# SHARIAH RISK FACTOR AND STOCK RETURN IN THE INDONESIAN STOCK MARKET DURING COVID-19 AND THE RUSSIA-UKRAINE CONFLICT

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## ABSTRACT

Using a sample of 544 Indonesian stocks, we examine the performance of the Shariah and non-Shariah stocks from 2018-2023. Employing panel regressions to investigate the impact of the Shariah investment principles on the average stock returns, we observe a positive relationship between the Shariah firms and average stock return in the market. Consequently, the study forms the Shariah and non-Shairah portfolios and analyzes their performance using the asset pricing model. We document evidence that the Shariah portfolio provides a higher abnormal return than the non-Shariah portfolio. Further, we report that the Shariah portfolio provides a higher abnormal return than the non-Shariah portfolio after controlling COVID-19 and the Russia-Ukraine war. Finally, we create the Shariah risk factor and conclude that it is one factor that explains the deviation in the stock return in the Indonesian stock market. The study recommends that policymakers consider this factor to derive the cost of equity, discount rate, and cost of capital.

*Keywords: Shariah investment, Shariah risk factor, Asset pricing model, Ethical investment.*
**JEL classification: -**

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*Shariah Risk Factor and Stock Return in the Indonesian Stock Market During COVID-19*
*and the Russia-Ukraine Conflict*

## I. INTRODUCTION

The subset of the unrestricted portfolio performance is lower than the overall portfolio in the market (Markowitz, 1952). In this line, the previous research reports that the Shariah investment is the subset of the portfolio and provides a lower return to investors due to the additional screening cost (Derigs & Marzban, 2009). However, many early studies on the Shariah investment document that the Shariah investment products perform similarly to the common investment products in the global market (Jawadi et al., 2014; Dharani & Natarajan, 2011; Albaity & Ahmad, 2008; Ahmad & Ibrahim, 2002). On the other hand, the market segmentation theory documents (Merton, 1987) that the neglected stocks in the segment outperform the common stocks. Later, studies on the Shariah stocks and mutual funds evidence that the Shariah investment products offer higher stock returns due to restricted leverage and credit sales (Hoepner et al., 2011; Hayat & Kraeussl, 2011; BinMahfouz & Hassan, 2012). In this context, Merdad et al. (2015) and Dharani et al. (2019) create the Shariah risk factor to examine the relationship between the Shariah firms and average return using the asset pricing model.

Moreover, Merdad et al. (2015) document a negative relationship between the Shariah firms and average return using the asset pricing model. On the contrary, Dharani et al. (2019) argue the positive relationship between the Shariah firms and the average returns using the country-specific asset pricing model. The arguments of Merdad et al. (2015) and Dharani et al. (2019) relate to the study's geographical location, company size, and time. In this connection, we use the global asset pricing model and compare the performance of the Shariah portfolio with the non-Shariah portfolio during Covid-19 and the Russia-Ukraine conflicts in the Indonesian stock market.

The growth of Shariah finance has been high for the last two decades due to ethical investment principles and restrictions on high-risk activities. The Islamic finance assets in the global markets increased by only 2% in 2018, compared to 10% in 2017 (Islamic Finance Outlook 2020). However, the S&P global ratings report that the industry continues to expand slower as Sukuk volumes shrink and global markets grapple. Further, international investors try to balance their portfolios by investing in different classifications of assets. In this connection, the Shariah stocks are the alternatives to the global investor for rebalancing their portfolios.

Further, Shariah stocks minimize the risk by restricting the debt capital, credit sales, interest income, and other ethical investment principles. Moreover, the risk of Shariah stocks is low even during the global crisis due to Shariah investment principles. Dharani et al. (2019) explore Shariah stocks as one of the best alternatives to incorporate in portfolios to minimize risk. Due to the unique features of the Shariah investment, investors prefer to invest in Shariah-based investment in the global markets.

This paper considers the 544 companies from the Indonesian stock market from 12-01-2018 to 28-04-2023. We divide the sample into the Shariah and non-Shariah stocks based on the Shariah investment norms and examine its impact on the stock returns. Initially, we report that the average return of Shariah stocks is higher than that of non-Shariah stocks. Interestingly, the study observes the positive relationship between the Shariah investment norms and the stock returns in the Indonesian stock market. Then, we create the Shariah and non-Shariah

portfolios to examine their performance using the global asset pricing model. The model reports that the Shariah portfolio offers a higher abnormal return than the non-Shariah portfolio. In addition, we find that the Shariah portfolio provides a higher abnormal return during the COVID-19 and the Russia-Ukraine war. The results motivate the formation of trading strategies and examine the statistical significance of the approach using the asset pricing model.

We organize the study into 5 sections: section 1 introduces the importance of the study. Section 2 investigates the previous research and develops the hypotheses. Section 3 models the empirical framework. Section 4 verifies the empirical results, and Section 5 summarizes the work to conclude the study.

## II. LITERATURE REVIEW AND HYPOTHESIS DEVELOPMENT

The research on the Islamic equity market has been increasing around the world. Recently, Khan et al. (2021) survey 315 research papers on the different fields of Islamic finance. Interestingly, they have 101 papers on Islamic equity research and find that more attention should be paid to the Islamic investment strategy. Further, Narayan & Phan (2019) review 112 papers from high-level journals and find that investors make a profitable trading strategy using financial and economic news in the global equity markets. Similarly, Masih et al. (2018) review previous research papers on the different dimensions of Islamic equity markets. Khan et al. (2021) and Narayan & Phan (2019) highlight the trading strategy in the Islamic equity market. However, it is not clear the method of the trading strategy. Therefore, we form the trading strategy in the Indonesian equity market using the different risk factors.

Dewandaru et al. (2017) examine the different asset classes for investors using the US and Malaysian data sets. They find that the Islamic equity does not add any value to the conventional investors in the Malaysian market. However, investors can minimize global risk by investing in traditional and Islamic REITs. Therefore, the risk factor is essential in forming the investment strategy. Additionally, Merdad et al. (2015) estimate the Islamic risk factor and evidence that the Islamic risk factor is negatively related to stock return. On the contrary, Dharani et al. (2019) create the Shariah risk factor and examine the performance of the Shariah and non-Shariah portfolios. They report that the Shariah risk factor is positively related to the stock return. Merdad et al. (2015) and Dharani et al. (2019) estimate the Shariah risk factor in different geographical regions and periods. Therefore, the study fills this gap by assessing the Shariah risk factor in the Indonesian stock market.

Further, Dharani et al. (2022) investigate the impact of Covid-19 on the Shariah sectorial indices from 2010 to 2020 and find that some Shariah sectorial indices outperform during the Covid-19 pandemic. Similarly, Ashraf et al. (2022) examine the Covid-19 impact on the global Shariah indices and document that the Shariah indices provide the excess return during the period. Likewise, Salisu and Shaik (2022) empirically investigate the performance of Islamic stocks during the pandemic. They report that Islamic stocks could be used for hedging during the pandemic. Hidayah and Swastika (2022) find that the Shariah stocks perform well during the pandemic period in the Indonesian stock market. On the other hand, Ali

et al. (2021) state that Islamic stocks are more volatile in the Indonesian stock market during the pandemic. Most previous papers on Islamic investment and Covid-19 report that Islamic stocks are the safest investment alternatives. Interestingly, we employ the asset pricing model and examine the Covid-19 impact and the Russia-Ukraine war on Islamic equity investment in the Indonesian context.

Many studies examine the risk and return of the Shariah stocks with their counterparts in the global markets. They document that the Shariah and common indices perform similarly (Jawadi et al., 2014; Dharani & Natarajan, 2011; Albaity & Ahmad, 2008; Ahmad & Ibrahim, 2002). On the other hand, studies on Shariah stocks and mutual funds evidence that Shariah investment products offer a higher return than non-Shariah investment products in the global market (Hoepner et al., 2011; Hayat & Kraeussl, 2011; BinMahfouz & Hassan, 2012). By considering both arguments, we develop the following hypothesis.

H1: The Shariah stocks provide a lower average return than the non-Shariah stocks in the Indonesian stock market.

Further, a few studies examine the impact of Shariah firms on average returns. For instance, Merdad et al. (2015) investigate the Islamic effect on the average stock return in Saudi Arabia from January 2003 to April 2011. They document a negative Islamic impact on the stock return during the study period. Al-Awadhi and Dempsey (2017) investigate the social norms and market outcomes in the Gulf Cooperation Countries (GCC). They document that the non-Shariah stocks provide a higher return with lower liquidity. On the other hand, Dharani et al. (2019) examine the impact of ethical norms on stock returns and find a positive relationship between ethical norms and average returns in India. We frame the following hypothesis to investigate the effect of the Shariah norms on stock return. H2: The Shariah investment norms are negatively related to the average stock returns in the Indonesian stock market.

Further, Merdad et al. (2015) and Dharani et al. (2019) create the SMN (Shariah minus and non-Shariah) factor and load it in the asset pricing model. Merdad et al. (2015) document the negative relation between the SMN factor and average stock return in Saudi Arabia. In this study, we frame the following hypothesis. H3: There is no relationship between the SMN and the stock returns in the Indonesian stock market.

## III. DATA AND METHODOLOGY
### 3.1. Data
Initially, we collect the weekly price of the 873 Indonesian stocks from 05-01-2018 to 19-05-2023 from the Thomson Reuters database. We verify the availability of the data set for the selected companies and confirm that the it is available for the 554 companies for the study period. Then, the study classifies the 554 stocks into 319 Shariah Stocks and 235 Non-Shariah stocks using the Shariah investment principles. Further, we obtain the weekly excess market return, size factor (SMB), value factor (HML), and risk-free rate from the Fama and French data libraries. Finally, we consider the 554 companies with 154564 observations for 277 weeks from 12-01-2018 to 28-04-2023. Ultimately, the study analyzes the variables at the 1st and 99th percentiles. We convert the weekly price into the weekly return as:

$$R_t = \ln\left(\frac{P_t}{P_{t-1}}\right) \times 100 \tag{1}$$

where $R_t$ is the weekly returns of the stocks at period t. $P_t$ and $P_{t-1}$ are the current week's closing price and the previous week's closing price of the stocks, respectively. We estimate the weekly return of the stocks using the first difference in the prices in the natural logarithm. Further, we calculate the weekly excess return of each stock by subtracting the weekly risk-free rate of return from the weekly return of the stock.

## 3.2. Method

Initially, the study employs the static panel model to examine the impact of the Shariah norms on the stock returns in the Indonesian stock market. Further, we verify the model selection based on the Hausman test. It supports the random effect model. However, the expected coefficient under the pooled regression and random effect model are the same. Further, we create the Shariah and non-Shariah portfolios. Moreover, the study employs the asset pricing model to examine the performance of the Shariah and non-Shariah portfolios in the Indonesian stock market. Finally, we create the Shariah risk factor by deducting the non-Shariah return from the Shariah return. To conclude, we add the Shariah risk factor in the asset pricing model to examine the stock return over the study period.

## 3.3. Proposed Method

We employ the following pooled panel regression models to investigate the presence of the Shariah effect on the Indonesian stock market.

$$R_{it} = \alpha + DShariah_{it} + \varepsilon_{it} \tag{2}$$

Where $R_{it}$ is the return of the stocks over the study period and $\alpha$ represents the intercept. It explains the weekly average return of the non-Shariah stocks. The D in the model is the coefficient of the Shariah dummy, which means the differential weekly average return of the Shariah stocks as compared to that of non-Shariah stocks. We assign the dummy value of 1 for the Shariah stocks and 0 for the non-Shariah stocks over the period. The study expects a positive coefficient in the model.

Next, we form the Shariah and non-Shariah portfolios and examine their performance using Equation (3).

$$R_t = \alpha + \beta_1(RM_t) + \beta_2 SMB_t + \beta_3 HML_t + \varepsilon_t \tag{3}$$

Where $R_{it}$ is the return of the stock portfolios over the study period and alpha ($\alpha$) captures the portfolio's abnormal return. The beta ($\beta_1$) represents a slope in the

model and describes the movement of the stocks to the market movement. The RM represents the market return, SMB for the size factor, and HML for the value factor. The $\beta_2$ and $\beta_3$ are the coefficients of the size and value factors. The study collects the Fama and French libraries' market, size, and value factors. We employ Equation (3) to investigate the risk and return performance of the Overall, Shariah, and non-Shariah portfolios.

Further, we test the Covid-19 impact on the Shariah and non-Shariah stock returns using the dummy variable from January 2020 to October 2020 (Dharani et al. 2022, 2023). We create the dummy variable of 1 for the Covid-19 period and otherwise 0. We employ Equation (4) to analyze the Sahriah and non-Shariah stock returns during Covid-19.

$$R_t = \alpha + DCovid_t + \beta_1(RM_t) + \beta_2 SMB_t + \beta_3 HML_t + \varepsilon_t \qquad (4)$$

In Equation (4), the alpha ($\alpha$) represents the portfolio's average return during the normal period. The D stands for the differential average return of the portfolio during the COVID-19 period. We employ the same Equation for the overall, Shariah and non-Shariah portfolios to examine their performance. The study expects a higher abnormal return for the Shariah portfolio after controlling COVID-19 due to the ethical norms of the stocks.

Further, the study examines the performance of the portfolios by controlling the Russia-Ukraine war. We consider the period from 24-02-2022 to 30-08-2022 and assign a dummy variable of 1 during the war period and 0 otherwise. The study employs the following model:

$$R_t = \alpha + DWar_t + \beta_1(RM_t) + \beta_2 SMB_t + \beta_3 HML_t + \varepsilon_t \qquad (5)$$

$$R_t = \alpha + D_1 Covid + D_2 War + \beta_1(RM_t) + \beta_2 SMB_t + \beta_3 HML_t + \varepsilon_t \qquad (6)$$

In Equation (5), the alpha ($\alpha$) represents the portfolio's average return other than the Russia-Ukraine war period. The D stands for the portfolio's differential average return from the model's intercept. We employ the same Equation for the overall, Shariah and non-Shariah portfolios to examine their performance after controlling the Russia-Ukraine war. After controlling the Russia-Ukraine war, the study expects a higher abnormal return for the Shariah portfolio. Further, we examine the Shariah and non-Shariah portfolios' performance using Equation (6) by including both Covid-19 and the Russia-Ukraine war.

Finally, the study estimates the significance of the SMN trading strategy using Equation (7).

$$SMN_t = \alpha + \beta_1(RM_t) + \beta_2 SMB_t + \beta_3 HML_t + \varepsilon_t \qquad (7)$$

SMN is the Shariah minus non-Shariah return. We observe that the Shariah stocks provide a higher return than the non-Shariah stocks. Therefore, the study creates the SMN time series return. Then, we estimate the abnormal return of

the SMN using Equation (7). The study also considers Covid-19 and the Russia-Ukraine war in this model. We expect a positive and significant intercept and coefficients for this model.

## IV. EMPIRICAL ANALYSIS
### 4.1. Descriptive Statistics
In this paper, we classify the stocks into Shariah and Non-Shariah stocks and provide descriptive statistics for the stock returns. Table 1 reports the results of the summary statistics from 12-02-2018 to 28-04-2023. The results reveal that the average weekly return of all stocks is 0.069%, with a standard deviation of 6.356 for the total observations of 154566. It reveals that the average yearly stock return of the Indonesian stock market is 3.58%. Further, we classify the 554 stocks into 319 Shariah stocks and 235 non-Shariah stocks. The average return of the Shariah stocks is 0.108%, with a standard deviation of 6.469, considering the 89001 observations. Moreover, the average return of the non-Shariah stocks is 0.015%, with a standard deviation of 6.199 for the 65565 observations. The skewness and kurtosis are higher than zero and 3 respectively over the study period. It reports that the return series are not normally distributed and are leptokurtic. Interestingly, the study observes that the average return of the Shariah stocks is higher than that of the non-Shariah and overall stocks. It reveals that the Shariah stocks provide a higher return to investors due to ethical investment principles (Dharani et al. 2019; Hoepner et al., 2011; Hayat & Kraeussl, 2011; Bin Mahfouz & Hassan, 2012).

**Table 1.**
**Summary Statistics**

| Parameters | Overall | Shariah | Non-Shariah |
|---|---|---|---|
| Mean | 0.069 | 0.108 | 0.015 |
| Maximum | 27.642 | 27.642 | 27.650 |
| Minimum | -19.118 | -18.919 | -19.355 |
| Std. Dev. | 6.356 | 6.469 | 6.199 |
| Skewness | 0.970 | 0.945 | 1.005 |
| Kurtosis | 8.094 | 7.611 | 8.837 |
| Jarque-Bera | 191365.5 | 92101.91 | 104129.3 |
| Probability | 0.000 | 0.000 | 0.000 |
| Observations | 154566 | 89001 | 65565 |

Source: Thomson Reuters Eikon

### 4.2. Impact of the Shariah Investment Principles on Stock Returns Using a Panel Regression Model
Further, we assign the dummy variable of 1 for the Shariah stocks and 0 for non-Shariah stocks to investigate the Shariah norms on the stock returns using the panel regression for the 154566 observations. Table 2 reports the model results to test the hypothesis that the Shariah investment norms are negatively related to the average stock returns in the Indonesian stock market. The coefficient of the Shariah dummy is 0.089, with a standard error of 0.033, and is highly significant at

1%. It confirms that Shariah stocks yield a higher return than non-Shariah stocks in Indonesia. The study fails to support the null hypothesis and confirms the positive relationship between the Shariah investment norms and the average stock returns in the Indonesian stock market. These results are consistent with the previous studies (Dharani et al., 2019). We suggest global investors consider the Shariah stocks from the Indonesia stock market to diversify the risk.

### 4.3. Descriptive statistics of the Shariah and Non-Shariah portfolios

The study creates equally weighted Shariah and non-Shariah portfolios for 277 weeks and presents the summary statistics in Table 3. Initially, we estimate the cross-section average return for each week and form the time series returns for 277 weeks. Then, we create the overall portfolio by considering all sample stocks selected in the study. Next, we classify the stocks into the Shariah and non-Shariah stocks. Then, we form the Shariah and non-Shariah weekly portfolios. The results of the portfolios reveal that the average return of the overall, Shariah and non-Shariah portfolios are 0.231, 0.263, and 0.181, respectively. It shows that the Shariah portfolio provides a higher return than the non-Shariah portfolio. Further, we create the Shariah minus non-Shariah Portfolio (SMN) by deducting the return of the non-Shariah stocks from the Shariah stocks (Dharani et al, 2019; Merdad et al., 2015). Additionally, the results confirm that the Shariah portfolio outperforms the non-Shariah and overall portfolios over the 277 weeks in the Indonesia stock market.

**Table 2.**
**Impact of the Shariah Investment Principles on Stock Returns**

| Variable | Coefficient | Prob. |
|---|---|---|
| Intercept | 0.018 | 0.481 |
| | (0.025) | |
| Shariah | 0.089 | 0.007 |
| | (0.033) | |
| F-statistic | 7.357 | |
| Prob(F-statistic) | 0.007 | |
| Observations | 154566 | |

Source: Thomson Reuters Eikon. The author (s) estimate the results using the Eviews software

**Table 3.**
**Summary Statistics of the Shariah and Non-Shariah Portfolios**

|             | OVERALL | SHARIAH | NONSHARIAH | SMN    |
|-------------|---------|---------|------------|--------|
| Mean        | 0.231   | 0.263   | 0.181      | 0.081  |
| Median      | 0.399   | 0.424   | 0.293      | 0.118  |
| Maximum     | 4.083   | 4.606   | 4.168      | 2.787  |
| Minimum     | -6.248  | -6.665  | -5.681     | -4.074 |
| Std. Dev.   | 1.600   | 1.728   | 1.550      | 0.883  |
| Skewness    | -0.870  | -0.853  | -0.601     | -0.515 |
| Kurtosis    | 5.496   | 5.815   | 4.598      | 5.375  |
| Jarque-Bera | 106.853 | 125.054 | 46.151     | 77.356 |
| Probability | 0.000   | 0.000   | 0.000      | 0.000  |
| Obs         | 277     | 277     | 277        | 277    |

Source: Thomson Reuters Eikon. The author (s) estimate the results using the Eviews software

### 4.4. The Performance of the Shariah and Non-Shariah Portfolios

We employ the Fama and French three-factor model (1996) for the overall, Shariah, and non-Shariah portfolios from 12-01-2018 to 28-04-2023. We source the market, SMB, and HML factors from the Fama and French libraries to understand the performance of the Indonesian stocks concerning global aspects. Table 4 presents the results of the three-factor model for the Shariah, non-Shariah, and overall portfolios. We examine the null hypothesis that the Shariah stocks provide a lower average return than the non-Shariah stocks in the Indonesian stock market. The intercept of the overall portfolio is 0.193 and significant at a 5% level. Further, the Shariah and non-Shariah intercepts are 0.220 and 0.149, significant at 5% and 10%, respectively. The asset pricing model intercept represents the portfolio's abnormal return. Moreover, it also explains the information efficiency. Further, the market and values factors' coefficients are positive and highly significant at 1%. Thus, these factors dominate in determining the variance in the stock returns of the Indonesian stock markets. Interestingly, the Shariah portfolio gains higher abnormal returns with a significant level of 5% than the non-Shariah and overall portfolios over the study period. Therefore, the study does not support the null hypothesis that the Shariah stocks provide a lower average return than the non-Shariah stocks in the Indonesian stock market. The results confirm that the Shariah portfolio outperforms the non-Shariah portfolio (Dharani et al., 2019; Hoepner et al., 2011; Hayat & Kraeussl, 2011; BinMahfouz & Hassan, 2012) and allows global investors to diversify the risk by considering the Shariah stocks from the Indonesian stock market.

### 4.5. The Performance of the Shariah and non-Shariah Portfolios After Controlling the Covid-19

In this section, we investigate the performance of the Shariah and non-Shariah portfolios after controlling the Covid-19 period. We assign the dummy value 1 during COVID-19 and 0 otherwise. Table 5 reports that the intercepts are 0.242 with a significance of 1%, 0.28 with a significance of 1%, and 0.187 with a significance of

5% for the overall, Shariah, and non-Shariah portfolios, respectively. Further, the market and value coefficients are positive and highly significant at 1%. It reveals that the market and value factors dominate in determining the variation in the stock return in the Indonesian stock market. The results of Table 5 are consistent with the results of Table 4 with respect to market and value factors after controlling the COVID-19 period. Our variable of interest is abnormal return between the Shariah and non-Shariah portfolios over the study period. After controlling COVID-19 in the model, the Shariah portfolio provides a higher return of 0.28 than the non-Shariah portfolio of 0.187. It confirms that the Shariah investment is one of the safest alternatives for global investors during the crisis. Hence, we suggest that investors consider Asian markets, particularly the Indonesian market, to diversify their investment risk.

**Table 4.**
**The Performance of the Shariah and Non-Shariah Portfolios**

| Variable | Overall | Prob. | Shariah | Prob. | Non-Shariah | Prob. |
|---|---|---|---|---|---|---|
| Intercept | 0.193 | 0.021 | 0.220 | 0.015 | 0.149 | 0.074 |
| | (0.083) | | (0.090) | | (0.083) | |
| MKT_RF | 0.252 | 0.000 | 0.278 | 0.000 | 0.216 | 0.000 |
| | (0.029) | | (0.032) | | (0.030) | |
| SMB | 0.073 | 0.203 | 0.088 | 0.153 | 0.059 | 0.300 |
| | (0.057) | | (0.061) | | (0.057) | |
| HML | 0.122 | 0.000 | 0.116 | 0.001 | 0.120 | 0.000 |
| | (0.033) | | (0.036) | | (0.034) | |
| Durbin-Watson stat | 1.927 | | 1.959 | | 1.815 | |
| F-statistic | 32.298 | | 33.043 | | 24.584 | |
| Prob(F-statistic) | 0.000 | | 0.000 | | 0.000 | |
| Obs | 277 | | 277 | | 277 | |

Source: Thomson Reuters Eikon. The author (s) estimate the results using the Eviews software

**Table 5.**
**The Performance of the Shariah and Non-Shariah Portfolios After Controlling the Covid-19**

| Variable | Overall | Prob. | Shariah | Prob. | Non-Shariah | Prob. |
|---|---|---|---|---|---|---|
| Intercept | 0.242 | 0.008 | 0.280 | 0.005 | 0.187 | 0.041 |
| | (0.091) | | (0.098) | | (0.091) | |
| MKT_RF | 0.252 | 0.000 | 0.278 | 0.000 | 0.216 | 0.000 |
| | (0.029) | | (0.032) | | (0.030) | |
| SMB | 0.075 | 0.189 | 0.091 | 0.140 | 0.061 | 0.286 |
| | (0.057) | | (0.061) | | (0.057) | |
| HML | 0.116 | 0.001 | 0.110 | 0.003 | 0.116 | 0.001 |
| | (0.034) | | (0.036) | | (0.034) | |
| COVID | -0.313 | 0.172 | -0.377 | 0.126 | -0.237 | 0.302 |
| | (0.229) | | (0.246) | | (0.229) | |
| Durbin-Watson stat | 1.937 | | 1.974 | | 1.820 | |

**Table 5.**
**The Performance of the Shariah and Non-Shariah Portfolios After Controlling the Covid-19 (Continued)**

| Variable | Overall | Prob. | Shariah | Prob. | Non-Shariah | Prob. |
|---|---|---|---|---|---|---|
| F-statistic | 24.770 | | 25.492 | | 18.710 | |
| Prob(F-statistic) | 0.000 | | 0.000 | | 0.000 | |
| Obs | 277 | | 277 | | 277 | |

Source: Thomson Reuters Eikon. The author (s) estimate the results using the Eviews software

### 4.6. The Performance of the Shariah and non-Shariah Portfolios After Controlling the Russia-Ukraine Crisis

The study also examines the impact of the recent Russia-Ukraine war on the Shariah and non-Shariah Portfolio returns over the study period. We consider the peak war period from 24-02-2022 to 30-08-2022 and assign a dummy variable of 1 during the war period and 0 otherwise. Then, the study employs the Fama and French three-factor model by controlling the war in the study. Table 6 reports the results of the impact of the war on the portfolio returns of the Shariah and non-Shariah from 12-01-2018 to 28-04-2023. The results show that the market and value factors are highly significant at 1%. Further, it reveals that the market factor dominates in the Indonesian market. Moreover, the war coefficients are not significant and infer that the Russia-Ukraine war effect is not important in the Indonesian stock market as far as this study is concerned. Interestingly, the intercepts are 0.198, 0.220, and 0.160 for the overall, Shariah, and non-Shariah portfolios for the 277 weeks. It indicates that the Shariah portfolio outperforms the non-Shariah portfolio in the model after controlling the Russia-Ukraine war. The study suggests that Shariah stocks are alternative investment products for global investors to diversify the risk.

### 4.7. The Performance of the Shariah and non-Shariah Portfolios After Controlling Covid-19 and the Russia-Ukraine Crisis

The study also examines the performance of the Shariah and non-Shariah portfolios after controlling COVID-19 and the Russia-Ukraine war. Table 7 shows that the COVID-19 and the Russia-Ukraine war coefficients are not statistically significant. Moreover, the coefficients of the market and value factors are positive and highly significant for all portfolios. This means that the market and value factors dominate in the Indonesian market. Further, the intercept coefficients are 0.255, 0.287, and 0.205 for the overall, Shariah and non-Shariah portfolios, respectively. These coefficients are highly significant for all portfolios. Interestingly, the Shariah portfolio provides a higher abnormal return than the overall and non-Shariah portfolios. It confirms that the Shariah stocks outperform the common stocks in the Indonesian stock market. It pays way to the global investor to consider stocks from the Indonesian stock market to diversify the risk during the crisis and unexpected periods.

**Table 6.**
**The Performance of the Shariah and Non-Shariah Portfolios After Controlling the Russia-Ukraine War**

| Variable | Overall | Prob. | Shariah | Prob. | Non-Shariah | Prob. |
|---|---|---|---|---|---|---|
| Intercept | 0.198 | 0.025 | 0.220 | 0.021 | 0.160 | 0.070 |
| | (0.088) | | (0.095) | | (0.088) | |
| MKT_RF | 0.252 | 0.000 | 0.278 | 0.000 | 0.215 | 0.000 |
| | (0.030) | | (0.032) | | (0.030) | |
| SMB | 0.073 | 0.202 | 0.088 | 0.154 | 0.060 | 0.296 |
| | (0.057) | | (0.061) | | (0.057) | |
| HML | 0.122 | 0.000 | 0.116 | 0.001 | 0.120 | 0.000 |
| | (0.034) | | (0.036) | | (0.034) | |
| RUSSIA | -0.048 | 0.863 | 0.002 | 0.995 | -0.109 | 0.698 |
| | (0.281) | | (0.302) | | (0.281) | |
| Durbin-Watson stat | 1.927 | | 1.960 | | 1.815 | |
| F-statistic | 24.145 | | 24.691 | | 18.419 | |
| Prob(F-statistic) | 0 | | 0 | | 0 | |
| Obs | 277 | | 277 | | 277 | |

Source: Thomson Reuters Eikon. The author (s) estimate the results using the Eviews software

**Table 7.**
**The Performance of the Shariah and Non-Shariah Portfolios After Controlling Covid-19 and the Russia-Ukraine War**

| Variable | Overall | Prob. | Shariah | Prob. | Non-Shariah | Prob. |
|---|---|---|---|---|---|---|
| Intercept | 0.255 | 0.009 | 0.287 | 0.006 | 0.205 | 0.035 |
| | (0.097) | | (0.104) | | (0.097) | |
| MKT_RF | 0.251 | 0.000 | 0.277 | 0.000 | 0.215 | 0.000 |
| | (0.030) | | (0.032) | | (0.030) | |
| SMB | 0.076 | 0.185 | 0.091 | 0.139 | 0.062 | 0.279 |
| | (0.057) | | (0.061) | | (0.057) | |
| HML | 0.116 | 0.001 | 0.110 | 0.003 | 0.116 | 0.001 |
| | (0.034) | | (0.036) | | (0.034) | |
| COVID | -0.325 | 0.161 | -0.385 | 0.123 | -0.255 | 0.273 |
| | (0.231) | | (0.249) | | (0.232) | |
| RUSSIA | -0.105 | 0.710 | -0.065 | 0.830 | -0.154 | 0.589 |
| | (0.283) | | (0.305) | | (0.284) | |
| Durbin-Watson stat | 1.937 | | 1.973 | | 1.820 | |
| F-statistic | 19.780 | | 20.332 | | 14.988 | |
| Prob(F-statistic) | 0 | | 0 | | 0 | |
| Obs | 277 | | 277 | | 277 | |

Source: Thomson Reuters Eikon. The author (s) estimate the results using the Eviews software

## 4.8. Robustness Test

We examine the robustness of the results by considering the excess returns of the Shariah portfolio over the non-Shariah portfoli. We document that the Shariah portfolio provides a higher return than the non-Shariah portfolio. Further, the

model results confirm that the Shariah portfolio yields a higher return than the non-Shariah and overall portfolios over the study period. Then, we create the SMN (Shariah return minus non-Shariah return) by deducting the return of the Shariah portfolio from the returns of the non-Shariah portfolio and we apply the three-factor model to the SMN series. Table 8 reports the results of the model. The results reveal that the market, size, and value factors are positive and highly significant. Further, the coefficients of the Covid-19 and the Russia-Ukraine values are not significant. Interestingly, the values of intercepts are 0.098, 0.109, and 0.101 and are highly significant at the 1% level. It indicates that the difference in returns between the Shariah and non-Shariah stocks is statistically significant. Therefore, the robustness test confirms that the Shariah portfolio outperforms the non-Shariah portfolio over the study period. Further, the study forms the trading strategy by long on the Shariah stocks and short on the non-Shariah stocks. Additionally, we suggest long and short-term investment strategies for global investors to diversify the risk by investing in the Indonesian stock market.

**Table 8.**
**The Excess Return of the Shariah Portfolio over the non-Shariah Portfolio**

| Variable | Model 1 | Prob. | Model 2 | Prob. | Model 3 | Prob. |
|---|---|---|---|---|---|---|
| Intercept | 0.098 | 0.000 | 0.109 | 0.000 | 0.101 | 0.000 |
|  | (0.017) |  | (0.020) |  | (0.020) |  |
| MKT_RF | 0.014 | 0.002 | 0.015 | 0.001 | 0.015 | 0.002 |
|  | (0.005) |  | (0.005) |  | (0.005) |  |
| SMB | 0.034 | 0.049 | 0.042 | 0.022 | 0.036 | 0.048 |
|  | (0.017) |  | (0.018) |  | (0.018) |  |
| HML | 0.040 | 0.000 | 0.043 | 0.000 | 0.040 | 0.000 |
|  | (0.010) |  | (0.010) |  | (0.010) |  |
| COVID |  |  | -0.060 | 0.203 | -0.048 | 0.298 |
|  |  |  | (0.047) |  | (0.046) |  |
| RUSSIA |  |  |  |  | 0.279 | 0.025 |
|  |  |  |  |  | (0.123) |  |
| F-statistic | 6.945 |  | 5.639 |  | 5.669 |  |
| Prob(F-statistic) | 0.000 |  | 0.000 |  | 0.000 |  |
| Obs | 277 |  | 277 |  | 277 |  |

Source: Thomson Reuters Eikon. The author (s) estimate the results using the Eviews software.

### 4.9. The Shariah Risk Factor and the Average Return of the Stocks

Finally, we diagnose the study's results by creating and adding the SMN risk factor to the asset pricing model. The study employs the three-factor model with the SMN risk factor to examine the performance of the stock returns. Then, we determine whether the SMN explains the variation of the stock return in the market. In this context, the study tests the null hypothesis that there is no relationship between the SMN and the average return of the stocks in the Indonesian stock market. Table 9 reports that the coefficient of the SMN factor is 0.263 and highly significant at 1%. It shows a positive relationship between the SMN risk factor and the average return of the stocks in the Indonesian stock market. Therefore, the study fails to support

the null hypothesis and confirms a positive relationship between the Shariah risk factor and the average stock returns in the Indonesian stock market. Furthermore, the study finds that the SMN factor is one factor that explains the variation in the stock return in the market. We suggest policymakers consider the SMN risk factor while investing in the global market.

**Table 9.**
**The Shariah Risk Factor and the Average Return of the Stocks**

| Variable | Coefficient | Prob. |
|---|---|---|
| Intercept | 0.174 | 0.036 |
| | (0.083) | |
| MKT_RF | 0.236 | 0.000 |
| | (0.030) | |
| SMB | 0.065 | 0.248 |
| | (0.056) | |
| HML | 0.123 | 0.000 |
| | (0.033) | |
| SMN | 0.263 | 0.006 |
| | (0.095) | |
| Durbin-Watson stat | 1.879 | |
| F-statistic | 26.707 | |
| Prob(F-statistic) | 0 | |
| Obs | 277 | |

Source: Thomson Reuters Eikon. The author (s) estimate the results using the Eviews software

## V. SUMMARY AND CONCLUSION

We investigate the performance of the Shariah and non-Shariah stocks from 12-01-2018 to 28-04-2023 in the Indonesian stock market. First, the study examines whether there exists the Shariah effect on the average stock return using the panel regression and provides an affirmative answer. Further, we report a positive relationship between the Shariah firms and average stock return in the market. Next, the study creates the Shariah and non-Shairah portfolios and analyzes their performance using the asset pricing model. The study finds that the Shariah portfolio provides a higher abnormal return than the non-Shariah portfolio in the market. We also examine the impact of the Covid-19 and Russia-Ukraine conflict on the performance of the portfolios. We document that the Shariah portfolio provides a higher abnormal return than the non-Shariah portfolio after controlling COVID-19 and the Russia-Ukraine war. The study reports that Shariah stocks may be the best investment alternatives for global investors even during the crisis period.

Further, the study creates the SMN factor by deducting the non-Shariah stocks' return from the Shariah stocks' return. We employ the asset pricing model to verify the significance of the SMN factor. The study finds that the SMN is highly significant. Then, we load the SMN factor in the asset pricing model and find that the coefficient of the SMN factor is highly significant. Therefore, we conclude that the Shariah risk factor also explains the deviation in the stock return in the

Indonesian stock market. The study suggests that global investors consider the Shariah risk factor to estimate the expected return of the stocks. Further, we recommend that policymakers consider this factor to derive the cost of equity, discount rate, and cost of capital. Future research can be examined by creating different portfolios based on the firm characteristics like size, value, momentum, investment, profitability, human capital, etc.

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