

Does *Shari'ah* Index Offer an Edge over Traditional Index during COVID-19? Empirical Evidence from the Capital Market of Bangladesh

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Abstract

Although the concept of the Shari'ah (Islamic law) compliant index came into light in the 1960s in Asia, the Dhaka Stock Exchange (DSE) became the first bourse to introduce a similar index in 2014 for the listed companies, including Islamic banks and financial institutions. The global stock markets observed a colossal fall in index value during the initial stage of the ongoing COVID-19 pandemic, and Bangladesh was no exception. This paper aims to evaluate the impact of COVID-19 on Bangladesh's capital market by adopting the event study method. The DSE Broad Index (DSEX) is taken as the population, whereas the DSE 30 Index (DS30) and the DSEX Shari'ah Index (DSES) are used as samples from February 2, 2019, to August 5, 2021. The study reveals that although there was a fall in indexes, COVID-19 has failed to generate significant abnormal returns (AR) for investors. However, unlike the DS30, the DSES enjoyed positive AR and cumulative abnormal return (CAR) after the hit of the second wave despite having mixed experiences during the first wave. In addition, it is evident that the weak form of efficiency persists in Bangladesh under the Efficient Market Hypothesis (EMH) theory.

Keywords: Bangladesh, Capital Market, COVID-19, Event Study, and Shari'ah Index

1. Introduction

Unlike other viruses, COVID-19 has been causing deadly losses to businesses and economies worldwide. The disease, which originated from Wuhan in China, quickly spreaded all over the world. Along with halting economic progress, it has negatively affected global equality and socioeconomic conditions. ADB (2020)

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estimated the cost of this pandemic as much higher than other predecessors, including Ebola, influenza, and severe acute respiratory syndrome (SARS). Due to the abruptness in consumption, production, and supply chain, both micro and macro-economic factors are affected (Setyawati *et al.*, 2021), and the stock market is not an exception (Baker *et al.*, 2020), as the financial market around the world observed huge downfall and volatility during the initial COVID-19 outbreak. To be specific, the stock market reacted inversely to the rising COVID-19 cases, having around 80% volatility due to the pandemic in 2020 (Li *et al.*, 2021), and several renowned indexes, namely, NASDAQ 100, S&P 500, and Nikkei 225 noticed almost 30% decline (Ding *et al.*, 2020).

For investors in particular and society in general, the capital market plays a vital role in making future economic expectations by providing helpful information (Wagner, 2020). The capital market, including both stock and bond markets, is where the economy's surplus and deficit sectors meet to satisfy their long-term financing requirements. Along with the traditional stock market, where any company can be listed complying with the criteria devised by the Securities and Exchange Commission (SEC), some exchanges around the world introduced the *Shari'ah* (Islamic law) compliant stock index. Over the last few decades, the Islamic financial system has been involved heavily with global economic growth, having instruments like Sukuk, *Shari'ah*-compliant mutual funds and Exchange Traded Funds (ETF), and stocks (Prasetyo *et al.*, 2021). The non-Islamic stock indexes mainly differ from the Islamic indexes in terms of *Shari'ah* principles, *Riba* (interest), the involvement of *gharar* (uncertainty), and *maisir* (gambling). In addition, income cleaning during the screening of the stocks for listing purposes and the prohibition of investment in particular companies with higher levels of debt also contribute toward the distinction (Mirza *et al.*, 2022).

Though both traditional and Islamic financial systems are vulnerable to economic and natural shocks, the latter demonstrates more resilience than the former, with a few exceptions. By analysing the performance of both conventional and Islamic stock indexes during the period 1996-2012, Al-Khazali *et al.* (2014) unfolded the

outperformance of the earlier over the latter, except during the subprime mortgage crisis. Islamic mutual funds also performed better than the conventional index due to the lower level of value at risk (VAR) and efficient risk management (Li *et al.*, 2017; Hoepner *et al.*, 2011). Things remain interestingly the same as Mirza *et al.* (2022) found that the Islamic equity funds outclass their traditional peers in terms of hedging risk and resilience to adverse events during the peak of the COVID-19 pandemic.

The capital market of Bangladesh, headed by the Bangladesh Securities and Exchange Commission (BSEC), includes two major stock exchanges, the Dhaka Stock Exchange (DSE) and the Chittagong Stock Exchange (CSE). Central Depository Bangladesh Limited (CDBL)(2021) reported around 2.5 million beneficiary owner (BO) accounts, 418 depository participants (DP), and 455 issuers are currently participating in the market, having a market capitalization of BDT5667.5 billion till February 2022. DSE renovated its old system by replacing the DSE all-share index with DSEX in 2013, where all listed companies are included. In the same year, the DS30 was formed to include 30 blue-chip stocks from the DSEX. As Islamic stock index and funds are more resilient to economic shocks, DSE took the opportunity to become the first bourse to introduce the *Shari'ah* index of the country, DSES, in 2014 in Bangladesh in partnership with S&P Dow Jones Indices, which provides consultancy and completes the *Shari'ah* screening process for the inclusion. To confirm the *Shari'ah* compliance of companies and administer Sukuk (Islamic) bonds, BSEC stepped up to establish a *Shari'ah* Board in January 2022.

COVID-19 struck Bangladesh on March 8, 2020, as the government announced the first case of the coronavirus. The effect on the stock market was seen the next day when the market reacted negatively. As the situation worsened further, BSEC set a floor price for certain securities and later closed the stock market for two months, a rare event in the history of the stock market. The effect of COVID-19 has a cripple down effect for Bangladesh due to the absence of full-fledged digitalization (Uddin *et al.*, 2021). Several studies, such as Haque and

Chowdhury (2020), Ahmed (2021), Rahman et al. (2021), and Qamruzzaman et al. (2021), studied the impact of the pandemic on the stock market of Bangladesh and the economy as a whole. However, none of the studies has shown the impact of the COVID-19 announcement on the performance of the indices. Moreover, the absence of a separate legal framework and infrastructure, lack of awareness among investors, and an inadequate number of *Shari'ah* scholars raise questions about Bangladesh's well-functioning Islamic stock market (Rasel *et al.*, 2018). Given these backdrops, this study aims to investigate whether or not the *Shari'ah* index surpasses the conventional index by using the event study model.

The remaining part of the paper is designed in the following way. Section 2 provides a brief review of the existing literature related to the impact of COVID-19 on the stock market and *Shari'ah*-compliant index. Data and methodology are introduced in Section 3. Section 4 presents the findings and the corresponding analysis. Section 5 provides the concluding remarks.

2. Literature Review

It is no surprise that disastrous natural events and economic accidents cause the economy to react. Historically, infectious diseases such as Ebola, malaria, plague, human immunodeficiency virus (HIV), and influenza put a heavy burden on the economy by increasing health and economic risks (Bloom *et al.*, 2018). Likewise, COVID-19 has been contributing negatively by altering the trends in the global economy from short to long horizon (Noy, 2009). In the short run, slower economic activities and strict policies are observed, whereas economies may face widespread unemployment and failures of businesses in the long run (Zhang *et al.*, 2020). In addition, the global travel restrictions, closure of borders, intensive health measures, and lockdown in an attempt to stop or slow down the spread-out of the pandemic rolled the economy into depression (Barro *et al.*, 2020). This increased economic downturn also adversely affects the financial market (Ramelli & Wagner, 2020). Although the stimulus package of several governments impacted the stock market positively (Phan & Narayan, 2020), Zhang *et al.* (2020) revealed the tendency of the market to assume more risk and uncertainty and the investors to incur losses in their investments.

A strong relationship exists between the pandemic and the stock market performances (Corbet *et al.*, 2020; Sharif *et al.*, 2020). As the number of cases increased during the initial wave, the stock market reacted negatively, causing a sharp decline in return (Ashraf, 2020). COVID-19 also increased the financial volatility and risk management of global indexes such as the S&P 500 (Albulescu, 2021). A study by Corbet *et al.* (2020) revealed increased volatility and trade volumes and decreased negative returns due to the increasing trend of the pandemic. Papadamou *et al.* (2020) used panel data from January 2, 2020, to April 9, 2020, and revealed the significant impact on market volatility in Asia, the USA, Europe, and Austria. Not financial markets but based on a study of internet searches in 61 countries, it is evident that COVID-19 plays a role in altering the risk attitudes of investors (Amstad *et al.*, 2020). Another study on 1567 firms by Ding *et al.* (2020) revealed the fact that market sentiments led by the behaviour of investors during the pandemic affect the stock market performance. Although almost every sector is negatively affected, stocks of companies from food, healthcare, and technology provide hope in terms of positive returns, as indicated by Mazur, *et al.* (2021).

With regard to the Islamic capital market, investment in real assets, lower levels of leverage, and fundamental investors make Islamic stocks more resilient and superior during any crisis (Al-Khazali *et al.*, 2014). Besides stocks, Islamic mutual funds offer better risk protection to investors (Li *et al.*, 2017). Due to the ethical and halal (permitted) investment nature of the Islamic market, investors from other religions have also started to invest with a view to enhancing socially responsible investment (Hayat & Kraeussl, 2011). Interestingly, Hasan *et al.* (2021) indicated that the Islamic stock market remains as safe investment as it was during the global financial crisis of 2008. In the same way, Mirza *et al.* (2022) attempted to compare the performance of stocks in Pakistan, Saudi Arabia, Kuwait, Qatar, the United Arab Emirates, and Malaysia. They reported the outperformance of the Islamic stocks over the conventional counterparts during the COVID-19 outbreak. On the contrary, Setyawati *et al.* (2021) opposed

the view. They found similar behaviour irrespective of the type of the market in Indonesia, along with Aloui *et al.* (2022), who found volatility in both markets in China.

According to the efficient market hypothesis, information affects the price (Fama, 1969). Fama's theory regards the market as weak if the price incorporates only historical information, semi-strong if the price is affected by publicly available information, and strong if all public and insider information is included in the price. Therefore, if there is any new announcement in the market, the price is expected to react accordingly. However, it is intuitive to study whether the change in the price of the security brings any significant abnormal return (AR) for the investors. Dolley (1933) is the pioneer of using the event study model to find out the impact of stock split on stock price. Later, many other studies, not limited to (Brown & Warner, 1985; Gaver *et al.*, 1992; Thompson, 1993; Agrawal & Kamakura, 1995; MacKinlay, 1997; Wang *et al.*, 2013) used the model for finding the impact of several events.

Recently, several studies (Chowdhury & Abedin, 2020; Liu *et al.*, 2020; Rahman *et al.*, 2021; Ryandono *et al.*, 2021) adopted a similar technique to analyse the impact of COVID-19 on the stock market. Rahman *et al.* (2021) investigated the stock market returns of four countries, including Bangladesh, using panel data and found a short-term influence of the pandemic on returns. With regard to the stock market of Bangladesh, Haque and Chowdhury (2020) examined the impact of COVID-19 on the capital market using variables like trading hours, market volume and capitalization, fundamental ratios, and circuit breakers. Qamruzzaman *et al.* (2021) found the negative impact of the pandemic on the stock market and showed the relationship between remittances and the market. Ahmed (2021) tested the efficiency of the stock market and viewed the market as weak. Uddin *et al.* (2021) revealed the necessity of digitalization in the capital market of Bangladesh using the event study model. Although a number of studies attempted to investigate the impact of the pandemic, there is a gap in terms of comparing the performance of conventional and *Shari'ah* index during this crisis. This study focuses on filling the vacuum by evaluating the impact of the

pandemic by using event study model and comparing the performance of Shari'ah and the traditional stock market index.

3. Data and Methodology

Bangladesh observed its first case of COVID-19 on March 8, 2020, and its first death on March 19 of the same year. To analyse the impact of this deadly news, we took our estimation window of 252 days from February 2, 2019. In an attempt to reduce the spread of the disease, the government of Bangladesh declared a lockdown on March 23, 2020. An estimation window of 252 days from March 5, 2020, is taken to figure out the effect of the lockdown. Later, Bangladesh observed the second wave of COVID-19 on April 5, 2021. On April 13, the second lockdown started, and the timing of trading in the stock exchange was reduced. Under the name of the second wave, we show the effect of the second wave, lockdown during the second wave, and post-lockdown effect. We took the estimation window of 252 days starting from January 26, 2021. After detecting the first case of the delta variant, the government decided to implement another lockdown from July 4, 2021. In order to analyse the impact of the delta variant, our estimated window starts from June 22, 2020.

We use the daily closing prices of the indices of DSES and DS 30 and the daily returns of the same for analysis purposes. The DSEX is the largest representative of the stock market of Bangladesh, having all shares in its list. The DS30 includes the top 30 blue-chip stocks based on their performance. Along with the DS30 and DSEX, there is another index, DSES, which includes companies based on the *Shari'ah* compliance. For the event study, DSES and DS30 are taken as samples for the study, whereas DSEX is taken as the population. We collect the COVID-19-related data from the World Health Organization (WHO) database and the daily index values from the database of DSE.

An event study is used for the analysis purpose. As we focus on the long-term impact of the events, we take long-term event study. This long-term nature will help investors to understand both the immediate and ultimate results of the event and to form both current and future expectations. We define 252 trading days prior to the two trading days of the event as the estimation window and the next

ten days as the event window, similar to Uddin *et al.* (2021), Brown & Warner (1985) and Dolley (1933). The t-test is applied to test the significance of the AR generated by the event. We find out the expected return of the index using the following equation:

$$R_{i,t} = \alpha_i + R_{mt}\beta_i + \varepsilon_{i,t}$$

In this equation, α_i and β_i are the coefficients whose values are derived from the variables. The values of both coefficients are estimated using the data of the previous 252 trading days. We use $R_{i,t}$ for calculating the expected rate of return of index i at time t and R_{mt} for calculating the percentage of normal returns of the market index m on day t . The term $\varepsilon_{i,t}$ specifies the idiosyncratic error term for observation-specific zero-mean random error of the index on a day t during the estimated window. We then find out the expected return of the indexes of each day during the event window using the following equation:

$$E(R_{i,t}) = \alpha_i + R_{mt}\beta_i$$

In event study, one of the goals is to find out the AR generated by the particular event during the event window. AR is the difference between the real return of the index and the calculated expected return of the index on day t . It measures the performance of an asset compared to the benchmark asset or market index. Cumulative abnormal returns (CAR) are also generated to find out the long-term impact of the particular event during the event window. It is computed by subtracting the anticipated return from the real return and aggregating these differences over the specified timeframe, serving to evaluate the influence of different factors on stock prices and forecast future stock performance. We use the following equation to estimate the AR and the CAR of the event:

$$AR_{i,t} = R_{i,t} - E(R_{i,t})$$

$$CAR_i(t_0, t_1) = \sum_{t=t_0}^{t_1} AR_{i,t}$$

Following the estimation of AR and CAR, we have to find out the significance of AR using the following equation:

$$AR \text{ Statistic} = AR / \text{Standard error}$$

We check the significance of the AR based on both 95% and 99% confidence levels.

4. Findings and Discussion

With the help of the event study, we find out whether or not the DSES enjoys any advantages over the DS30. It is evident from our study that both the number of cases and number of new deaths are positively correlated with the market. However, the correlation is weakly positive. In Table I, our model suggests the mean of the sample and the population are almost the same as the standard error. In addition, the dependent variables possess a strong relationship with the event study model, as the r-squared of each case is more than 85%. All the events show positive slopes, which indicate the existence of a positive correlation between variables.

Table I: Summary of Event Study Outputs

Reasons	Index	Window	Intercept	Slope	R-squared	Standard error
First case	DS30	252	-0.000217	0.97859	0.906639	0.0027692
	DSES	252	0.000041	0.97767	0.892188	0.0029970
First lockdown	DS30	252	-0.000246	0.97605	0.953575	0.0028005
	DSES	252	-0.000007	0.99296	0.945722	0.0030933
Second wave	DS30	252	0.000359	1.06045	0.919389	0.0042147
	DSES	252	0.000002	0.96112	0.919777	0.0038099
Delta variant	DS30	252	0.000064	1.14256	0.863571	0.0043063
	DSES	252	-0.000119	0.88988	0.850898	0.0035323

Source: Authors' calculation

The findings reveal that after detecting the first case, both the DS30 and DSES failed to generate any significant AR for the investors. Because of the shocking news of detecting the first case on March 8, 2020, the market reacted negatively

and produced a massive fall in all indexes since the DSEX, DS30, and DSES noted negative returns of 6.8%, 6.4%, and 7.24% respectively in the next day with an anticipation of a nationwide outbreak. Interestingly, such an event could not produce AR or loss for the investors. Table II reveals the impact of the pandemic throughout the event window and shows that both AR and CAR are in a downward trend. On the $t+7$ day, the DSES and DS30 noted negative AR of 0.53% and 0.23%, respectively, to unleash the incapability of the index in response to the event.

Table II: Reaction after Detecting First Case

Date	DS 30				DSES			
	ER (%)	AR (%)	CAR (%)	AR Test	ER (%)	AR (%)	CAR (%)	AR Test
3/4/2020	-1.02	0.00	0.00	-0.0006	-1.37	-0.04	-0.04	-0.1184
3/5/2020	-0.55	0.01	0.01	0.0368	-0.73	-0.02	-0.06	-0.0698
3/8/2020	-1.86	-0.02	-0.01	-0.0672	-1.63	-0.04	-0.10	-0.1385
3/9/2020	-6.28	-0.12	-0.12	-0.4161	-7.08	-0.17	-0.26	-0.5534
3/10/2020	3.13	0.09	-0.03	0.3272	3.23	0.07	-0.19	0.2318
3/11/2020	1.62	0.06	0.02	0.2076	1.93	0.04	-0.15	0.1332
3/12/2020	-2.26	-0.03	0.00	-0.0989	-2.19	-0.05	-0.21	-0.1811
3/15/2020	-3.50	-0.05	-0.06	-0.1969	-3.25	-0.08	-0.29	-0.2620
3/16/2020	-5.16	-0.09	-0.15	-0.3278	-5.68	-0.13	-0.42	-0.4471
3/18/2020	-4.91	-0.09	-0.23	-0.3079	-4.49	-0.11	-0.53	-0.3563

Source: Authors' calculation

To control the wave of the pandemic, the government of Bangladesh imposed a countrywide lockdown. Almost all institutions, including the stock market, were closed. After a rare 2-month stock market closure, it resumed its trading at the end of May 2020 and reported a surge in the index. It seemed that investors were hopeful of the initiatives of the government to provide BDT50000 million as a stimulus to the industries. We document the reaction of the indexes after the first lockdown in Table III. Like the event of detecting the first case, the impact of nationwide lockdown and stock market halt was insignificant. Immediately after

the resumption of the trade, both the DS30 and DSES boosted the investors with positive AR of 0.04% and 0.02% respectively. However, the market lost its confidence over time resulting in a series of negative returns to the investors after the event during the event window. It is also evident that the DS30 has performed well in contrast to the DSES after the resumption of the trading. The DS30 produced a positive CAR of around 0.26% against 0.01% of the DSES. The DSEX again fell below the 4000 points as the investors lost confidence and sell-side pressure was still high.

Table III: Reaction after First Lockdown

Date	DS 30				DSES			
	ER (%)	AR (%)	CAR (%)	AR Test	ER (%)	AR (%)	CAR (%)	AR Test
3/24/2020	-0.03	0.02	0.02	0.0878	-0.17	0.00	0.00	-0.0017
3/25/2020	0.49	0.04	0.06	0.1334	0.37	0.00	0.00	0.0106
5/31/2020	2.48	0.09	0.15	0.3071	3.28	0.02	0.03	0.0773
6/1/2020	-1.33	-0.01	0.14	-0.0267	-2.28	-0.02	0.01	-0.0502
6/2/2020	-1.24	-0.01	0.14	-0.0185	-1.05	-0.01	0.00	-0.0219
6/3/2020	-0.17	0.02	0.16	0.0751	-0.13	0.00	0.00	-0.0008
6/4/2020	-0.54	0.01	0.17	0.0427	-0.33	0.00	0.00	-0.0054
6/7/2020	0.45	0.04	0.20	0.1299	0.28	0.00	0.01	0.0087
6/8/2020	-0.25	0.02	0.22	0.0681	-0.13	0.00	0.00	-0.0007
6/9/2020	0.29	0.03	0.26	0.1153	0.04	0.00	0.01	0.0031

Source: Authors' calculation

After the first wave, the second wave hit on April 5, 2021. The pandemic was considered as new-normal, and the economy started to move on from the pandemic. After the second hit, the index responded positively as the DSEX documented a positive return of 1.72%, whereas the DS30 and DSES generated 2.26% and 1.4% returns respectively. During the second wave and its resultant lockdown, the DS30 experienced negative AR, whereas the DSES observed positive AR as indicated by Table IV. However, none of the indexes produced significant AR to indicate the fact that the market rapidly adjusts the information.

Unlike the announcement of the first case, the DS30 failed to produce superiority over the DSES. As time went on during the window, it was evident that the CAR of DSES improved and produced a positive CAR of 0.16% against the negative CAR of DS30. It means the *Shari'ah* index started absorbing the news earlier than that of other indexes by unleashing its safe heaven nature. As the constituents of the DSES must maintain a low debt-to-equity ratio and stringent measures, investors became confident in these *Shari'ah* index enlisted stocks.

Table IV: Reaction during the Second Wave of COVID-19

Date	DS 30				DSES			
	ER (%)	AR (%)	CAR (%)	AR Test	ER (%)	AR (%)	CAR (%)	AR Test
4/1/2021	-0.56	0.00	0.00	-0.0051	-0.13	-0.01	-0.01	-0.0145
4/4/2021	-4.45	0.22	0.22	0.5218	-2.95	-0.12	-0.13	-0.3140
4/5/2021	2.44	-0.17	0.05	-0.4099	1.36	0.05	-0.07	0.1433
4/6/2021	2.39	-0.17	-0.12	-0.4033	1.76	0.07	0.00	0.1866
4/7/2021	1.25	-0.11	-0.23	-0.2496	0.76	0.03	0.03	0.0800
4/8/2021	-1.07	0.03	-0.20	0.0639	-1.31	-0.05	-0.02	-0.1402
4/11/2021	-1.98	0.08	-0.12	0.1875	-1.62	-0.07	-0.09	-0.1729
4/12/2021	0.46	-0.06	-0.18	-0.1430	0.44	0.02	-0.07	0.0457
4/13/2021	2.01	-0.15	-0.33	-0.3521	1.26	0.05	-0.02	0.1332
4/15/2021	1.57	-0.12	-0.45	-0.2932	0.84	0.03	0.01	0.0884
4/18/2021	0.74	-0.08	-0.53	-0.1799	0.20	0.01	0.02	0.0202
4/19/2021	0.37	-0.05	-0.59	-0.1304	0.37	0.01	0.04	0.0385
4/20/2021	1.89	-0.14	-0.73	-0.3361	1.36	0.05	0.09	0.1439
4/21/2021	0.07	-0.04	-0.77	-0.0899	0.00	0.00	0.09	-0.0010
4/22/2021	0.24	-0.05	-0.81	-0.1131	0.30	0.01	0.10	0.0317
4/25/2021	1.56	-0.12	-0.94	-0.2908	1.41	0.06	0.16	0.1496

Source: Authors' calculation

As stated above, investors became more confident and considered the pandemic as the new normal. Despite the widespread delta variant of COVID-19, the capital market performed well by surpassing 6000 points. The impact of the delta variant and its subsequent lockdown on the stock market is evident in Table V.

Our analysis suggests the outperformance of the DSES over the DS30 during this window in terms of both AR and CAR, although the AR is insignificant. The DS30 index hammered investors with its negative AR of 1.44%, whereas the DSES produced 1.42% AR. The trend of CAR of the DSES is increasing compared to the decreasing CAR of the DS30. It resembles the resilience of the *Shari'ah* index during the pandemic.

Table V: Reaction during the Second Lockdown

Date	DS 30				DSES			
	ER (%)	AR (%)	CAR (%)	AR Test	ER (%)	AR (%)	CAR (%)	AR Test
6/29/2021	0.49	-0.07	-0.07	-0.1541	0.23	0.04	0.04	0.1201
6/30/2021	1.18	-0.15	-0.22	-0.3546	1.10	0.15	0.19	0.4242
7/4/2021	0.01	-0.01	-0.23	-0.0148	-0.01	0.01	0.20	0.0338
7/5/2021	0.87	-0.11	-0.34	-0.2649	0.79	0.11	0.32	0.3164
7/6/2021	0.21	-0.03	-0.37	-0.0730	-0.15	0.00	0.31	-0.0132
7/7/2021	0.13	-0.02	-0.39	-0.0519	0.17	0.03	0.35	0.0989
7/8/2021	0.86	-0.11	-0.51	-0.2612	0.92	0.13	0.47	0.3620
7/12/2021	0.56	-0.07	-0.58	-0.1739	0.34	0.06	0.53	0.1563
7/13/2021	0.75	-0.10	-0.68	-0.2296	0.47	0.07	0.60	0.2016
7/14/2021	0.05	-0.01	-0.69	-0.0285	-0.08	0.00	0.60	0.0108
7/15/2021	0.02	-0.01	-0.70	-0.0178	0.40	0.06	0.67	0.1779
7/18/2021	1.56	-0.20	-0.90	-0.4646	0.92	0.13	0.79	0.3610
7/19/2021	0.81	-0.11	-1.01	-0.2487	0.89	0.12	0.92	0.3513
7/25/2021	0.70	-0.09	-1.10	-0.2152	0.38	0.06	0.98	0.1701
7/26/2021	-0.67	0.08	-1.02	0.1805	-0.24	-0.02	0.96	-0.0464
7/27/2021	-0.68	0.08	-0.94	0.1852	-0.14	0.00	0.96	-0.0106
7/28/2021	0.73	-0.10	-1.04	-0.2255	0.51	0.08	1.03	0.2158
7/29/2021	0.22	-0.03	-1.07	-0.0773	0.28	0.05	1.08	0.1370
8/2/2021	0.80	-0.11	-1.18	-0.2448	0.69	0.10	1.18	0.2798
8/3/2021	1.09	-0.14	-1.32	-0.3288	0.77	0.11	1.29	0.3077
8/5/2021	0.94	-0.12	-1.44	-0.2858	0.90	0.13	1.42	0.3547

Source: Authors' calculation

Our study reveals the fact that the capital market of Bangladesh is still incapable of reflecting the information in the price. The pandemic has been a curse for economies around the world and has hit several industries and the stock market badly. However, in Bangladesh, none of the announcements led to significant AR for the investors. It is evident from our analysis that investors became more confident and showed positive reactions toward the initiatives to see good days. Therefore, the index has observed an increasing trend despite the ongoing pandemic. The *Shari'ah* index has been showing its resilience by turning around the situation from worse to better as time goes on, like Dharani *et al.* (2022) and Raza *et al.* (2023).

5. Conclusions and recommendations

COVID-19 has been destructive around the world with its devastating effect on the economy. Bangladesh has been facing economic turmoil since the day it observed the first case. Consequently, the country observed a lockdown for a few months, which resulted in decreased exports and disruption in the supply chain. Bangladesh's capital market has also been affected by the ongoing pandemic. To protect the interests of the investors and the market, the regulatory authority decided to suspend trading for two months. Since the effect of the pandemic around the world is clearly visible, we feel the intuition to study whether the COVID-19 announcements have any impact on the performance of the indexes of DSE.

The performance of conventional and *Shari'ah* indexes during the pandemic was compared by adopting the event study model. It is revealed that none of the announcements was able to generate significant returns for the investors, irrespective of being conventional or *Shari'ah* compliant. However, it is worth mentioning that the *Shari'ah* index has performed better than its peers in terms of CAR during the event window over the period under study. It indicates the ability of DSES to show at least some extent of resilience during the pandemic. Regarding the inability to affect the returns significantly, it seems that the stimulus package declared by the government for the business and the decision to suspend the trading played positive roles in protecting the market from a free fall.

However, as the market could not be able to produce significant returns due to the announcements, we can say that publicly available information is not reflected in the price, which in turn reveals the existence of a weak form of efficiency in the capital market of Bangladesh. Although this inefficiency avails the investors of the opportunity to diversify and make profits through insider trading, most of the general investors are affected inversely. Therefore, regulators and policymakers may devise stringent policy measures to reduce the practices of insider trading and to push companies to disclose price-sensitive information in due time. This paper contributes to the existing body of literature regarding the current market scenario of Bangladesh, the effectiveness of measures taken during the crisis and the impact of the important events on the price of the stocks. However, further studies can incorporate the scenario of other countries and their policy measures during the pandemic.

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