index (ISSI), LQ45, and JII. The period for data sharing is from December 6, 2019, to June 26, 2020. Ratio data and company stock capitalization were obtained from the Osiris database including share price data for 564 companies, consisting of 356 Islamic stocks and 208 shares in general. Data on the number of confirmations for each positive case, death, and recovery from COVID-19 cases were 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 daily data was accumulated into data every week to adjust to fundamental data of the company provided by Osiris which was then processed using the Eviews 10 software.

In Figures 1, 2, and 3, the composite stock price index weekly dataset is shown according to the period studied in this article, data on average return on the composite stock price index every week, and stock capitalization data in the Indonesian capital market. Meanwhile, figure 4 shows the changes in each positive data confirmed for COVID-19 in Indonesia, picture 5 shows every week of confirmed cases of death due to COVID-19, while the last picture shows the data confirmed that patients recovered from COVID-19. Descriptively from the two groups of images, it can be seen that there is a negative relationship between the return of IHSG at the beginning of the COVID-19 pandemic that hit Indonesia in mid-March and early April 2020.

Figure 1: Graph of Weekly Stock Price

Intern. Journal of Profess. Bus. Review. | Miami, v. 7 | n. 6 | p. 01-19 | e0941 | 2022.
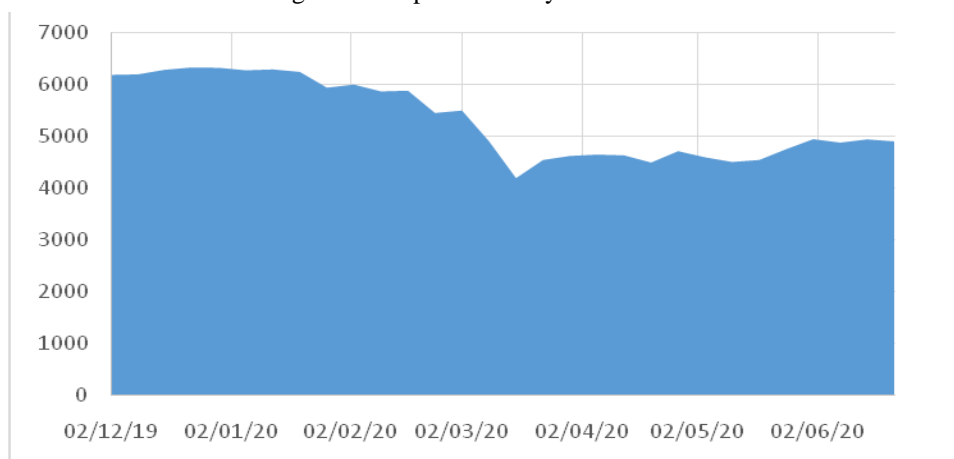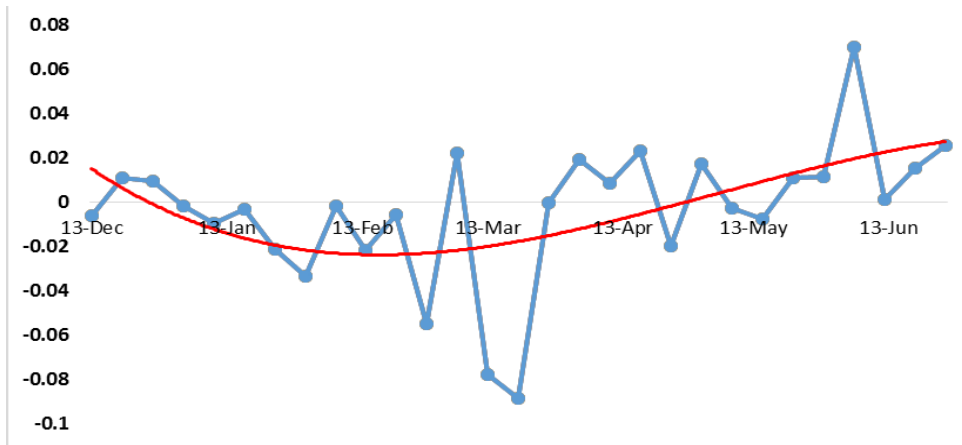
10

Figure 2: Average Stock Return

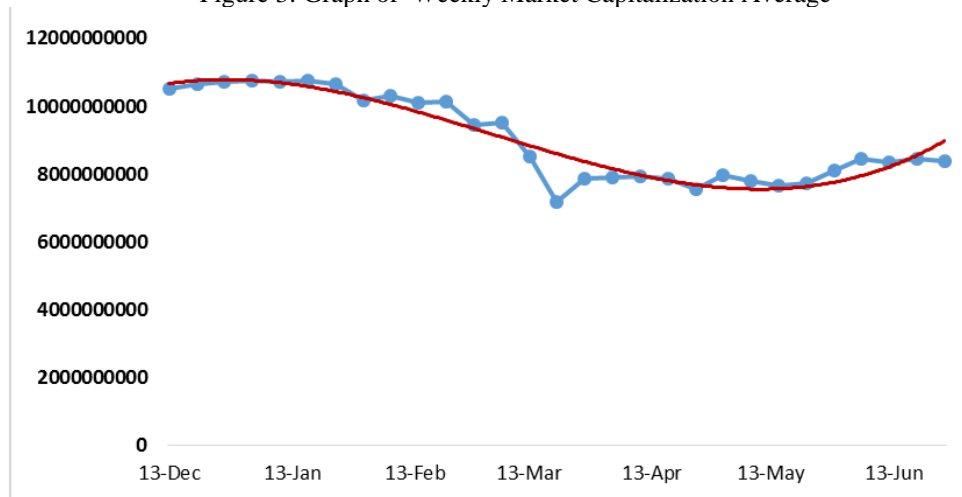Figure 3: Graph of Weekly Market Capitalization Average

Figure 4: Graph of Weekly Positive Case Data of Covid-19 Every Week in Indonesia
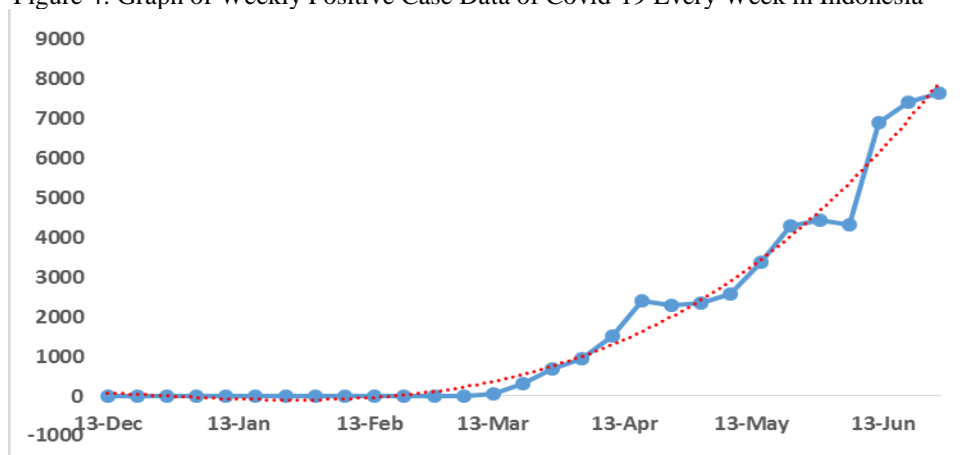
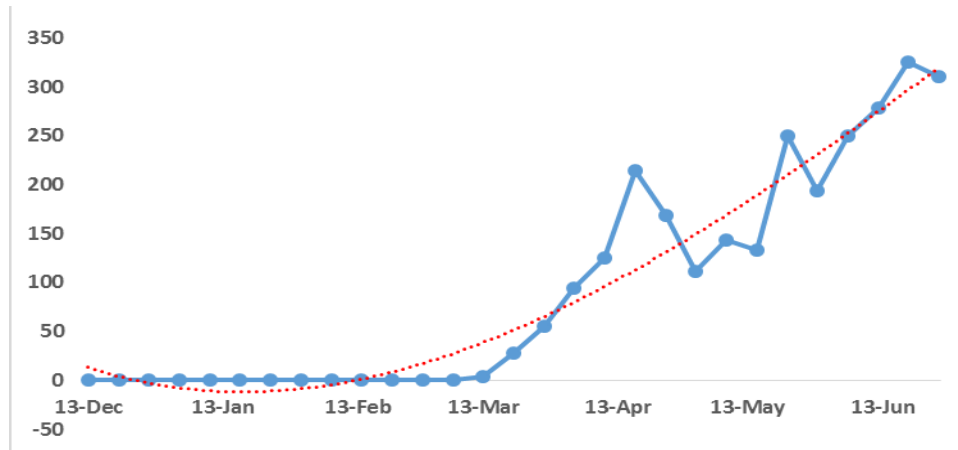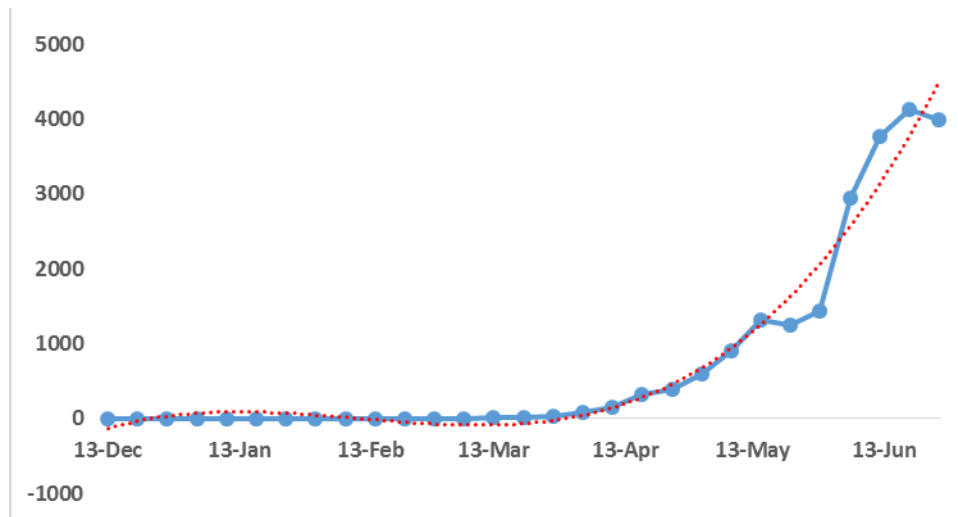Figure 5: Graph of Confirmed Death Data of Covid-19 Every Week in Indonesia

Figure 6: Graph of Patients Recovering of Covid-19 Every Week in Indonesia

Tabel 1: Descriptive Statistic

	RETURN	STYPE	PCASE	HCASE	DCASE	PBV	ASSETS
Mean	-0.002307	0.631206	1773.345	735.6207	92.51724	2.680670	9.04E+09
Median	0.000000	1.000000	300.0000	12.00000	28.00000	1.217500	7.61E+08
Maximum	16.50000	1.000000	7624.000	4136.000	325.0000	141.3360	8.39E+11
Minimum	-0.900000	0.000000	0.000000	0.000000	0.000000	-75.17900	1035.009
Std. Dev.	0.180984	0.482493	2377.440	1273.196	109.3152	10.21147	4.55E+10
Skewness	55.40903	-0.543882	1.245358	1.774473	0.772355	6.875128	10.85961
Kurtosis	4631.958	1.295808	3.385907	4.715217	2.167252	98.43444	146.9520
Jarque-Bera	1.46E+10	2785.633	4329.288	10588.46	2098.744	6335770.	14443646
Probability	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000
Sum	-37.72984	10324.00	29004828	12031812	1513212.	43845.04	1.48E+14
Sum Sq. Dev.	535.7101	3807.433	9.24E+10	2.65E+10	1.95E+08	1705404.	3.38E+25
Observations	16356	16356	16356	16356	16356	16356	16356

Intern. Journal of Profess. Bus. Review. | Miami, v. 7 | n. 6 | p. 01-19 | e0941 | 2022.

12

Data return is the yield per week for each share on the Indonesia Stock Exchange. STYPE is a type of Islamic stock and common stock that is categorized with 1 for Islamic shares and 0 for conventional shares. PCASE is the number of positive cases of COVID-19 every week announced by the Ministry of Health, HCASE is the accumulation of cases recovered every week from COVID-19, DCASE is the number of cases who die from COVID-19 every week. PBV is the market-to-book ratio every week and LOGASSET is the natural logarithm of weekly data on the capitalization of each share in the Indonesian capital market.

Tabel 2: Correlation Matrix

	RETURN	STYPE	PCASE	DCASE	HCASE	PBV	LOGASSET
RETURN	1						
STYPE	0.001436	1					
PCASE(-1)	-0.069282	2.85×10^{-5}	1				
DCASE(-1)	0.072869	-1.37×10^{-5}	0.993294	1			
HCASE(-1)	0.061404	0.000102	0.977535	0.947901	1		
PBV	-0.009804	0.017523	-1.21×10^{-5}	-8.49×10^{-6}	-1.83×10^{-5}	1	
LOGASSET	0.007979	-0.017161	-0.012925	-0.014770	-0.009407	0.067015	1

Table 1 provides a general statistical description of the data used in this study. The descriptive statistical table shows that a maximum weekly return stock of 16.5% and a minimum weekly return of -9% and an average weekly return of -0.24 percent during the COVID-19 period December 2019 to June 2020. The highest total number of COVID-19 positives each week of 7624 cases, the highest total death cases in one week was 325 people, while the maximum number of people recovered in a week was 4136 people. Table 2 indicates the correlation matrix data for each variable. In the table, it can be seen that the correlation between stock week returns and confirmation of the number of positive cases of COVID-19 the previous week has a negative correlation.

Empirical Testing

The results of the regression test using auto-regressive distributed lag models (ARDL) are presented in Table 3. The number of models tested is three models controlling for the type of Islamic and common stocks as well as the fundamental variables in each model. The first model examines the effect of information on the positive number of COVID-19 in a time lag on stock returns each week in the Indonesian capital market. The test results for the first model are presented in table 3, showing that although it is not statistically significant, the relationship between information on the number of positive cases of COVID-19 in the previous week negatively affects weekly stock returns in the Indonesian capital market.

Intern. Journal of Profess. Bus. Review. | Miami, v. 7 | n. 6 | p. 01-19 | e0941 | 2022.

13

In the death case model due to COVID-19 every week shows significant results with a marginal error of 10%, the regression test shows that information on the number of cases of death due to COVID-19 in the previous week will negatively affect stock returns per week, this result is consistent with control the fundamental variables of stocks. The last model shows the relationship between recovered COVID-19 cases and returns stock per week on the Indonesia Stock Exchange. The results of the regression test proved that the information on recovered COVID-19 cases has a significant positive effect with an error rate of 1% on the returns on stock investment in the Indonesian capital market. However, testing with the ARDL model indicates that there is a considerable time lag between the announcement of a recovered case due to COVID-19 and the market response to stock prices in the Indonesian capital market, where the test results show that the market points to information on recovering COVID-19 with a three-week time lag.

Meanwhile, the model test results regarding the performance of Islamic stocks. Where the difference in the performance of the portfolio of Islamic stocks and common stocks is represented through the categorization of Islamic stocks and common stocks with dummy variables. Through the multiple linear regression test with the ARDL method, it shows consistent results in all models. Even though they are not statistically significant, Islamic stocks tend to have better performance than common stocks. This is indicated by the direction of the regression coefficient which is always positive for all models. This shows that sharia stock portfolios tend to be resistant to the shock of the COVID-19 pandemic in the Indonesian capital market.

Tabel 3: Regression Panel

The positive cases model of COVID-19 every week			
α_0	-0.014111*** (0.0000)	-0.013710*** (0.0000)	-0.017283** (0.0246)
STYPE	0.000455 (0.8746)	0.000556 (0.8497)	0.000465 (0.8739)
PCASE (-1)	-2.64×10^{-7} (0.1721)	-2.57×10^{-7} (0.1907)	-2.65×10^{-7} (0.1767)
PBV		-0.000185 (0.1813)	-0.000195 (0.1590)
LOGASSET			0.010496*** (0.0000)
LOGASSET(-1)			-0.013252*** (0.0000)
The death case model of COVID-19 every week			
α_0	-0.015671*** (0.0000)	-0.015289*** (0.0000)	-0.019035** (0.0135)
STYPE	0.000450 (0.8759)	0.000554 (0.8501)	0.000466 (0.8736)
DCASE (-1)	-6.17×10^{-6}* (0.1011)	-6.04×10^{-6} (0.1139)	-6.19×10^{-6}* (0.1047)

PBV		-0.000186 (0.1808)	-0.000196 (0.1581)
LOGASSET			0.010493*** (0.0000)
LOGASSET(-1)			-0.013256*** (0.0000)
The recovery case model of COVID-19 every week			
α_0	-0.010743*** (0.0000)	-0.010330*** (0.0000)	-0.013692* (0.0738)
STYPE	0.000469 (0.8707)	0.000565 (0.8473)	0.000472 (0.8719)
HCASE (-3)	9.11×10^{-7}** (0.0115)	9.46×10^{-7}*** (0.0098)	9.38×10^{-7}** (0.0104)
PBV		-0.000185 (0.1827)	-0.00195 (0.1608)
LOGASSET			0.010539*** (0.0000)
LOGASSET(-1)			-0.013289*** (0.0000)

Further Testing

To strengthen the results of previous regression tests using the ARDL method, further in this study, panel data testing was also carried out using three models, namely the Panel Least Squares (PLS) regression test with three approaches, namely OLS, fixed models, and random models. In the fixed model and random model, the COVID-19 indicator variable is controlled to eliminate the effect of multicollinearity between variables. To see the effect of the time lag for COVID-19 information in the form of positive, death, and recovery data every week on the performance of sharia stocks and common shares of COVID-19 information data, it is transformed to have a time lag of one week. Panel data regression test results show results consistent with the previous ARDL method, where death and positive information have a negative effect on stock performance in the Indonesian capital market, while cases recovered provide positive information for capital market investors, hence they are optimistic in seeing the performance of the Indonesian Stock Exchange.

Tabel 4: The regression test panel data

Variabel	Fixed Model	Random Model	OLS
SYARIAH	0.000569 (0.8458)	0.000375 (0.8978)	0.000551 (0.8510)
ASET	5.41×10^{-13}*** (0.0050)	4.51×10^{-15} (0.8847)	0.010076*** (0.0000)
PBV	-0.000175 (0.2060)	-0.000185 (0.1798)	-0.000177 (0.2013)
PCASE (-1)	-2.09×10^{-5}*** (0.0000) (1)	-2.11×10^{-5}*** (0.0000) (1)	
DCASE (-1)	-0.000402**** (0.0000) (2)	-0.000396*** (.00000) (2)	
HCASE (-1)	1.70×10^{-5}*** (0.0001) (3)	1.76×10^{-5}*** (0.0000) (3)	

CONCLUSION

The results of testing and the portfolio's performance analysis of Islamic stocks and common stocks during the COVID-19 pandemic starting in China, December 2019 and having an impact in Indonesia from March to June 2020 show that the COVID-19 pandemic, both positive case data, and death case data, has a negative relationship towards stock returns every week of shares on the Indonesian stock exchange. Moreover, the information related to data on recovered patients shows a significant positive relationship to the overall stock performance every week on the Indonesia Stock Exchange, even though the methodological data shows different results, where between one methodology and another there is a difference in time lag response, namely time lag in three weeks and one week. Meanwhile, differences in behavior were shown by the Islamic stock portfolio group and conventional stock portfolios in responding to COVID-19 information, although not statistically significant, Islamic stock portfolios tended to be more resilient during the COVID-19 pandemic than common stock portfoliosThe results of testing and the portfolio's performance analysis of Islamic stocks and common stocks during the COVID-19 pandemic starting in China, December 2019 and having an impact in Indonesia from March to June 2020 show that the COVID-19 pandemic, both positive case data, and death case data, has a negative relationship towards stock returns every week of shares on the Indonesian stock exchange. Moreover, the information related to data on recovered patients shows a significant positive relationship to the overall stock performance every week on the Indonesia Stock Exchange, even though the methodological data shows different results, where between one methodology and another there is a difference in time lag response, namely time lag in three weeks and one week. Meanwhile, differences in behavior were shown by the Islamic stock portfolio group and conventional stock portfolios in responding to COVID-19 information, although not statistically significant, Islamic stock portfolios tended to be more resilient during the COVID-19 pandemic than common stock portfolios.

REFERENCES

Abbes, M. B. (2012). Risk and return of islamic and conventional indices. *International Journal of Euro-Mediterranean Studies*. https://doi.org/10.1007/s40321-012-0001-9

Al-Awadhi, A. M., Alsaifi, K., Al-Awadhi, A., & Alhammadi, S. (2020). Death and contagious infectious diseases: Impact of the COVID-19 virus on stock market returns. *Journal of Behavioral and Experimental Finance*. https://doi.org/10.1016/j.jbef.2020.100326

Al-Khazali, O., Lean, H. H., & Samet, A. (2014). Do Islamic stock indexes outperform conventional stock indexes? A stochastic dominance approach. *Pacific Basin Finance Journal*. https://doi.org/10.1016/j.pacfin.2013.09.003

Alsaifi, K., Elnahass, M., & Salama, A. (2020). Market responses to firms' voluntary carbon disclosure: Empirical evidence from the United Kingdom. *Journal of Cleaner Production*. https://doi.org/10.1016/j.jclepro.2020.121377

Ashraf, D., & Mohammad, N. (2014). Matching perception with the reality-Performance of Islamic equity investments. *Pacific Basin Finance Journal*. https://doi.org/10.1016/j.pacfin.2013.12.005

Baker, S. R., Bloom, N., Davis, S. J., Kost, K., Sammon, M. C., & Viratyosin, T. (2020). The Unprecedented Stock Market Impact of COVID-19. *Review of Corporate Finance Studies*.

Baker, S. R., Farrokhnia, R. A., Meyer, S., Pagel, M., & Yannelis, C. (2020). How does household spending respond to an epidemic? consumption during the 2020 COVID-19 pandemic. In *Review of Asset Pricing Studies*. https://doi.org/10.1093/rapstu/raaa009

Baltagi, B. (2005). Econometric analysis of panel data. In *Vasa*.

Bash, A., & Alsaifi, K. (2019). Fear from uncertainty: An event study of Khashoggi and stock market returns. *Journal of Behavioral and Experimental Finance*. https://doi.org/10.1016/j.jbef.2019.05.004

Bhandari, L. C. (1988). Debt/Equity Ratio and Expected Common Stock Returns: Empirical Evidence. *The Journal of Finance*. https://doi.org/10.2307/2328473

Boo, Y. L., Ee, M. S., Li, B., & Rashid, M. (2017). Islamic or conventional mutual funds: Who has the upper hand? Evidence from Malaysia. *Pacific Basin Finance Journal*. https://doi.org/10.1016/j.pacfin.2016.01.004

Buhagiar, R., Cortis, D., & Newall, P. W. S. (2018). Why do some soccer bettors lose more money than others? *Journal of Behavioral and Experimental Finance*. https://doi.org/10.1016/j.jbef.2018.01.010

Caballero, R. J., & Simsek, A. (2020). A Model of Asset Price Spirals and Aggregate Demand Amplification of a "COVID-19" Shock. *SSRN Electronic Journal*. https://doi.org/10.2139/ssrn.3576979

Chen, M. H., Jang, S. C. (Shawn), & Kim, W. G. (2007). The impact of the SARS outbreak on Taiwanese hotel stock performance: An event-study approach. *International Journal of Hospitality Management*. https://doi.org/10.1016/j.ijhm.2005.11.004

Chun-Da Chen, Chin-Chun Chen, Wan-Wei Tang, & Bor-Yi Huang. (2009). The Positive and Negative Impacts of the Sars Outbreak: A Case of the Taiwan Industries. *The Journal of Developing Areas*. https://doi.org/10.1353/jda.0.0041

Fama, E. F., & French, K. R. (1993). Fama-French APT three-factor model. In *Journal of Financial Economics*. https://doi.org/10.1016/0304-405X(93)90023-5

Franco Modigliani; Merton H. Miller. (1958). The cost of capital, corporation finance and theory of investment. *Journal of Craniomandibular Disorders : Facial & Oral Pain*.

Guo, M., Kuai, Y., & Liu, X. (2020). Stock market response to environmental policies: Evidence

Intern. Journal of Profess. Bus. Review. | Miami, v. 7 | n. 6 | p. 01-19 | e0941 | 2022.

17

from heavily polluting firms in China. *Economic Modelling*. https://doi.org/10.1016/j.econmod.2019.09.028

Hassan, T. A., Hollander, S., van Lent, L., & Tahoun, A. (2020). Firm-level Exposure to Epidemic Diseases: COVID-19, SARS, and H1N1. *SSRN Electronic Journal*. https://doi.org/10.2139/ssrn.3566530

Ho, C. S. F., Abd Rahman, N. A., Yusuf, N. H. M., & Zamzamin, Z. (2014). Performance of global Islamic versus conventional share indices: International evidence. *Pacific Basin Finance Journal*. https://doi.org/10.1016/j.pacfin.2013.09.002

Hoepner, A. G. F., Rammal, H. G., & Rezec, M. (2011). Islamic mutual funds' financial performance and international investment style: Evidence from 20 countries. *European Journal of Finance*. https://doi.org/10.1080/1351847X.2010.538521

Husnan, S. (2001). Dasar-Dasar Teori Portofolio dan Analisis Sekuritas Edisi Ketiga. *Yogyakarta: UPP AMP YKPN*.

Ichev, R., & Marinč, M. (2018). Stock prices and geographic proximity of information: Evidence from the Ebola outbreak. *International Review of Financial Analysis*. https://doi.org/10.1016/j.irfa.2017.12.004

Johns Hopkins University. (2020). *COVID-19 Map - Johns Hopkins Coronavirus Resource Center*. Johns Hopkins Coronavirus Resource Center.

Kannan, S., Shaik Syed Ali, P., Sheeza, A., & Hemalatha, K. (2020). COVID-19 (Novel Coronavirus 2019) - recent trends. *European Review for Medical and Pharmacological Sciences*. https://doi.org/10.26355/eurrev_202002_20378

Kemenkes. (2020). Gugus Tugas Percepatan Penanganan COVID-19, Salah Satu Respons Pemerintah Perlambat Penyebaran Corona. *19/03/2020 14:50:58*.

Kowalewski, O., & Śpiewanowski, P. (2020). Stock market response to potash mine disasters. *Journal of Commodity Markets*. https://doi.org/10.1016/j.jcomm.2020.100124

Krueger, D., Uhlig, H., & Xie, T. (2020). Macroeconomic Dynamics and Reallocation in an Epidemic. *SSRN Electronic Journal*. https://doi.org/10.2139/ssrn.3584436

La Pade, A. (2020a). *Kinerja Portofolio Saham Syariah dan Faktor yang Memengaruhi Kinerja Saham Syariah di Indonesia*. *5*(1), 17–41. https://doi.org/http://dx.doi.org/10.31332/lifalah.v5i1.1884

La Pade, A. (2020b). Kinerja Portofolio Saham Syariah dan Faktor yang Memengaruhi Kinerja Saham Syariah di Indonesia. *Li Falah : Jurnal Studi Ekonomi Dan Bisnis Islam*. https://doi.org/10.31332/lifalah.v5i1.1884

Ludvigson, S. C., Ma, S., & Ng, S. (2020). COVID-19 and The Macroeconomic Effects of Costly Disasters. *National Bureau of Economic Research*.

Makni, R., Benouda, O., & Delhoumi, E. (2015). Large scale analysis of Islamic equity funds using a meta-frontier approach with data envelopment analysis. *Research in International Business and Finance*. https://doi.org/10.1016/j.ribaf.2015.02.014

McGowan, Jr., C. B., & Muhammad, J. (2010). The Theoretical Impact Of The Listing Of Syariah-

Intern. Journal of Profess. Bus. Review. | Miami, v. 7 | n. 6 | p. 01-19 | e0941 | 2022.

18

Approved Stocks On Stock Price And Trading Volume. *International Business & Economics Research Journal (IBER)*. https://doi.org/10.19030/iber.v9i3.532

Modigliani, F., & Miller, M. H. (1963). Corporate Income Taxes and the Cost of Capital: A Correction. *American Economic Review*. https://doi.org/10.2307/1809167

Moser, C., & Yared, P. (2020). Pandemic Lockdown: The Role of Government Commitment. *SSRN Electronic Journal*. https://doi.org/10.2139/ssrn.3581412

Narayan, P. K., Narayan, S., Bach Phan, D. H., Sivananthan Thuraisamy, K., & Tran, V. T. (2017). Credit quality implied momentum profits for Islamic stocks. *Pacific Basin Finance Journal*. https://doi.org/10.1016/j.pacfin.2015.11.004

Rahman, M., & La Pade, A. (2020). Efisiensi Bank Umum Syariah Milik Pemerintah Daerah di Indonesia. *Li Falah : Jurnal Studi Ekonomi Dan Bisnis Islam*. https://doi.org/10.31332/lifalah.v4i2.1405

Ru, H., Yang, E., & Zou, K. (2020). What Do We Learn from SARS-CoV-1 to SARS-CoV-2: Evidence from Global Stock Markets. *SSRN Electronic Journal*. https://doi.org/10.2139/ssrn.3569330

Shanaev, S., & Ghimire, B. (2019). Is all politics local? Regional political risk in Russia and the panel of stock returns. *Journal of Behavioral and Experimental Finance*. https://doi.org/10.1016/j.jbef.2018.11.002

Sharpe, W. F. (1963). A Simplified Model for Portfolio Analysis. *Management Science*. https://doi.org/10.1287/mnsc.9.2.277

Su, C., & Bangassa, K. (2011). The impact of underwriter reputation on initial returns and long-run performance of Chinese IPOs. *Journal of International Financial Markets, Institutions and Money*. https://doi.org/10.1016/j.intfin.2011.06.002

Umar, Z. (2017). Islamic vs conventional equities in a strategic asset allocation framework. *Pacific Basin Finance Journal*. https://doi.org/10.1016/j.pacfin.2015.10.006

Wooldridge, J. M. (2002). Econometric Analysis of Cross Section and Panel Data. *Booksgooglecom*. https://doi.org/10.1515/humr.2003.021

Yang, Y., Peng, F., Wang, R., Guan, K., Jiang, T., Xu, G., Sun, J., & Chang, C. (2020). The deadly coronaviruses: The 2003 SARS pandemic and the 2020 novel coronavirus epidemic in China. In *Journal of Autoimmunity*. https://doi.org/10.1016/j.jaut.2020.102434

Yang, Y., Peng, F., Wang, R., Yang, M., Guan, K., Jiang, T., Xu, G., Sun, J., & Chang, C. (2020). Corrigendum to "The deadly coronaviruses: The 2003 SARS pandemic and the 2020 novel coronavirus epidemic in China" [J. Autoimmun. 109C (2020) 102434](S0896841120300470)(10.1016/j.jaut.2020.102434). In *Journal of Autoimmunity*. https://doi.org/10.1016/j.jaut.2020.102487

Zach, T. (2005). Political Events and the Stock Market: Evidence from Israel. *SSRN Electronic Journal*. https://doi.org/10.2139/ssrn.420242