The Impact of Government Interventions during Covid-19 Pandemic on Financial Market: Evidence from the Middle Eastern Countries

GHAITH N. AL-EITAN
Department of Finance and Banking
Al-Bayt University
JORDAN
Email: ghaith.eitan@aabu.edu.jo

BASSAM AL-OWN
Department of Finance and Banking
Al-Bayt University
JORDAN
Email: bown@aabu.edu.jo

Abstract: - This paper primarily examined the influence of government involvement on stock market returns during Covid-19 pandemic, and the effect of such involvement on stock market returns in the context of the countries in the Middle East. The research data has its basis on balanced panel data gathered from 9 Middle Eastern nations, including Saudi Arabia, the UAE, Bahrain, Egypt, Jordan, Oman and Qatar. More specifically, the sample comprised of 820 daily observations from April 1 to September 20, 2020 of the above nations. According to the obtained findings, the stock market returns of the Middle Eastern countries had a positive and significant response towards reduced Covid-19 confirmed cases, while the social isolation measures proclamations led to negative stock market returns. Additionally, the income support packages and containment along with public awareness programs proclamations had a positive relationship with the stock market returns. The study contributes by providing insights that have implications for investors and policymakers in how to manage the Covid-19 pandemic adverse effects on the performance of stock markets and on the social distancing measures design for the purpose of enhancing any and all future government response. This study is the first of its kind, to the best of the author's knowledge, to examine the effect of government interventions on stock market returns during the Covid-19 pandemic in the context of the Middle Eastern countries.

Key-words: Covid-19 Pandemic; Government Interventions; Middle Eastern Countries; Financial Markets; Panel Data; Random Effects Model

1 Introduction

The end of December 2019 brought on several pneumonia cases in Wuhan, Hubei province, China, which was considered to be of unknown cause, after which patients were swabbed in January 2020 and found to be suffering from acute respiratory syndrome, also known as Coronavirus 2 (SARS-CoV-2). The virus is a new one which has, to date, infected and killed millions of people all over the world, and was shortly after its discovery, declared by the World Health Organization (WHO) as a global epidemic and Public Health Emergency of International Concern (PHEIC) on March 11 2020 (Al-Eitan & Al-Ahmed, 2020). Consequently, countries began to take actions and limitations in order to minimize the virus negative effects and by November 13 of the same year, over 53,000,000 cases had been reported, with 1,302,000 fatalities

all over the world as reported by the WHO. The epidemiological situation due to Covid-19, which was in the center of public attention in 2020, has attracted the attention of various sectors of society. The visible impact is not only limited to public health, but also affects various sectors (Erlina and Elbaar, 2021).

There are many factors that affect the financial markets, which could result in the investments decreasing/increasing, and at the onset of 2020, the emergence and level of Covid-19 pandemic has been the biggest influence over businesses and as such, it becomes a must to determine how the pandemic has influenced the financial markets. Generally, within a few days, it reduced the market by a 15% level, and its emergence has led to the halting of work in major cities and firms, brought on by the fear of the people in contracting the virus, limiting their activities to their homes, and leaving businesses high and dry. This eventually led to the recession of many financial markets like Japan and Germany, and it is predicted the virus will continue to cause recession in other markets around the globe. Currently, owing to the dramatic movements in financial markets, majority of studies have turned to examining the Covid-19 effects on stock market returns using empirical methods (e.g., Zhang et al., 2020; Al-Ali et al., 2020; Baker et al., 2020; Ramelli & Wagner, 2020; Ashraf, 2020a, Haroon & Rizvi, 2020; Schell et al., 2020).

Moreover, four ways of government measures have been used to examine stock market responses and they are government response, containment and health, stringency and economic support. Specifically, government responses take on an increasing and decreasing trend during the pandemic and restraint and health combine lockdown and lock restrictions with testing and contact tracing measures, short-term healthcare investment, and vaccines investment. Moreover, strictness documents the lockdown policies stringency that basically controls the behavior of the people (e.g., closing of schools, workplaces and public places, limitations on domestic and international flights, etc.). To counter or at least minimize the negative effects, economic support measures like income support and debt relief

have been provided, and such actions of the government have been argued to have effects on stock market profitability. Actions taken pertaining so social exclusion can influence the stock market returns and the economic activity in a negative way, as opposed to government control and health response, as well as support packages that have the opposite effect, while at the same time increasing investor's confidence and minimizing the negative effects of the pandemic on the whole economy.

Understanding the way the Covid-19 pandemic is influencing the stock markets involves the examination of its impact on the day-to-day returns of the major stock market indices of the Middle Eastern nations for the period starting from April 1, 2020 and culminating on September 20, 2020. The remaining parts of this paper is organized in the following sections; the next section, which is Section 2 presents literature review concerning the impact of Covid-19 and the government interventions on stock returns, while Section 3 contains a presentation of the used data. This is followed by Section 4 that contains the definition of the adopted study methodology and Section 5 that presents and discusses the obtained empirical findings. Finally, Section 6 contains the conclusion of the study.

2 Theoretical Basis and Testable Hypotheses

A huge proportion of literature has been dedicated to the effect of Covid-19 on financial markets, with the current ones arguing that such effect has led to new economic and financial challenges that diminish with every passing crisis.

Studies of this caliber such as, Ramelli and Wagner (2020), Alfaro et al. (2020), Al-Awadhi et al. (2020), Ashraf (2020a), Baker et al. (2020) and Zhang et al. (2020) revealed that a significant negative influence of Covid-19 pandemic on the stock markets returns in various contexts all over the globe.

To begin with, the relationship between stock market risks and Covid-19 was the focus of

Zhang et al.'s (2020) study targeting the global financial markets. The authors employed simple statistical analysis on stock market data from the top 10 infected countries based on the confirmed cases – the countries included Japan, South Korea and Singapore. The results showed high risk and ambiguity between February and March 2020 in the international financial markets.

Additionally, the influence of confirmed cases and growing fatalities of Covid-19 on the stock market returns was also examined by Ashraf (2020), using panel data analysis with daily Covid-19 and stock market returns data gathered from January 22, 2020 to April 17, 2020 from a total of 64 countries around the world. Growth of confirmed cases was found to have a significant negative influence on the stock market returns, but response to the growth impact in fatalities was insignificant.

In the context of GCC countries, Bahraini and Filfilan (2020) focused on the influence of Covid-19 pandemic confirmed cases and fatalities on the stock market indices daily returns. They made use of panel data regression analysis on data concerning daily Covid-19 and stock market returns for the period starting from April 1, 2020 until June 26, 2020. The findings showed that new and total Covid-19 confirmed deaths had a significant negative effect on stock markets in the countries examined, and confirmed cases number had no significant effect.

In the same caliber of study, Goodell (2020) and Yarovaya et al. (2020) revealed the possible significant influence of Covid-19 pandemic on the financial sector's performance in what appear to be a promising research area. On the other hand, Corbet et al. (2020a) examined the influence of Covid-19 on stock returns and found companies experiencing Covid-19 was significantly and negatively faced with returns and increased volatility at the pandemic's onset. Hence, based on literature and related theories, this study proposes the following hypothesis;

H₁: Stock market returns are negatively related to Covid-19 confirmed cases over the study period.

Other studies that examined the Covid-19 impact on financial markets included Al-Awadhi et al. (2020), Ali et al. (2020), Ashraf (2020a), Baker et al. (2020), Haroon and Rizvi (2020), Ramelli and Wagner (2020), Schell et al. (2020) and Zhang et al. (2020).

In the U.S. context, Alfaro et al. (2020) made use of data collected and reached to the conclusion that there is a negative effect of Covid-19 on the stock market value. Similarly, in China, Al-Awadhi et al. (2020) showed that overall share prices dropped because of the estimated negative economic outcomes brought on by the pandemic. Thus, based on related literature and theory, this study hypothesizes that;

H₂: Stock market returns are positively related to announcements of government economic support programs over the study periods.

In the same study line, the event study method was adopted by Liu et al. (2020) and Harjoto et al. (2020), with the former examining the effect of Covid-19 pandemic on 21 major stock market indices in countries including Japan, Korea, U.S., Italy and the U.K, using daily stock market data closing prices indices for the period from February 21, 2019 to March 18, 2020. The authors reached to the conclusion that the pandemic has a negative and significant influence over the stock market returns and that major stock indices performance had a significant negative decline in light of abnormal returns, particularly in Asia. Thus, based on studies in literature, the following hypothesis is proposed;

H₃: Stock market returns are negatively related to the announcements of stringent government social distancing measures over the study period.

In a related study, Harjoto et al. (2020) concentrated on two events to present the shock and stimulus of the WHO declaration of March 11, 2020 as well as, the Federal Reserve Declaration of April 9, 2020. They found that Covid-19 pandemic negatively influenced global stock markets, emerging markets and small firms and that the stimulus of Federal Research positively affected the U.S. stock market and unusual returns in comparison to other emerging and developed markets. They reached to the conclusion that major U.S. firms achieved

abnormal positive returns from the Federal Research stimulus.

Also in the developed nations of U.S., UK, Germany, France, Spain and Italy Cepoi (2020) examined the Covid-19 pandemic effects, using panel quantile regressions for the period from February 3, 2020 to April 17, 2020. The findings revealed that fake news negatively influenced lower-middle quantiles throughout returns distribution, and returns throughout middle-upper quantiles were decreased by the media coverage. As a consequence, this study hypothesized the following;

H_4: Stock market returns are negatively related to the announcements of government containment and health policies over the study periods.

Data was gathered from 77 countries dated from January 22 to April 17, 2020 by Ashraf (2020) for the examination of the government actions' effect on stock market returns. Based on the findings, government announcements of social distancing measures negatively affected stock market returns, whereas reduced Covid-19 confirmed cases had a positive influence on stock market returns. Moreover, the findings also indicated that public awareness programs and economic support announcements had a positive effect on market returns. Hence, based on the above discussions of theory and extant theories, this study hypothesizes that;

H_5: Stock market returns are negatively related to the government announcements of social distancing measures over the study period.

4 Methodology

The influence of government intervention during the Covid-19 pandemic on the stock market returns of Middle Eastern countries was determined through the use of panel data regression. In the panel data models, the concern is mostly placed simultaneously on time and cases, with other models opting instead to express the heterogeneities across units or throughout time. Such models also consider the composition of heterogeneity of cross-sectional units and time

The study has contributions to literature dedicated to the effect of government intervention and Covid-19 on stock markets among Middle Eastern countries. The study assumes that Covid-19 pandemic and government interventions affect stock market returns in the Middle Eastern countries context for the period beginning from April 1, 2020 to September 20, 2020.

3 Data Collection

In the present study, data was gathered from three major sources, namely Daily Stock Market Returns from www.investing.com, one major stock market from each country, daily Covid-19 data for each country reported by the Johns Hopkins University, Coronavirus Resources Center (JHU-CRC), and Government Accountability Indicator data obtained from the OxCGRT website. Data collected was dated from April 1 2020 to September 20, 2020 – owing to the fact that this period is characterized by the Covid-19 validated cases and each country's government response to control and manage it. The sample was purified using two filters, the first of which is countries that have no stock return data were not included from Covid-19 approved items or government response indicators, and second daily observations missing values necessitated the omission of variables. The sample comprised of 820 observations gathered from the sample countries, including Saudi Arabia, UAE, Bahrain, Egypt, Jordan, Oman and Qatar for the period from April 1 to September 20, 2020. The fundamental information of the sample distribution is presented and tabulated in Table 1.

dimensions, which leads to minimizing estimation bias and the multicollinearity occurrence (Baltagi, 2008; Gujarati, 2003; Wooldridge, 2010). Moreover, because of Covid-19 pandemic spread evolves over time, studies opted to use panel data method over other approaches as exemplified by Al-Awadhi et al. (2020) and Ashraf (2020), with the combined regression being the simplest estimation method and regression measurement used. A single equation is used to estimate the data altogether and it is represented by Brooks (2008) as;

$$y_{it} = \alpha + \beta x_{it} + u_{it} \ldots \ldots \ldots \ldots (1)$$

In the above equation, y represents the dependent variable, i represents the unit, t represents time, x represents the independent variable, and u the random error limit.

Generally speaking, a panel data research uses two major approaches, which are fixed effects model and random effects model to analyze the time series and cross-sectional data (Gujarati, 2003). Each group's intercepts varies at different times, with the coefficients representing the fixed effects model assumption remaining constant. This shows that it connects to the error component through explanatory variables. On the other hand, random effects model enables the changing over time of explanatory variables throughout different groups (Verbeek, 2012). Hausman (1978) showed that the results of Hausman-test to choose the model fit is useful;

$$y_{it} = \alpha + \beta x_{it} + u_i + v_{it} \ldots \ldots \ldots \ldots (2)$$

More specifically, the Hausman-test is useful in selecting the model according to the Chi-Square value – in that the fixed model is suitable to be used if the Chi-Square value is lower than 5%, otherwise the random model is more suitable for use. Accordingly, this study found the random effects model to be more suitable for the panel data based on the test, as the chi-square value is higher than 5%;

$$y^*_{it} = \alpha^* + \beta x^*_{it} + \gamma \hat{x}_{it} + u^*_{it} \ldots \ldots \ldots \ldots (3)$$

$\mu_{i,t}$ denotes the error term, that is represented by the following equation;

$$\mu_{i,t} = u_i + \gamma_t + \epsilon_{i,t} \quad \ldots \ldots (4)$$

In the above equation (Equation 4), the panel model's error term can be considered to be classified into pure disturbance term ($\epsilon_{i,t}$) and error term brought on by other factors – such factors are denoted by μ_i, which are unobservable individuals effects, while unobservable time

effects are denoted by γ_t. In the equation, in case μ_i and γ_t equals zero, the use of OLS method is preferred, otherwise, depending on statistical tests regarding the presence of individual or/and time specific effects, a fixed effect or random effect specification of the panel model is chosen.

In the present paper, the Hausman-test results, the panel data model utilized to shed light on the effects of government interventions and Covid-19 on the stock market returns of Middle Eastern countries for the period from April 1, 2020 to September 20, 2020 is as follows;

$$SMR_{i,t} = \alpha_0 + \alpha_1 GOVINT_{i,t-1} + \sum_k^k = 1\beta_k X^k_{i,t-1} + u_{it} \ldots (5)$$

$$SMR_{i,t} = \alpha_0 + \alpha_1 COVID - 19_{i,t-1} + \sum_k^k = 1\beta_k X^k_{i,t-1} + u_{it} \ldots (6)$$

The model in Equation 4 shows that $SMR_{i,t}$ is the dependent variable, indicating that stock market return in country i on day t, gauged as the change in major stock market index on a daily basis, while α_0 is the constant term. The government interventions effect on stock market returns is obtained by measuring government reactions ($GOVINT_{i,t-1}$) using four major indices, namely stringency index, containment and health index, and economic support index. Moreover, $COVID - 19_{i,t-1}$ represents the daily measured confirmed cases of Covid-19, $X^k_{i,t-1}$ represents the vector of control variable, with the control variable being the variation in percentage of the S&P500 volatility index (VIX). VIX stands for the 30-day estimated U.S. stock market volatility, obtained from real-time, mid-quote S&P500 mid-quote prices Index call and put options (Chicago Board Options Exchange). According to Liu et al. (2020), VIX is a proxy for instrument investor's risk, with the entire Covid-19 and control variable covered under their lagged values.

5 Empirical Analysis

This study primarily examines the direct effect of government interventions on the Middle Eastern

countries stock market returns during Covid-19 pandemic, and the effect of the latter on the stock market returns in the same context, for the period from April 1, 2020 to September 20, 2020, using the panel data model. Prior to running the regression analysis, a stability test had to be conducted for the model's independent variables and for this, the Augmented Dickey-Fuller test and the Phillips-Perron test were both employed. This step ensures the time series data is stable for the period of study, as instability could result in inaccurate results of regression analysis.

Table 1, Summary of Statistics

Variable	Mean	Maximum	Minimum	Std. Dev.	Observations
RE	0.000955	0.046022	-0.074136	0.008944	820
RES	74.24555	87.50000	35.12000	9.751652	820
CH	77.49854	92.36000	36.81000	9.749763	820
STR	80.04920	100.0000	30.56000	12.00247	820
SUP	54.73301	87.50000	0.000000	21.75684	820
CFC	21325.50	201801.0	153.0000	36.75204	820
DE	53.52816	318.0000	1.000000	84.08873	820
VIX	-0.000723	0.479500	-0.1317	0.081402	820

The above table contains the descriptive statistics of the main variables. From the table, stock returns are gauged as the change in each country's (Saudi Arabia, UAE, Bahrain, Egypt, Jodan, Oman and Qatar) major stock indices daily, and government response index reflects the way government responses increase/decrease during the pandemic. Moreover, inclusion and health index is a combination of lockdown and lockdown restrictions with measures (e.g., short-term investments in healthcare and vaccines, contact tracing and testing policy). Added to the above, the stringency index is the austerity of lockdown policies that basically limits the behavior of people (e.g., universities, offices and community places closure, domestic and international travel restrictions), whereas economic support index gauges' measures like income support program and debt relief. As for the Covid-19 certified items, they were measured as the number of certified items in a country on a daily basis, while the number of Covid-19 fatalities was measured as the death due to Covid-19 on a daily basis. The variation in percentage of the S&P500 volatility index (VIX) is the control variable, VIX being referred to as 30-day estimated volatility of the U.S. stock market, obtained from real-time S&P500 index mid-quote prices call and put options (Chicago Board Options Exchange).

Table 2, Correlation Matrix

	RE	RES	CH	STR	SUP	CFC	DE	VIX
RE	1							
RES	0.0258933	1						
CH	0.0210817	0.9526529	1					
STR	-0.0276028	0.7099229	0.8340870	1				
SUP	0.0246839	0.5759084	0.3000678	-0.015538	1			
CFC	0.0844743	0.1398329	0.0948248	-0.1487823	0.1839805	1		
DE	0.04542491	0.1032978	0.1100331	-0.1979956	0.0284598	0.2890258	1	
VIX	0.08312529	0.0115938	0.0023674	-0.0058360	0.0300512	0.0270347	0.0233585	1

In the above table (Table 2), the correlation matrix results show no strong correlation and they show the independent-dependent variables relationship and the relationships among the independent variables. It reveals a double correlation between two variables and the correlation coefficient between more than two variables. The table specifically shows the relationship between government response index, containment and health index, stringency index, economic support index and the S&P500 volatility index (model 1), as the independent variables, and confirmed cases of Covid-19, number of deaths of Covid-19, and the S&P500 volatility index (mode 2) – the relationship is devoid of multicollinearity issues and no autocorrelation exists between the dependent and independent variables.

Table 3, Unit Root Test Results (Dickie Fuller & Phillips Peron)

Variable		ADF	PP	Results
RE	Level	81.7550***	365.511***	Non-stationary
	First difference	315.403***	253.481***	Stationary
RES	Level	10.0074	10.3270	Non-stationary
	First difference	97.9116***	442.930***	Stationary
CH	Level	11.0854	10.9802	Non-stationary
	First difference	99.8710***	450.313***	Stationary
STR	Level	8.35392	8.93157	Non-stationary
	First difference	100.130***	444.644***	Stationary
SUP	Level	8.77291	8.05485	Non-stationary
	First difference	104.949***	440.118***	Stationary
CFC	Level	7.58633	7.15326	Non-stationary
	First difference	69.7857***	358.987***	Stationary
DE	Level	8.99306	8.71113	Non-stationary
	First difference	82.5459***	414.369***	Stationary
VIX	Level	103.127***	551.647***	Non-stationary
	First difference	283.998***	128.945***	Stationary

The Dicky Fuller and Phillips-Perron test was used to confirm the stability of the time series for the study variables and the stability for the study period, steering clear of instability that could lead to inaccurate results of regression analysis. Accordingly, two tests were conducted at the level of the study variables. Table 3 tabulates the results and it indicates the instability of all variables the level and thus, the null hypothesis that states the instability of the time series was accepted. Thus the entire variables first differences was obtained and retested after the first differences was obtained by the tests, with significant value lower than 5% for the tests. The alternative hypothesis was accepted, stating that the time series of study variables has become stable. More specifically, the Phillips-Perron test considers the random errors and encompasses the Dickey Fuller test, indicating that the temporary shock effects will eventually diminish through time, particularly through long periods.

The appropriate panel models to be used in estimating the direct impact of government interventions and Covid-19 pandemic on stock market returns of the examined countries in the Middle East have to be determined. The decision involves selecting between fixed or random effects model, and for this the Hausman test was conducted, after which the random effects model was found to be suitable.

Table 4, Model 1 (Covid-19) Panel Data Random Effects Model Results

Variable	Coefficient	t-Statistic	Prob.
C	-0.00143	-2.60656	0.0093
CFC	3.35E-08	2.077731	0.038
DE	9.77E-06	1.40124	0.1615
VIX	-0.01147	-2.75778	0.0059
R-squared	0.421625		
F-statistic	6.011918	Durbin-Watson stat 1.776	
Prob(F-statistic)	0.000472		
Hausman test			
Test Summary	Chi-Sq. Statistic	Chi-Sq. d.f.	Prob.
Period random	4.94162	3	0.1761

In the above table, the random effect panel data regression findings of Model 1 are tabulated, and it covers the daily confirmed cases (CFC) and confirmed deaths (DE) representing Covid-19 pandemic effect measures on the Middle Eastern Countries' stock market returns. The table shows that VIX as proxy of instrument investors' risk, while standard errors were used to address the heteroskedasticity issue for the regression variables. The F-test p-values were less than the 5% significance level, indicating data-model fit. Moreover, the random effect results of Model 1 shows the CFC to be statistically significant in its influence on stock market returns, which indicates that daily total confirmed cases do influence the Middle Eastern countries' stock market returns in the examined period (April 1, 2020 – September 20, 2020). Additionally, indirect positive effect was found on stock market returns in the face of decreased Covid-19 confirmed cases.

A negative relationship was revealed between the stock market returns of the examined Middle Eastern countries and S&P500 volatility index (VIX) during the studied period. In other words, oil volatility and investors' concerns gauged through VIX and OVX negative relate to stock market returns in the Middle Eastern countries during the pandemic. These results are aligned with prior studies that found stock markets to fall in the face of increased changes in volatility indices (e.g., Bahrini & Filfilan, 2020; Alqahtani & Chevallier, 2020; Liu et al., 2020; Smales, 2017).

Table 5, Model 2 - (Covid-19) Panel Data Random Effect Model Results

Variable	Coefficient	t-Statistic	Prob.
C	-0.00424	-4.08936	0.0000
RES	-0.48894	-3.3593	0.0008
CH	0.419032	3.359625	0.0008
STR	0.000101	1.16466	0.2445
SUP	0.069866	3.359538	0.0008
VIX	-0.0086	-2.06613	0.0391
R-squared	0.452133		
F-statistic	8.61043	Durbin-Watson stat 1.83115	
Prob(F-statistic)	0.0000		
Hausman test			
Test Summary	Chi-Sq. Statistic	Chi-Sq. d.f.	Prob.
Period random	3.549717	5	0.6159

The above table presents the effect of independent variables, namely government response index, stringency index, containment and health index, and economic support index actions on stock market returns in the examined countries during the Covid-19 pandemic. From the table, instrument investors' risk is proxied by VIX, which is the control variable.

Model 2 results revealed that government response index significantly and negatively affected the stock market returns of the countries during the pandemic due to heightened government actions in social distancing measures like the closure of universities, schools, industrial workplaces and community places, and limitations in national and international travel and movement. Corporate valuations on average decreased owing to the government inducements of social distancing and their negative influence.

Added to the above result, containment and health response had a significant impact, which means government actions pertaining to public awareness campaigns and testing and quarantining policy result in positive market response, increasing the confidence of investors and decreasing the adverse effects on the economy brought on by the pandemic.

Moving on to stringency index, no statistical significant influence was found on the stock market returns of the Middle Eastern nations examined, meaning to say the government announcements of social distancing measures like colleges closure, workplace closure, public events cancellations, limited meeting size, public transport curtailing, stay at home mandates, limiting domestic movement and international travel have no significant effect on stock market returns.

As for economic support index, the government income support and debt/contract relief of household's programs had statistical significantly effects on the overall stock markets, indicating positive returns in response to the government interventions.

6 Conclusion

This study investigated the economic impact of government interventions and Covid-19 on the stock market returns of selected 9 Middle Eastern Countries. The study considered the government policy actions implementations and illustrated the effect of government interventions like social distancing measures, lockdown constraints and closure of entities, along with measures like

testing policy and contact tracing, closure of educational facilities and workplaces, and limited domestic and international travel during the Covid-19 pandemic on the stock market returns of the examined Middle Eastern countries. In the empirical analysis, the study made use of stock market returns data, Covid-19 confirmed cases and announcements relating to government policies from the countries from April 1, 2020 to September 20, 2020. According to the obtained results, the stock markets of the 9 Middle Eastern countries responded in a positive and significant way to the decreased number of Covid-19 confirmed cases, while the social distancing measures announcements had a negative effect on the stock market returns because of the estimated negative effect on the economic activities. With regards to government announcements of containment and health of public awareness programs, positive market returns were observed owing to the decreased Covid-19 confirmed cases. Lastly, income support programs culminated in positive market returns in all 9 Middle Eastern countries examined.

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Ghaith N. Al-Eitan-Conceptualization-editing and analysis
Bassam Al-Own-Writing-review