

# THE COVID-19 PANDEMIC AND THE PERFORMANCE OF THE STOCK EXCHANGE MARKET: EVIDENCE FROM THE BAHRAIN STOCK EXCHANGE INDEXES

Mohammad Salem Oudat \*

\* College of Business Administration, Umm Al-Quwain University, Umm Al-Quwain, the UAE

Contact details: College of Business Administration, Umm Al-Quwain University, Al Ras St., Al Raas 2, Umm Al-Quwain, the UAE



## Abstract

**How to cite this paper:** Oudat, M. S. (2022). The COVID-19 pandemic and the performance of the stock exchange market: Evidence from the Bahrain Stock Exchange indexes. *Corporate & Business Strategy Review*, 3(1), 19–28. <https://doi.org/10.22495/cbsrv3i1art2>

Copyright © 2022 The Author

This work is licensed under a Creative Commons Attribution 4.0 International License (CC BY 4.0).  
<https://creativecommons.org/licenses/by/4.0/>

**ISSN Online:** 2708-4965  
**ISSN Print:** 2708-9924

**Received:** 09.11.2021  
**Accepted:** 22.04.2022

**JEL Classification:** G1, G140, O15  
**DOI:** 10.22495/cbsrv3i1art2

Numerous studies confirmed that COVID-19 still has a negative impact on financial market performance worldwide, which inversely affected investors' perceptions and decisions by creating uncertainty and a risky investment environment (Bagão, Dias, Heliodoro, & Alexandre, 2020). Therefore, the current study tries to assess the influence of the COVID-19 pandemic on Bahrain Stock Exchange indexes during the pandemic peak period in 2021. The effect of the COVID-19 pandemic on the Bahrain Stock Exchange is analysed using the autoregressive distributed lags (ARDL) approach. Daily observations from January 1, 2021, to September 30, 2021, in Bahrain, encompassing the pandemic peak period. COVID-19 pandemic used to represent independent variables by new daily cases (positive), death cases and recovered patient cases. Meanwhile, the study utilized the Bahrain Stock Exchange for the dependent variables, including both Bahrain all-share index (BASI) and the Bahrain Islamic index (BII). The findings showed a negative and negligible association between BASI, BII, and COVID-19. The study found that both indexes and daily retrieved cases exhibit a favorable correlation during the research period. Additionally, the analysis concluded that both indexes are roughly moving in the same way in reaction to the present epidemic.

**Keywords:** Financial Markets, Bahrain All-Share Index, Bahrain Islamic Index, COVID-19, Pandemic, ARDL

**Authors' individual contribution:** The Author is responsible for all the contributions to the paper according to CRediT (Contributor Roles Taxonomy) standards.

**Declaration of conflicting interests:** The Author declares that there is no conflict of interest.

## 1. INTRODUCTION

Global financial markets have been battered by a variety of crises over the previous few decades; these crises ranged from economic to financial to

health-related. For instance, in 2008, the global financial markets were impacted by one of the most severe financial crises in history, from which the markets are still reeling. The globe was recently assaulted by an unexpected healthy pandemic at

the end of 2019, dubbed the coronavirus pandemic (COVID-19), which spread rapidly around the world. Specifically, the first instance was identified in December 2019 in Wuhan, the capital of China's Hubei province. As a result of Wuhan's strategic geographic location and the city's massive population, particularly in conjunction with the Chinese New Year, the diseases were able to progressively spread to other provinces, with many instances recorded beyond Wuhan in early January 2020. Wuhan halted all modes of transit at the time, including metros, buses, trains, airplanes, and any other kind of long-distance passenger transportation. However, China's government developed a variety of public health policies to halt the virus's spread. As a result, the World Health Organization (WHO) began issuing the first worldwide alert about this virus (WHO 2020), indicating that the virus has spread internationally and become a significant concern. At the end of January 2020, a number of nations were attacked by this virus, particularly those with a big population and a high number of confirmed cases, such as the United States of America, Italy, France, Germany, Spain, and South Korea. Additionally, the virus was spread globally, affecting both developed and poor countries. Bahrain, on the other hand, was not immune to this virus, as the ministry of health verified the country's first case on February 24, 2020. As a result, the ministry implemented additional public health policies and procedures in accordance with the WHO's international standards in order to halt the spread of the epidemic. Among those procedures were the government's closure of schools, universities, and other educational institutions, as well as any enterprises that could serve as a source of spread the virus among the population. Additionally, the government prohibited any gathering. Mazur, Dang, and Vega (2021) discovered that the pandemic had a favorable effect on software, food, natural gas, and healthcare, but had a negative effect on real estate, petroleum, entertainment, and hospitality. Additionally, Duan, Wang, and Yang (2020) discovered that small- and medium-sized enterprises, which play a critical role in the Chinese economy, have been adversely affected by the pandemic due to decreased consumption and increased expenditure on rents, wages, and interest, which could further undermine the banking system's and financial markets' stability. However, Sharma (2020) examined the impact of COVID-19 stock volatility on selected developed and developing countries. The study discovered that the pandemic has a statistically significant effect on stock volatility; the study also discovered that the effect varies by country; the study discovered that developed countries (higher-income countries) initially overreacted and recovered more quickly than developing countries (lower-income). Gil-Alana and Claudio-Quiroga (2020), on the other hand, argue that the influence of the COVID-19 pandemic on stock markets will vary depending on the market's characteristics. As a result of the conflicting findings of previous research, the current study aims to provide new evidence on the impact of COVID-19 on the financial market in one of the emerging markets — Bahrain — by analyzing the impact on both Bahrain all-share

index (BASI) and the Bahrain Islamic index (BII), during a peak period for COVID-19 in Bahrain. Bahrain Stock Exchange contains two indexes covering different sectors, one of the most important sectors is the financial sector, which represents more than 17.8% of the country's GDP. Bahrain's economy is different from other GCC countries as did not rely on the oil and gas industry for its GDP. Moreover, Bahrain is repositioning itself to be a financial technology hub of the region combining conventional and Shariah-compliant financial technology solutions. Bahrain Stock Exchange showed a decline of 7.5% from 2019 to 2020 as a result of the decline of the corporation's profitability by 61.2%, from BD 858.5 million in 2019 to BD 332.7 million in 2020. The corporations listed on the Bahrain Stock Exchange are mostly from financial sectors which represent around 50% of the corporations listed (Central Bank of Bahrain, 2021). However, the finance sector is the sector that has been most affected by several crises in previous decades. Accordingly, from the previous discussion, the current study tries to analyse the relationship between COVID-19 and Bahrain Stock Exchange market and explain how the stock market was impacted by this pandemic. Zhang, Hu, and Ji (2020) claimed that the economy global effects of the current COVID-19 have not been fully evident yet, financial markets have already responded to the pandemic with dramatic movements. In most countries, stock values have declined overly and the market has more fluctuations.

Accordingly, the value of this paper consists in that, to the author's knowledge, this is the first research to examine the influence of the COVID-19 pandemic on Bahrain's two financial indexes (BASI and BII) during the pandemic's peak period, which reached more than 3,000 cases per day. As a result, the author believes that the findings of this study will benefit a variety of parties, including current and potential investors, government officials, scholars, and researchers, by providing a better understanding of the relationship between the COVID-19 pandemic and financial stock exchanges in emerging markets.

The remainder of the paper is organized as follows. In addition to the current introduction, the following sections include a literature review in Section 2 that summarizes previous empirically related studies. Section 3 dwells on the COVID-19 pandemic in Bahrain. Section 4 outlines the methodology and data collection. Section 5 discusses the analysis and results. Section 6 contains the concluding remarks and general discussion.

## 2. LITERATURE REVIEW

The influence of financial crises on the financial system, stock market, and economic development has been extensively studied (Hasan, Oudat, Alsmadi, Nurfahasdi, & Ali, 2021). Oudat, Ahmad, and Yazis (2016) examined the link between macroeconomic factors, including global events, such as the 2008 financial crisis. While Kaya and Engkuchik (2017) investigated the influence of financial crises on global stock market liquidity. Additionally, Samsi, Cheok, and Yusof (2019) examined the influence of the Asian and global financial crises on economic

development in the Asian Five Nations. On the other hand, other scholars have confirmed in their studies that COVID-19 has had an effect on global financial markets. Bagão et al. (2020) examined the impact of COVID-19 on European financial markets, using confirmed cases and deaths as variables to represent COVID-19 from December 31, 2019, to July 23, 2020.

Topcu and Gulal (2020) investigated the impact of the COVID-19 epidemic on emerging stock markets from March 10 to April 30, 2020. Their research discovered that epidemics had a detrimental effect on stock markets. Ashraf (2020) examined the stock market's response to the COVID-19 epidemic, utilizing daily data to accomplish the study's objective. COVID-19 pandemic, as measured by confirmed and fatal cases, as well as profitability in 64 markets, from January 22 to April 17, 2020. The findings indicate that the financial markets reacted unfavorably to the increase in confirmed cases of COVID-19. This indicates that as the number of verified instances grew, stock market profits decreased. Ali, Alam, and Rizvi (2020) investigated the financial markets' responses as the COVID-19 epicenter shifted from China to Europe and subsequently to the United States. The data suggest that while China's (original) epicenter is stabilizing, global markets have begun a free slide, particularly during the contagion phase (later). Additionally, Baker et al. (2020) examined the extraordinary stock market impact of COVID-19. Their findings indicated that no earlier epidemic of infectious sickness, including the Spanish Flu, had the same profound effect on the stock market as the COVID-19 pandemic. Additionally, they discovered that government limitations on economic activity and social distance are the primary causes for the United States stock market's stronger response to COVID-19 than to prior illness outbreaks. Erdem (2020) discovered that the COVID-19 has a detrimental effect on stock market returns and a beneficial effect on volatility in 77 nations. More recently, Wu, Lee, Xing, and Ho (2021) examined the influence of the COVID-19 outbreak on the stock price movements of the Chinese tourist sector, and found that COVID-19 had a negative effect on the stock price. Hong, Bian, and Lee (2021) examined the link between the COVID-19 epidemic and the uncertainty associated with price volatility and stock return predictability in the United States between January 1, 2019, and June 30, 2020. The data indicated that both the S&P 500 and DJIA (Dow Jones Industrial Average) price volatility and return predictability suffered a single structural breach. In line with previous studies, Çütücü and Kılıç (2020) stated that COVID-19, which is considered a worldwide health problem, does not only impact real economy and social life, but it has a major impact causes on stock value in financial markets. However, Baldwin and

Weder di Mauro (2020) stated that the current pandemic has disrupted the economy globally, claiming that it can be economically contagious as much as it is medically so. On the other hand, Karabag (2020) argues that although the pandemic is generally delineated as a period of danger, instability, and uncertainty, this pandemic will also provide beneficial contributions to accelerate the spread of digital technologies and micro-level initiatives around the world.

To summarize, the current study's primary objective is to contribute to the provision of new evidence from the Bahrain Stock Exchange to investors and decision-makers in Bahrain's stock market, where various investors constantly seek benefits of diversification in their investments, as well as to assist regulators in developing beneficial policies that contribute to the market's efficiency. Thus, the purpose of this study is to examine the link between the COVID-19 data series (new daily cases, new daily death cases, and new daily recovered cases) and two indexes (BASI and BII) of the Bahrain Stock Exchange from January 1, 2021, to September 30, 2021.

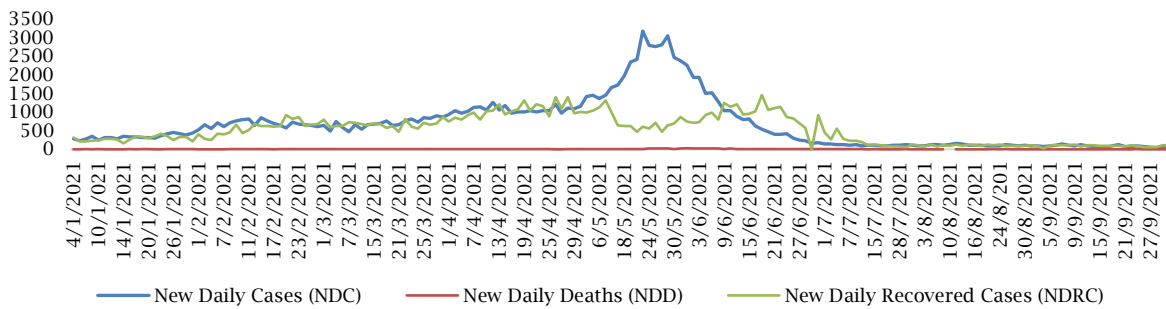
### 3. COVID-19 PANDEMIC IN BAHRAIN

By initiating the pandemic at the start of 2020, Bahrain reported the first case in February 2020. Accordingly, Bahrain's government has implemented a variety of procedures and policies to combat pandemic threats, including the closure of schools and other educational institutions, non-essential firms and businesses, and tight restrictions on population movement, while no full lockdown was ever implemented in the country, even during the pandemic's peak period. However, the country's economic sectors have deteriorated. Despite the government's efforts to assist industries in overcoming the pandemic, GDP growth has slowed to 5.81% in 2020, down from 1.98% in 2019. Additionally, the unemployment rate climbed from 4.09% to 1.56% in 2020, up from 1.56% in 2019. Additionally, the interest rate was reduced from 2.5% in 2019 to 1% in 2020 (The World Bank<sup>1</sup>).

Figure 1 depicts Bahrain's experience with the COVID-19 pandemic during the research phase. Figure 1, on the other hand, shows that on September 23, Bahrain achieved its peak in new daily positive cases, reporting 3177 instances, while the greatest number of new daily death was recorded on June 1, 29 cases, for the most daily recovered cases during the research period. Because of this, the chart shows that daily death cases have decreased from 0 to 1 over the previous two months, but new positive daily cases have increased over the same period.

<sup>1</sup> <https://data.worldbank.org/indicator/NY.GDP.MKTP.KD.ZG?locations=BH>

**Figure 1.** Bahrain COVID-19 pandemic over the period from January 1, 2021, to September 30, 2021

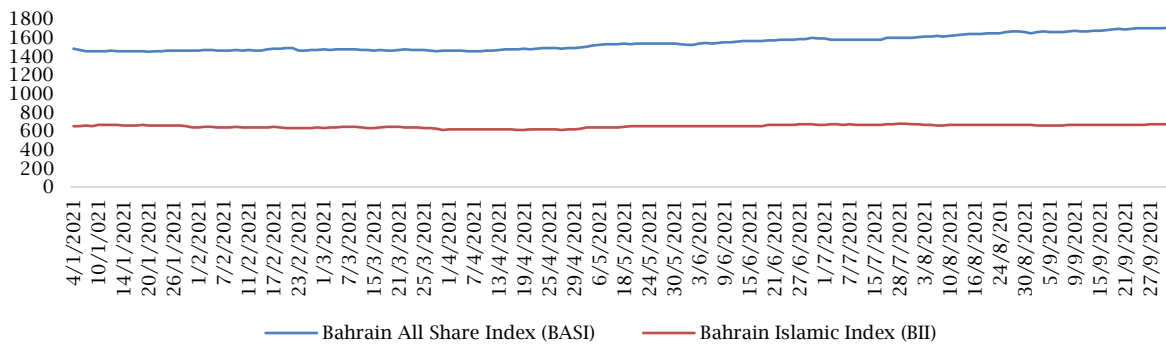


Source: Bahrain Ministry of Health (<https://healthalert.gov.bh/en/category/daily-covid-19-report>).

Figure 2 displays the Bahrain Stock Exchange for both indexes, BASI and BII, during the study period. However, the figure shows that the BASI and BII have been directly affected by the pandemic as during the highest number of new positive cases daily the indexes are slightly declined. While with the time decreasing of the new daily positive cases the indexes are improved to report the highest

points which reached 1,705.56 points for BASI while 671.28 points for BII. That means the prices of the shares in both indexes started to be improved as the financial markets partially recovered with decreasing of the lowest daily positive cases in this pandemic. That leads to raising the investors' confidence in the financial markets again after a long time decreased.

**Figure 2.** Bahrain Stock Exchange indexes over the study period from January 1, 2021, to September 30, 2021



Source: Bahrain Bourse (<https://www.bahrainbourse.com/>).

A number of prior empirical studies have looked at the impact of COVID-19 on stock market performance, including those conducted by Topcu and Gulal (2020), Ashraf (2020), Erdem (2020), Baker et al. (2020), as well as Lee and Chen (2020). According to their research, the COVID-19 pandemic has a detrimental influence on the financial stock markets. The COVID-19 epidemic has spread throughout Bahrain's different industries, including the banking industry.

The present study will add to the existing literature in several ways. For starters, most prior studies focused on industrialized nations, such as the United States and Europe. However, this study focuses on one of the smallest developing countries (Bahrain). Secondly, most of the previous studies tackled the public index for their financial market, while the current study tackles two different indexes (public and Islamic) to show if there is any difference in how the Islamic shares respond to the pandemic compared with the public index. Thirdly, Bahrain has witnessed a peak of the new daily positive, deaths and recovered cases during 2021, the current study will cover this time. Finally, few studies employed the autoregressive distributed lags (ARDL) approach to analyse the relationship

between the COVID-19 pandemic and stock exchange as most previous studies used the multiple regression method.

**4. RESEARCH METHODOLOGY**

Secondary data, time series daily data ranging from January 1, 2021, to September 30, 2021, including 176 observations that complied with Bahrain Stock Exchange working days, were used to determine the influence of the COVID-19 pandemic on the Bahrain Stock Exchange. The needed data for the COVID-19 pandemic was obtained from the Bahrain Ministry of Health website, while the other data for the stock market was obtained from the Bahrain Bourse official website. However, in order to analyse the gathered data, the augmented Dicky-Fuller (ADF) unit root test was used to ensure that the present research variables were stationary. Furthermore, the co-integration connection between the COVID-19 pandemic and Bahrain Stock Exchange indexes was investigated using the limits F-statistic test. Furthermore, the ARDL method was used to investigate short-run connections between the independent and dependent variables. Employing the ARDL approach in the current paper is for

different reasons. The ARDL approach generates consistent estimates of the long-run coefficients that are asymptotically normal regardless of whether the underlying regressors are I(0), I(1), or fractional integrated. Furthermore, Pesaran and Pesaran (1997) discovered that the ARDL approach might be a reliable estimation and hypothesis testing tool for the long-run coefficients for a small sample in both cases where the underlying are I(1) or I(0).

The current study formulated the hypotheses, which are as follows:

H1: There is a short- and long-run negative relationship between COVID-19 and BASI.

H2: There is a short- and long-run negative relationship between COVID-19 and BII.

Accordingly, the following models have been developed for this purpose:

Model 1

$$\Delta LBASI_t = \beta_1 + \beta_{11}LBASI_{t-1} + \beta_{12}LNDC_{t-1} + \beta_{13}LNDD_{t-1} + \beta_{14}LNDRC_{t-1} + \sum_{t=s}^h v_{11} \Delta LBASI_{t-s} + \sum_{t=s}^h v_{12} \Delta LNDC_{t-s} + \sum_{t=s}^h v_{13} \Delta LNDD_{t-s} + \sum_{t=s}^h v_{14} \Delta LNDRC_{t-s} - \tau_1 ect_{t-1} + \varepsilon_{1t}$$

Model 2

$$\Delta LBII_t = \beta_1 + \beta_{11}LBII_{t-1} + \beta_{12}LNDC_{t-1} + \beta_{13}LNDD_{t-1} + \beta_{14}LNDRC_{t-1} + \sum_{t=s}^h v_{11} \Delta LBII_{t-s} + \sum_{t=s}^h v_{12} \Delta LNDC_{t-s} + \sum_{t=s}^h v_{13} \Delta LNDD_{t-s} + \sum_{t=s}^h v_{14} \Delta LNDRC_{t-s} - \tau_1 ect_{t-1} + \varepsilon_{1t}$$

where,  
 $\Delta$  is the difference operator;  
 $L$  is the natural logarithm;  
 $\beta_i (i = 1 \dots 4)$  indicates the intercept terms;  
 $v_i (i = 1 \dots 4)$  denotes the short-run coefficient;  
 $\tau_i (i = 1 \dots 4)$  represents the coefficient of error correction terms, i.e.,  $(ect_{t-1})$ ;  
 $\varepsilon_{it} (i = 1 \dots 4)$  stand for the error terms;  
 $h$  indicates the lag length selected using  $t$  which represents the lag order;  
 $\beta_i (i = 1 \dots 4)$  denotes the long-run coefficient.

at the level of intercept, trend and intercept. Nonetheless, at the 1% significance level, all planned variables are stationary when the data is transformed to the first difference. The second test, however, is to find the best lag selection for both equations models, and the study used the vector autoregression (VAR) model to do so.

The results of the VAR lag order selection criteria for both models are shown in Tables 2 and 3. Table 2 shows that the sequential modified likelihood ratio (LR) statistic test, final prediction error (FPE), Akaike information criterion (AIC), and Hannan-Quinn information criterion (HQC) all suggest a lag of order 4, whereas only the Schwarz information criterion (SIC) suggests a lag of order 2 for the first model (BASI). Table 3 further demonstrates that for the second model, all criterion methods (LR, FBE, AIC, SIC, and HQC) are proposed with a 2 lag duration (BII).

5. EMPIRICAL RESULTS

The unit root test is the initial test that must be utilized to conduct the present research analysis. The ADF was used in this investigation to ensure that the data was stationary. As a result, Table 1 shows the results of the unit root test. The findings show that none of the variables are significant

Table 1. Unit root test results

Variables	Level		First difference	
	Intercept	Trend and intercept	Intercept	Trend and intercept
BAS	1.5731	-2.650632	-13.23186***	-13.54036***
BII	-1.049999	-1.823816	-11.55331***	-11.59231***
NDC	-1.343294	-1.621700	-4.725751***	-4.747120***
NDD	-1.785167	-1.778047	-12.44202***	-12.45873***
NDR	-1.299583	-1.857368	-13.88133***	-13.95289***

Note: \*\*\*, \*\*, \* indicate significant at 1%, 5%, and 10% levels, respectively.

Table 2. BASI model lag selection criteria

Lag	LoqL	LR	FPE	AIC	SIC	HQC
0	-3921.808	NA	3.08e + 15	47.01566	47.09034	47.04597
1	-3052.672	1686.228	1.13e + 11	36.79847	37.17188	36.95003
2	-3002.636	94.67902	7.49e + 10	36.39085	37.06299*	36.66366
3	-2975.423	50.18859	6.56e + 10	36.25657	37.22744	36.65062
4	-2945.614	53.54996*	5.57e + 10*	36.09118*	37.36079	36.60649*

Notes: LR: sequential modified likelihood ratio test statistic (each test at 5% level); FPE: Final prediction error; AIC: Akaike information criterion; SIC: Schwarz information criterion; HQC: Hannan-Quinn information criterion.

**Table 3.** BII model lag selection criteria

Lag	LogL	LR	FPE	AIC	SIC	HQC
0	-3706.927	NA	8.31e + 13	43.40265	43.47614	43.43247
1	-3008.953	1355.129	2.85e + 10	35.42636	35.79380	35.57545
2	-2960.441	91.91829*	1.95e + 10*	35.04609*	35.70750*	35.31446*

Notes: LR: sequential modified likelihood ratio test statistic (each test at 5% level); FPE: Final prediction error; AIC: Akaike information criterion; SIC: Schwarz information criterion; HQC: Hannan-Quinn information criterion.

The diagnostic tests for the BASI and BII models are shown in Tables 4 and 5, respectively. The findings of both tables clearly demonstrate that neither model has a serial correlation problem, since the p-value of the LM test is 0.9382 for BASI and 0.2489 for BII, indicating that the null hypothesis ( $H_0$ ) cannot be rejected. The tables also indicate that both models have no heteroscedasticity problem as the p-value for the Breusch-Pagan test is 0.9597 for

the BASI model and 0.9013 for the BII model, which means that the  $H_0$  is accepted which stated that there is no heteroscedasticity problem in both models. Moreover, the tables confirmed that both models have a linear relationship between dependent and independent variables as Ramsey regression equation specification error test (RESET) results, this indicates that  $H_0$  is accepted which stated that models are correctly specified.

**Table 4.** Diagnostic test for ARDL (BASI)

Test	Value
LM test	0.061242 (0.9382)
Breusch-Pagan test	0.153378 (0.9597)
Ramsey RESET test	0.406601 (0.6848)

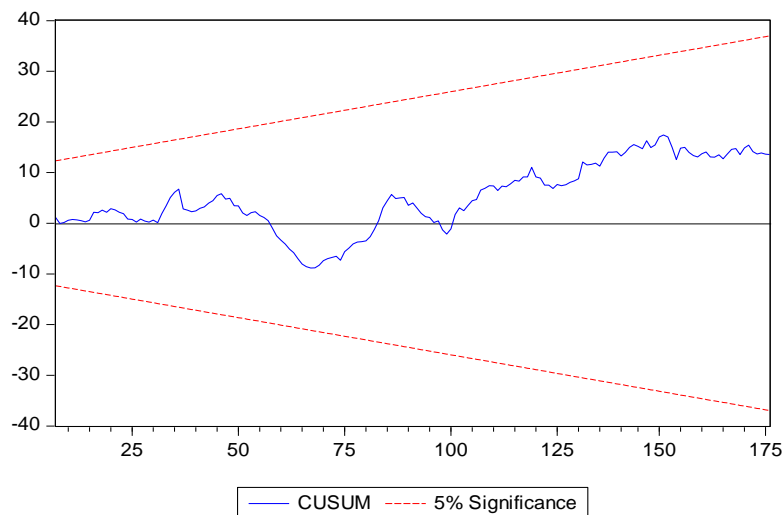
**Table 5.** Diagnostic test for ARDL (BII)

Test	Value
LM test	1.340929 (0.2486)
Breusch-Pagan test	0.34995 (0.9013)
Ramsey RESET test	0.455738 (0.6492)

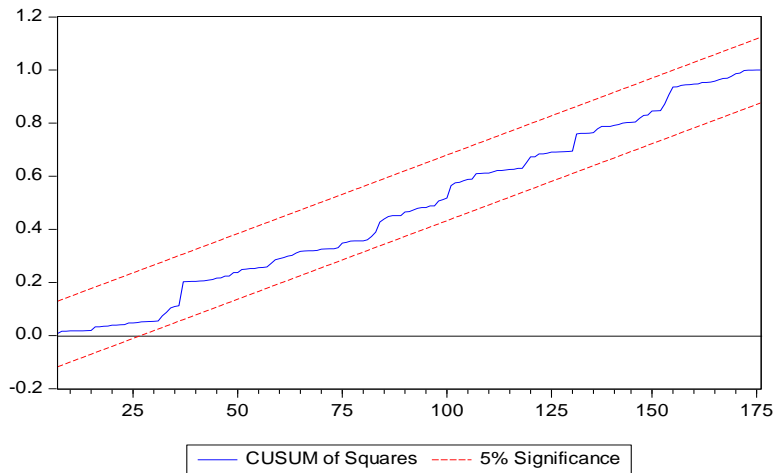
The cumulative sum of recursive residuals (CUSUM) and cumulative sum of squares of recursive residuals (CUSUMsq) are proposed by Pesaran and Shin (1998) to assess the stability of parameters in the selected error-correcting ARDL model in the short- and long-term. As a consequence, Figures 3 and 4 show the results of both CUSUM and CUSUMsq for the first model (BASI), whereas Figures 5 and 6

show the results of both CUSUM and CUSUMsq for the second model (BII). All results, however, demonstrate that the plots of CUSUM and CUSUMsq for the BASI and BII models are within the crucial boundaries of the 5% level of significance. As a result, the  $H_0$ , which states that all parameters are stable and the models are stable, is accepted, indicating that the present research models are stable.

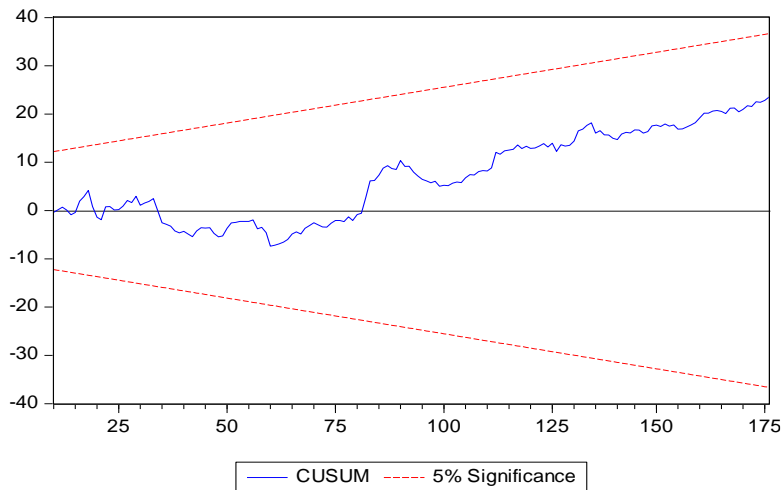
**Figure 3.** The plot of CUSUM for the BASI model



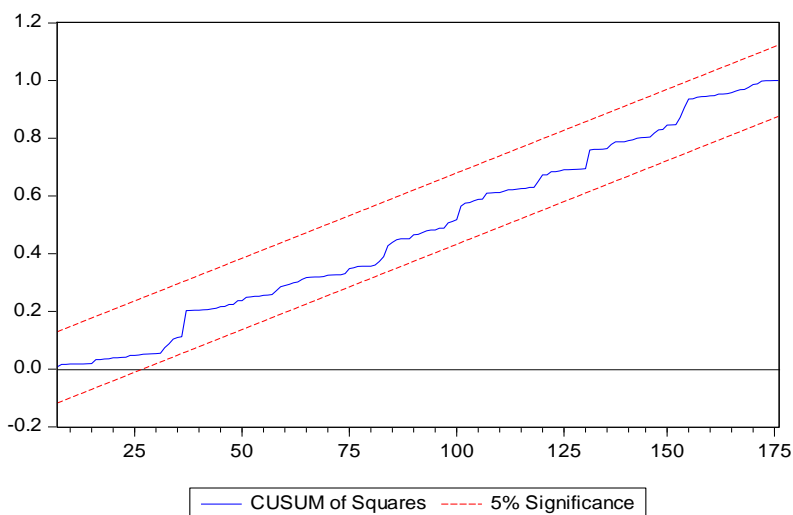
**Figure 4.** The plot of CUSUMsq for the BASI model



**Figure 5.** The plot of CUSUM for the BII model



**Figure 6.** The plot of CUSUMsq for the BII model



Tables 6 and 7 show the long-run coefficient results for both models (BASI and BII). Table 6 for the BASI model demonstrates that the long-run connection between the independent factors and the dependent variables (*BASI* and *BII* performance)

is negligible. In further detail, the table shows that new positive daily cases and new death cases have a negative influence on the BASI, but new daily recovered cases have a positive but negligible impact. Table 7 also provides the assessment

of the long-run association between the BII and independent variables (*NDC*, *NDD*, and *NDR*). Table 7 demonstrates that the link between BII and *NDC* is negligible. Meanwhile, there is a substantial positive association with *NDD*, as well as a significant positive relationship with *NDRC*. According to the data, increasing the number of new daily recovered cases by 1% will enhance Bahrain's BII by 0.021. The insignificance of the relationships among variables in both models might be related to different reasons which can be concluded by the nature of the small size of the Bahrain Stock Exchange market compared with other regions and international markets, the most corporations that are included in Bahrain stock market indexes are from financial and telecommunications sectors.

However, these corporations are the lowest corporations affected by the current pandemic. In addition, the procedures that have been taken by the government could also be a reason as the government did not make any lockdown. The experience of the government in how dealing with the pandemic in 2020 gave the corporations from the financial and telecommunications sectors advantages by keeping them locked down during the pandemic like other firms such as small businesses. Moreover, the government accelerated the vaccinations for all citizens and residents which clearly positively affected the new daily recovered cases and negatively affected the new daily positive cases and new daily deaths cases.

**Table 6.** Estimated long-run coefficient results for the BASI model

Variable	Coefficient	Std. Error	T-statistic	Prob.*
Constant	22.30867	11.43227	1.951378	0.0527*
<i>NDC</i>	-0.000396	0.001108	-0.357861	0.7209
<i>NDD</i>	-0.082427	0.116452	-0.707817	0.4800
<i>NDRC</i>	0.002217	0.001604	1.381718	0.1689

Note: \*, \*\*, and \*\*\* denote statistical significance at 10%, 5%, and 1% level, respectively.

**Table 7.** Estimated long-run coefficient results for the BII model

Variable	Coefficient	Std. Error	T-statistic	Prob.*
Constant	1.125645	0.075155	14.97768	0.0000***
<i>NDC</i>	-0.000358	0.000680	-0.526829	0.5990
<i>NDD</i>	0.054937	0.074931	0.733164	0.4645
<i>NDRC</i>	0.003762	0.001615	2.328903	0.0211**

Note: \*, \*\*, and \*\*\* denote statistical significance at 10%, 5%, and 1% level, respectively.

The short-run error correction term for the BASI and BII models is shown in Tables 8 and 9. Table 8 shows that the BASI has a negative and negligible association with all independent variables; the data suggest that increasing the number of new daily positive cases, new daily death, and new daily recoveries cases will cause the BASI to drop in the near term. Table 9 also shows the results of

the short-run association between the BII and the independent variables during the research period. According to the data, there is a negative and negligible link between BII and new daily positive cases and death. New daily recovered cases, on the other hand, have a positive and negligible association with BII.

**Table 8.** Estimated short-run error correction term (ECT-ARDL) results for the BASI model

Variable	Coefficient	Std. Error	T-statistic	Prob.*
Constant	1.257520	0.444026	2.832085	0.0052**
<i>NDC</i>	-0.001527	0.003383	-0.451247	0.6524
<i>NDD</i>	-0.166237	0.145443	-1.142974	0.2547
<i>NDRC</i>	-0.000686	0.002572	-0.266918	0.7899
$ECT_{t-1}$	0.442456	0.092115	4.803320	0.0000***

Note: \*, \*\*, and \*\*\* denote statistical significance at 10%, 5%, and 1% level, respectively.

**Table 9.** Estimated short-run error correction term (ECT-ARDL) results for the BII model

Variable	Coefficient	Std. Error	T-statistic	Prob.*
Constant	-0.141564	0.079548	-1.779595	0.0770*
<i>NDC</i>	-0.011066	0.183795	-0.060208	0.9521
<i>NDD</i>	-0.001477	0.001624	-0.909862	0.3643
<i>NDRC</i>	0.072600	0.071186	1.019858	0.3094
$ECT_{t-1}$	-0.004024	0.001529	-2.632179	0.0093***

Note: \*, \*\*, and \*\*\* denote statistical significance at 10%, 5%, and 1% level, respectively.

As a result, the study discovered that throughout the study period, both indexes on the Bahrain Stock Exchange had almost the same reopened to the COVID-19 pandemic, particularly for new daily positive cases. It's possible that the companies in the BII are also included in the BASI. The present study's findings, on the other

hand, are consistent with prior research on COVID-19 influence on stock markets. Topcu and Gulal (2020), Ashraf (2020), Erdem (2020), Baker et al. (2020), and Lee and Chen (2020) are among the researchers that revealed a negative correlation between COVID-19 and stock market performance.



## 6. CONCLUSION

The current study used the ARDL approach to examine the impact of the COVID-19 pandemic on Bahrain Stock Exchange indexes from January 1, 2021, to September 30, 2021. In the long and short term, the study found a negative and negligible relationship between BASI and new daily positive cases and new daily death cases. However, in the long run, the new recovered cases have a positive insignificant association, whereas, in the short run, the new recovered cases have a negative insignificant link. Furthermore, the study discovered a negative and insignificant association between BII and new daily positive cases in the long and short term, but a positive and insignificant relationship between BII and new daily death. Meanwhile, the findings show that fresh recovered instances have a beneficial long-term and short-term influence on BII. According to the current findings, the study recommends for decision-makers continue confronting the current pandemic by following various government methods to increase the recovery

cases in order to encourage investor confidence in the financial market and realize uncertainty from their investment perceptions. Also, investors should rearrange and rebalance their portfolio investment and use hedging techniques to reduce their risks. However, the current study has several limitations. To begin with, it is focused on a period in Bahrain that was considered to be a peak time for the pandemic, with the highest number of new daily positive cases since the beginning of the pandemic, which lasted only 9 months from 2021, whereas future studies may extend the study period. Second, the methodology is a restriction, as the current study was conducted utilizing the ARDL approach, but other approaches for analysis may be employed. Finally, the current study only employed three independent factors, but more variables, such as vaccination cases for COVID-19, might be used. Finally, future research on this topic might compare different emerging stock markets, whether using a public index or an Islamic index, as this study only looked at the Bahrain Stock Exchange.

## REFERENCES

1. Ali, M., Alam, N., & Rizvi, S. A. R. (2020). Coronavirus (COVID-19) — An epidemic or pandemic for financial markets. *Journal of Behavioral and Experimental Finance*, 27, 100341. <https://doi.org/10.1016/j.jbef.2020.100341>
2. Ashraf, B. N. (2020). Stock markets' reaction to COVID-19: Cases or death? *Research in International Business and Finance*, 54, 101249. <https://doi.org/10.1016/j.ribaf.2020.101249>
3. Bagão, M., Dias, R., Heliodoro, P. A., & Alexandre, P. M. (2020). The impact of COVID-19 on European financial markets: An empirical analysis. In *LIMEN 2020 Conference Proceedings*. <https://doi.org/10.31410/LIMEN.2020.1>
4. Baker, S., Bloom, N., Davis, S. J., Kost, K., Sammon, M., & Viratyosin, T. (2020). The unprecedented stock market reaction to COVID-19. *The Review of Asset Pricing Studies*, 10(4), 742-758. <https://doi.org/10.1093/rapstu/raaa008>
5. Baldwin, R., & Weder di Mauro, B. (2020). *Economics in the time of COVID-19*. CEPR Press. Retrieved from <https://voxeu.org/article/economics-time-covid-19-new-ebook>
6. Central Bank of Bahrain. (2021). *Financial stability report* (Issue No. 31). Retrieved from <https://www.cbb.gov.bh/wp-content/uploads/2021/10/FSR-Sep2021.pdf>
7. Çütcü, I., & Kılıç, Y. (2020). Stock market response to coronavirus (COVID-19) pandemic. *Journal of Applied Economics and Business Research*, 10(4), 207-220. Retrieved from <https://hdl.handle.net/20.500.11782/2293>
8. Duan, H., Wang, S., & Yang, C. (2020). Coronavirus: Limit short-term economic damage. *Nature*, 578(7796), 515. <https://doi.org/10.1038/d41586-020-00522-6>
9. Erdem, O. (2020). Freedom and stock market performance during Covid-19 outbreak. *Finance Research Letters*, 36, 101671. <https://doi.org/10.1016/j.frl.2020.101671>
10. Gil-Alana, L. A., & Claudio-Quiroga, G. (2020). The COVID-19 impact on the Asian stock markets. *Asian Economics Letters*, 1(2). <https://doi.org/10.46557/001c.17656>
11. Hasan, H., Oudat, M. S., Alsmadi, A. A., Nurfahasdi, M., & Ali, B. J. (2021). Investigating the causal relationship between financial development and carbon emission in the emerging country. *Journal of Governance & Regulation*, 10(2), 55-62. <https://doi.org/10.22495/jgrv10i2art5>
12. Hong, H., Bian, Z., & Lee, C.-C. (2021). COVID-19 and instability of stock market performance: Evidence from the U.S. *Financial Innovation*, 7, 12. <https://doi.org/10.1186/s40854-021-00229-1>
13. Karabag, S. F. (2020). An unprecedented global crisis! The global, regional, national, political, economic and commercial impact of the coronavirus pandemic. *Journal of Applied Economics and Business Research*, 10(1), 1-6. Retrieved from <http://www.diva-portal.org/smash/get/diva2:1420844/FULLTEXT01.pdf>
14. Kaya, H. D., & Engkuchik, E. N. S. (2017). The effect of financial crises on stock market liquidity across global markets. *Investment Management and Financial Innovations*, 14(2), 38-50. [https://doi.org/10.21511/imfi.14\(2\).2017.04](https://doi.org/10.21511/imfi.14(2).2017.04)
15. Lee, C.-C., & Chen, M.-P. (2020). The impact of COVID-19 on the travel and leisure industry returns: Some international evidence. *Tourism Economics*, 28(2), 451-472. <https://doi.org/10.1177/1354816620971981>
16. Mazur, M., Dang, M., & Vega, M. (2021). COVID-19 and the March 2020 stock market crash. Evidence from S&P1500. *Finance Research Letters*, 38, 101690. <https://doi.org/10.1016/j.frl.2020.101690>
17. Oudat, M. S., & Ali, B. J. (2020). Effect of bad debt, market capitalization, operation cost capital adequacy, cash reserves on financial performance of commercial banks in Bahrain. *International Journal of Psychosocial Rehabilitation*, 24(1), 5979-5986. Retrieved from <https://www.psychosocial.com/article/PR200694/31628/>
18. Oudat, M. S., & Ali, B. J. (2021). The underlying effect of risk management on banks' financial performance: An analytical study on commercial and investment banking in Bahrain. *Ilkogretim Online*, 20(5), 404-414. Retrieved from [https://www.researchgate.net/publication/349201367\\_The\\_Underlying\\_Effect\\_of\\_Risk\\_Management\\_On\\_Banks'\\_Financial\\_Performance\\_An\\_Analytical\\_Study\\_On\\_Commercial\\_and\\_Investment\\_Banking\\_in\\_Bahrain](https://www.researchgate.net/publication/349201367_The_Underlying_Effect_of_Risk_Management_On_Banks'_Financial_Performance_An_Analytical_Study_On_Commercial_and_Investment_Banking_in_Bahrain)
19. Oudat, M. S., Ahmad, N., & Yazis, M. (2016). The impact of macroeconomic variables and global events on banking system: Evidence from Jordanian banking system. *Journal of Administrative and Business Studies*, 2(1), 19-24. <https://doi.org/10.20474/jabs-2.1.3>

20. Pesaran, H. H., & Shin, Y. (1998). Generalized impulse response analysis in linear multivariate models. *Economics Letters*, 58(1), 17-29. [https://doi.org/10.1016/S0165-1765\(97\)00214-0](https://doi.org/10.1016/S0165-1765(97)00214-0)
21. Pesaran, M., & Pesaran, B. (1997). *Microfit 4.0 (Windows version)*. New York, NY: Oxford University Press Inc.
22. Samsi, S. M., Cheok, C. K., & Yusof, Z. (2019). Financial crisis, stock market and economic growth. *Journal of Southeast Asian Economies*, 36(1), 37-56. <https://doi.org/10.1355/ae36-1e>
23. Sharma, S. S. (2020). A note on the Asian mark volatility during the COVID-19 pandemic. *Peer-Reviewed Research*, 1(2), 1-6. <https://doi.org/10.46557/001c.17661>
24. Topcu, M., & Gulal, O. S. (2020). The impact of COVID-19 on emerging stock markets. *Finance Research Letters*, 36, 101691. <https://doi.org/10.1016/j.frl.2020.101691>
25. World Health Organization (WHO). (2020). *Novel coronavirus (2019-nCoV)* (Situation Report No. 1). Retrieved from [https://www.who.int/docs/default-source/coronaviruse/situation-reports/20200121-sitrep-1-2019-ncov.pdf?sfvrsn=20a99c10\\_4](https://www.who.int/docs/default-source/coronaviruse/situation-reports/20200121-sitrep-1-2019-ncov.pdf?sfvrsn=20a99c10_4)
26. Wu, W., Lee, C. C., Xing, W., & Ho, S. J. (2021). The impact of the COVID-19 outbreak on Chinese-listed tourism stocks. *Financial Innovation*, 7, 22. <https://doi.org/10.1186/s40854-021-00240-6>
27. Zhang, D., Hu, M., & Ji, Q. (2020). Financial markets under the global pandemic of COVID-19. *Finance Research Letters*, 36, 101528. <https://doi.org/10.1016/j.frl.2020.101528>