Socially Responsible Investment During the COVID-19 Pandemic: Evidence from Morocco, Egypt and Turkey

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Abstract

Socially responsible investing (SRI) seeks to combine financial returns with social and environmental performance. In the context of the Covid-19 pandemic, SRI is seen as an alternative way to maintain sustainable returns. This article attempts to assess the impact of COVID-19 on the performance of socially responsible stocks. In other words, we test the resilience of ESG (Environmental, Social and Governance) oriented companies' stock prices to the global crisis, and compare it with the performance of selected non-ESG stocks. To do so, we focus on companies listed on the Moroccan, the Egyptian and the Turkish stock exchanges. We use the event study methodology, which relies mainly on calculating the daily abnormal returns of each company and aggregating them over an event window to test their statistical significance. The results reveal that all the companies listed on these three stock exchanges suffered from the COVID-19 crisis, posting negative abnormal returns. However, the ESG oriented companies listed on the Turkish stock exchange were more resilient compared to non-ESG companies. Sustainable investing underperformed non-ESG investing in Morocco and Egypt, as ESG oriented companies posted more pronounced negative abnormal returns, compare to non-ESG companies. So, unlike Turkey, ESG oriented companies were less portfolio protective alternative during the crisis in Morocco and Egypt.

Keywords: Socially Responsible Investment, Covid-19, financial market, Morocco, Egypt, Turkey

1. Introduction

Corporate Social Responsibility (CSR) has often been used by business leaders to demonstrate their economic, social and environmental orientations. It has been the focus of researchers who are more contributing to the development of the sustainability literature. The earliest discussion of CSR refers to Bowen (1953), stating that CSR "refers to the obligations of businessmen to pursue those policies, make those decisions, or follow those courses of action that are desirable in terms of the goals and values of our society." The term has undergone immense development following the appearance of a dozen scientific contributions that have marked the literature (Selekman, 1959; Heald, 1970; Preston & Post, 1975; Carroll, 1979; Frederick, 1994; McWilliams & Siegel, 2001; Andriof et al., 2002; Freeman, 2004).

The development of CSR in the literature has been supported by an immense development of sustainable activities. In fact, financial markets have been the subject of many financial arrangements that align with ethical values and with the goals of sustainable development, including sustainable investment funds, greens bonds, and socially responsible stock indices. Today, sustainable investment is on the minds of investors and ethical investment practices are actively promoted by financial markets. Thus, a range of academic research has proven that ESG investment increases the profitability of portfolios by improving returns and reducing risks (Jo & Na, 2012; Ashwin et al., 2016; Jin, 2018; Harjoto & Laksmana, 2018; Sherwood & Pollard, 2018; Kim & Li, 2021). In the same vein, certain theoretical foundations have proven a positive relationship between social and financial performance. In other words, having a good social performance generates additional financial performance, which comes down to the satisfaction of the various stakeholders (Freeman, 1984). On the other hand, other currents of thought consider social commitment as a loss of resources for the company because it undertakes actions that are quite far from its economic obligations to shareholders (Friedman, 1970 and Jensen, 2002). Empirical studies have shown a diversity of results and findings. Some confirm the stakeholder theory (Cornell

& Shapiro, 1987; Waddock & Graves, 1997; Donaldson & Preston, 1995; Cho et al., 2019), while others support the other theories (Preston & O'bannon, 1997, Allouche & Laroche, 2005). However, academic research has opened a new debate by analyzing the financial performance of sustainable investments in times of crisis. In this context, empirical studies test the resistance of stock prices of socially responsible companies to a financial shock. As an example, the trust between a company, its stakeholders and its investors, established through social capital investments, pays off when the general level of trust in companies and markets suffers a negative shock (Lins et al., 2017).

During the first months of 2020, the COVID-19 health crisis was triggered on a global scale, causing a severe global financial crisis whose repercussions gather, almost, to that of the 2007/2008 Subprime crisis. The occurrence of the Covid-19 pandemic presents an opportunity to study its impact on corporate performance, risk, stock price volatility, and socially responsible investing (Albuquerque et al., 2020; Omura et al., 2020; Bae et al., 2021; Shields et al., 2021). Indeed, it is interesting to quantify the resilience of stock prices of socially responsible companies in these particular circumstances.

Thus, the objective of this paper is to assess the resilience of socially responsible companies' stock prices during the health crisis, and to compare it with a sample of companies not included in the sustainability indices. It focuses on companies listed on the Moroccan, the Egyptian and the Turkish stock exchanges.

The paper continues as follows: Section 2 presents a review of the literature analyzing ethical investment in times of crisis. The methodological process follows in Section 3. Then, we present the results and the main implications of the study in Section 4. Finally, Section 5 concludes.

2. Literature Review

Several studies have examined the impact of pandemics on stock markets in different countries and have realized that in a Covid-19 pandemic environment, firm prices experience significant volatilities that often continue through technical declines and rebounds. As a result, companies experience negative abnormal returns and falling economic indicators in different financial markets (Al-Awadhi et al., 2020; Ali Alam & Rizvi, 2020; Ashraf, 2020; Bora & Basistha, 2020; Harabida & Radi 2020; Sansa, 2020; Senol, 2020; Wang & Enilov, 2020).

The occurrence of COVID-19 pandemic is an opportunity to test the contributions of one of the most famous theories in CSR, namely the stakeholder theory. According to this theory, a company can truly increase its value when its CSR strategy is in line with the strategic intentions of its stakeholders. Indeed, socially responsible investment is seen as an alternative way to invest in a period of crisis. Aligning with the objectives of sustainable development and having a financial strategy oriented towards ethical and moral values as well as compliance with ESG criteria, can increase the economic value of the company in times of crisis (Albuquerque et al., 2020; Hoang, 2020; Omura, 2020; Bae et al., 2021; Shields et al., 2021).

Qiu et al. (2020) evaluated the impact of socially responsible investment on stock prices during the health crisis period in the Chinese context through an event study methodology. They found that engaging in CSR activities can increase stock performance and stakeholder attention of hospitality companies during the health crisis. For example, they argue that community-related CSR actions have a stronger and more immediate effect on stock returns than customer and environmental activities. Thus, the study found that hospitality companies, seeking to reduce the negative impact of a crisis, need to adopt CSR. Broadstock et al. (2021) showed that the portfolios of Chinese companies with high ESG performance generally outperform those with low ESG performance. Thus, being a socially responsible company reduces financial risk during the crisis period. Their study confirms that ESG performance is a key determinant of financial performance in times of crisis.

Bae et al. (2021) examined the relationship between corporate social responsibility (CSR) and stock returns during the COVID-19 pandemic-induced stock market crash and recovery after the crash. Using a sample of 1,750 U.S. companies, the study indicated that CSR had no impact on stock returns during the crash. They found that companies that were committed to protecting stakeholder interests before the pandemic did not perform better than others during the crisis period. They concluded that pre-crisis CSR is not effective in protecting shareholder wealth from the pandemic. In the same context, Garel and Romec (2021) studied the reaction of stock prices of socially responsible companies during the pandemic crisis in order to explore investors' views and expectations on environmental issues. The study found that companies with environmentally responsible strategies had better stock returns. Albuquerque et al. (2020) tested the volatility of returns of US companies with high ESG ratings during the Covid-19 crisis. Their study provided evidence that these firms have had significantly higher returns with lower return volatility and higher operating profit margins during the first quarter of 2020.

In a comparative study between the performance of ethical and conventional investments during the Covid-19 crisis, Omura et al. (2020) confirmed that SR indexes in the United States, Japan, and Europe outperform conventional indexes. In the Asian context, Lee and Lu (2021) confirmed that firm prices realized negative cumulative abnormal returns during the pandemic period. However, firms that were engaged in CSR activities, before the crisis, were less impacted compared to other firms. The stock prices of SR firms performed relatively well during the Taiwanese financial market paralysis and recovered more quickly.

In an effort to compare ethical investing in Europe and the United States, Chiappini et al. (2021) conducted a study in which they analyzed the response of sustainable indices following the spread of the Covid-19 pandemic. The study concluded that durable indices were negatively impacted by containment. These companies did not show statistically significant different abnormal returns compared to traditional indices. In fact, selection strategies (negative, positive, best-in-class) did not have an influence during this pandemic period.

However, sustainable investing in the UK context is considered beneficial for investors. According to Hoang's (2020) study, ESG reporting disclosures help listed companies better mitigate the impact of the Covid-19 pandemic. Companies with high ESG disclosure scores show remarkable financial performance compared to other companies.

In an effort to analyze the volatility of NASDAQ sustainable investments, Shields et al. (2021) conducted a study in which they analyzed the volatility of SR firms by industry. Investing in socially responsible companies across sectors shows low volatility compared to traditional investments, except for the technology sector which showed higher volatility. Folger-Laronde et al. (2020) conducted a study on the impact of social performance on financial returns of funds in times of crisis (Covid-19). They found that high levels of fund sustainability performance do not mitigate financial losses during a financial standstill.

In the Moroccan context, Lagsir and Moflih (2020) compared the performance of the Casa ESG 10 index with the FTSE 15 during the pandemic period through technical analysis. They showed that both indices followed a downward trend, with negative performances. Given the diversity of the previous results, we retain the following research hypotheses:

H₀: ESG companies were more resilient during the pandemic period than non-ESG;

H₁: ESG companies were less resilient during the pandemic period than non-ESG.

3. Data and Methodology

3.1 Data

This study covers companies listed on the financial markets of Morocco, Egypt and Turkey (see Table 1). In order to compare the performance of sustainable investment and conventional investment, we collected stock market data of companies listed on ESG and conventional indices, namely CASA ESG 10 and MASI (Morocco all shares index) for Morocco, S&P ESG Egypt and EXG 70 EWI for Egypt and BIST Sustainability index and BIST all shares index for the Turkish stock market.

The number of companies listed on the CASA ESG 10, S&P ESG Egypt and BIST Sustainability indices is capped at 10, 30 and 49 respectively. Similarly, for non-ESG companies, we selected an equivalent sample, including 10, 30, 49 companies listed on MASI, EXG 70 EWI and BIST All Shares respectively. The total number of these companies is therefore 178. We retrieved the daily share prices of the companies as well as the daily quotations of the three indices on the Investing platform.

Country	Indices	Number of companies
Morocco	MASI	10
	Casa ESG 10	10
Egypte	EXG 100	30
	EXG S&P	30
Turkey	BIST All shares	49
	BIST Sustanability Index	49
Total		178

Table 1. Sample composition

3.2 Methodology

The event study methodology is often recommended by researchers to test the impact of a public announcement

on the stock returns of companies. In fact, this methodology helps researchers to evaluate, in the short term, the impact of an event on the stock prices of companies. Therefore, we focus on the event study methodology to test the resilience of stock prices of socially responsible firms to the spread of the Covid-19 pandemic.

The application of this methodology requires to recall its basic assumptions, namely market efficiency, unexpected event and non-existence of confounding effects. In fact, the assumption of market efficiency implies that all the determining information, which is accessible to the market, is integrated into the company's stock price (Mcwilliams & Siegel, 1997). In other words, a market is efficient when events disclosed therein are quickly and adequately incorporated into prices. However, the unexpected event hypothesis requires that the announcement of the event under study should not be disclosed to the market before the event occurs, since if this is the case, the announcement is disclosed before the event date, identifying the day of its release will be difficult and therefore the event study methodology will be useless. The last assumption (the non-existence of confounding effects) assumes that the calculated abnormal returns are the result of the event studied, in other words, the assumption confirms that the changes in the stock prices of the companies are due to the event studied.

The implementation of the event study methodology requires, first of all, the calculation of the abnormal returns, which are the difference between the posted return and the theoretical return. If the event under study is bad news, the calculated abnormal returns will be negative, which proves that the market considers that the event will decrease the value of the company. On the other hand, a good news event causes positive abnormal returns and therefore it will increase the value of the company. In a second step, it is recommended to calculate the average abnormal returns and the cumulative average abnormal returns in order to identify the global impact of the event on all the companies forming the sample of the study. On the other hand, the calculation of the cumulative average returns will allow us to test the statistical significance of the results.

In fact, in order to quantify the abnormal returns of the companies, it is imperative to estimate the theoretical returns of each company. First, based on the so-called Market Model (MM), we regressed the stock returns of each company and the returns of its local market index in order to assess the impact on the market. The regression is presented as follows:

$$R_{i,t} = \alpha_i + \beta_i Rm_t + \varepsilon_{i,t} \tag{1}$$

with:

$$R_{i,t} = \ln(P_{i,t} / P_{it-1}) \tag{2}$$

where Pi,t is the closing price of stock i on day t; Ri,t is the return of stock i on day t; Rm,t is the local market return on day t. ϵ_i ,t is the random error term for stock i on day t, and α and β are the regression parameters to be estimated.

The estimated parameter values are used in the following formulas to calculate the expected return and the abnormal return:

$$E(R_{i,t}) = \alpha_i + \beta_i Rm_t \tag{3}$$

$$AR_{i,t} = R_{i,t} - E(R_{i,t})$$
(4)

E(Ri,t) and ARi,t are respectively the expected return and the abnormal return of stock i on day t. The average abnormal return of the stocks in the sample on day t is calculated as AAR:

$$AAR = \frac{1}{N} \sum_{i=1}^{N} RA_{i,t}$$
(5)

where, N is the number of companies.

The abnormal return and the average abnormal return can be aggregated over time. The cumulative abnormal return (CAR) of stock i over time from t_0 to t_1 and the cumulative average abnormal return (CAAR) are calculated based on the following formulas:

$$CAR(t_0, t_1) = \sum_{t=t_0}^{t_1} AR_{i,t}$$
(6)

$$CAAR(t_0, t_1) = \sum_{t=t_0}^{t_1} CAR$$
 (7)

Finally, to determine the statistical significance of CAR and CAAR, we used Student's parametric test:

$$t = \frac{AAR}{\sigma(AAR)} \tag{8}$$

$$t - CAAR = CAAR / \sigma(AAR) * \sqrt{\text{number of days in the window}}$$
(9)

According to Peterson (1989), typical event window durations range from 2 to 212 days. For our study we chose an estimation period of 222 trading days. The windows vary according to the stock market data of each country. We retained March 11, 2020, the date of classification of Covid-19 as a global pandemic by the WHO (note 1) as the event date. Regarding the event windows, we selected 27 days before and 195 days after the event date (222 days). We defined 10 event windows ranging from the shortest to the longest in order to evaluate socially responsible investment over different event window.

4. Results and Discussion

4.1 Descriptive Statistics

	Casablanca Stock Exchange		Egyptian exchange		Borsa Istanbul	
	ESG invest	Trad. invest	ESG invest	Trad. invest	ESG invest	Trad. invest
Mean	-0.0718%	0.0282%	0.2245%	0.0131%	-0.0104%	-0.0376%
Median	-0.0216%	0.0628%	0.2993%	0.0924%	0.0548%	0.0586%
Std Dev	1.0802%	0.7844%	8.2300%	0.9402%	0.5057%	1.0365%
Minimum	-9.4746%	-2.5787%	-52.0452%	-8.0720%	-2.9188%	-6.7594%
Maximum	3.9982%	2.9712%	50.3104%	7.4889%	1.5032%	3.0674%
Skewness	-2.4947	0.1737	-0.0043	-4.0378	-0.8939	-1.6092
Kurtosis	21.2412	0.8150	11.3702	50.9097	3.3121	7.4646

Table 2. Average abnormal returns

The descriptive statistics present a preliminary analysis of the performance of sustainable and traditional investment in the three financial markets during the pandemic period (see Table 2). In the Moroccan context, ESG firms posted an average daily abnormal return of -0.0718%, while non-ESG firms outperformed during the period with an average return of 0.0282%. Similarly, the lowest average rate of return was recorded by socially responsible companies (-9.4746%), while that achieved by non-ESG Moroccan companies is -2.5787%. On the other hand, Moroccan ESG companies posted the highest rate of return (3.9982%) compared to non-ESG Moroccan companies (2.9712%). From this preliminary analysis of the Moroccan stock market, we can see that the average daily returns of ESG companies were more dispersed compared to non-ESG companies, which is evidenced by the standard deviation. Sustainable firms had a fairly large standard deviation compared to non-ESG firms (1.0802% versus 0.7844%).

In Egypt, ESG firms posted an average daily abnormal return of 0.2245%, while non-ESG firms underperformed during the period with an average return of 0.0131%. Abnormal returns were more volatile. For example, ESG companies recorded returns ranging from -52.0452% to 50.3104% with a standard deviation of 8.2300%, which is much higher than the mean (0.2245%). This proves the high dispersion of daily returns observed throughout the study period. The non-ESG companies showed less volatile abnormal returns with a range of variation of [-8.0720%: 7.4889%], with a standard deviation of 0.9402%.

Descriptive statistics show that socially responsible investment in the Turkish stock market has been more resilient than conventional investment during the crisis period. In fact, ESG companies achieved an average rate of return of -0.0104% which is much higher than that achieved by non-ESG companies (-0.0376%). Over the entire study period, including the estimation period, the returns of the non-ESG companies varied within a range of [-6.7594%; 3.0674%] while those of the ESG companies were less volatile with a range of [-2.9188%; 1.5032%]. The results show a slight dispersion of ESG stock returns (0.5057%) compared to non-ESG companies (1.0365%). As a result, an initial finding can be confirmed: socially responsible investment has been the most resilient in the Turkish stock market, with less volatile abnormal returns. These descriptive statistics are supported by figures 1, 2 and 3.





Figure 1. Average abnormal returns during the event window of the Moroccan Financial Market

Figure 2. Average abnormal returns during the event window of the Egyptian Financial Market



Figure 3. Average abnormal returns during the event window of the Turkish Financial Market

4.2 Regression Results and Discussion

To thoroughly test the resilience of stock prices of socially responsible companies during the health crisis, we calculated average cumulative abnormal returns over ten different event windows and compared them with a sample of companies not included in the sustainability index. We proposed pre-, during-, and post-event windows to identify the persistent and cumulative effect of the pandemic on daily returns.

The results presented in Table 2 reveal that the Moroccan financial market has experienced negative abnormal returns over all event windows. The negative returns are more severe on the windows surrounding the event date, for example, in the windows (-3;+3), (-5;+5) and (-10;+10) the firms showed negative and significant abnormal returns of -26.5712%, -33.7693% and -25.3015% respectively. Similarly, we can see that stock prices reacted as soon as the first cases of contamination appeared, recording in the windows (-10;0), (-15;0) and (-25;0) rates of -10.6281%, -10.4202% and -12.7076%. The impact continued until the days following the event date, after which it gradually decreased. In other words, the daily returns of Moroccan companies began to recover in the period following the date of the event. Yet, from the results of the study, we find that non-ESG Moroccan firms listed in the MASI exhibited more resilient abnormal returns compared to ESG firms. For example, in the window (-10;+10), surrounding the event date, ESG firms showed a rate of return of -25.3015%, while the rate of return of non-ESG firms did not exceed -7.2891% and similarly for the windows following the event date. Thus, the prices of non-ESG companies have recovered from the window (0;60) by recording a full recovery of stock returns. Indeed, ESG companies are still suffering from the shock of the pandemic in the last window of the study by posting average abnormal returns of -16.0956%. The companies listed in the Casa ESG 10 Index were not found to be resilient during this pandemic situation. Throughout the study period, Moroccan ESG firms posted negative and higher abnormal returns than non-ESG firms. We confirm that in Morocco, socially responsible investment was not a good protection against the effect of crisis nor a good option to invest in during the pandemic period. These results are in line with previous studies which have proven in several occasions that the Moroccan financial market has been perfectly impacted by the Covid-19 pandemic (Ashraf, 2020; Harabida & Radi, 2020).

Abnormal returns are more volatile in the Egyptian market. It recorded significant negative abnormal returns in the windows preceding the event date (-15;0) and (-10;0) as well as in the windows surrounding the event date. The impact continued until the last two windows (0;+5) and (0;+10), when it gradually disappeared. However, the stock prices of the non-ESG companies showed some stability (positive of less negative abnormal returns) compared to the ESG companies. Thus, even the market experienced some recovery during the last two windows of the study, we can confirm that the sustainable companies listed on the S&P ESG Egypt index did not perform well during the pandemic situation. This finding is similar to the one observed in the Moroccan stock market. Non-ESG companies were more resilient during the pandemic period.

For the Turkish financial market, the results indicate that the listed companies suffered a fairly small shock compared to Moroccan companies. Indeed, in the days preceding the event date, the companies showed negative reactions with rates of -10.2128%, -8.4332% and -7.2327% in the windows (-25;0), (-15;0) and (-10;0), which are lower than those observed in the Moroccan market. Abnormal yields maintained their rates over the windows surrounding the event date and are more resilient compared to other markets. The days following the event date showed a full recovery in stock prices and a complete disappearance of the effect of the pandemic. In contrast to Moroccan companies, non-ESG companies listed in the Turkish financial center were more impacted by the pandemic than ESG companies, notably the average abnormal returns on the (-25:0), (-15:0) and (-10:0) windows were -19.63%, -21.01% and -20.19%, which is far higher than the returns generated by socially responsible companies. Thus ESG companies listed in BIST were able to withstand compared to non-ESG companies, showing less volatile negative abnormal returns with a full recovery in the last windows of the analysis. We can say that ethical and sustainable investment was a good option for investors in the Turkish stock market and especially in times of crisis. Investing in companies with a sustainable strategy helps to mitigate the risk of loss of value and keep a less volatile pace of stock prices. These results align with the implications of Romec (2021) and Qiu et al. (2020) who confirmed that socially responsible investing is more resilient during a pandemic.

From this, we can conclude that sustainable investment in Turkey's stock market is a good option for investors, as ESG companies show more resilient abnormal returns than non-ESG companies. Hence, this finding supports our null hypothesis (H₀).

The prices of ESG firms listed on the Moroccan and Egyptian stock exchanges were not resilient during the pandemic period, and as a result, they exhibited negative average abnormal returns that were much higher than other firms, and therefore we reject our null hypothesis (H_0) and accept the alternative hypothesis H_1 .

	Casablanca Stock Exchange		Borsa Istanbul		Egyptian Exchange	
Event windows	ESG invest	Trad. Invest	ESG invest	Trad. Invest	ESG invest	Trad. Invest
	(%)	(%)	(%)	(%)	(%)	(%)
(-25;0)	-12.707***	-2.140	-10.213***	-19.639***	6.226***	1.903
	(-6.448)	(-0.544)	(-5.182)	(-5.946)	(3.159)	(0.375)
(-15;0)	-10.4202***	-4.672	-8.433***	-21.019***	-35.807***	0.714
	(-6.740)	(-1.513)	(-5.545)	(-8.111)	(-23.160)	(0.179)
(-10;0)	-10.628***	-3.472	-7.233***	-20.192***	-35.890***	-0.652
	(-8.695)	(-1.423)	(-5.917)	(-9.856)	(-29.363)	(-0.207)
(-3;+3)	-26.571***	-1.833	-8.430***	-21.786***	-65.479	-1.415
	(-25.984)	(-0.898)	(-8.244)	(-12.711)	(-64.031)	(-0.538)
(-5;+5)	-33.769***	-8.038***	-10.716***	-27.701***	-75.179***	-2.532
	(-26.343)	(-3.140)	(-8.360)	(-12.893)	(-58.646)	(-0.767)
(-10;+10)	-25.301***	-7.289**	-8.862***	-27.244***	-45.355***	0.005
	(-14.285)	(-2.061)	(-5.000)	(-9.177)	(-25.606)	(0.001)
(0;+5)	-25.711***	-4.459**	-5.637***	-14.104***	-72.170***	-1.199
	(-27.157)	(-2.358)	(-5.954)	(-8.888)	(-76.228)	(-0.492)
(0;+10)	-15.074***	-2.376	-2.644**	-9.970***	-14.312***	0.801
	(-11.759)	(-0.928)	(-2.062)	(-4.640)	(-11.165)	(0.242)
(0;60)	-19.038***	10.835*	5.915**	8.454	11.815***	10.448
	(-6,307)	(1.798)	(1.959)	(1.671)	(3.914)	(1.344)
(0;+195)	-16.095***	12.255	5.719	4.7262	100.292***	3.632
	(-2.982)	(1.137)	(1.060)	(0.522)	(18.581)	(0.261)

Table 2. Cumulative Average Abnormal Yields

Note. ***, **, * indicate respectively 1%, 5% and 10% significance levels.

5. Conclusion

Sustainable investment aims to combine financial return with social and environmental performance. In times of crisis, ethical finance can be seen as an alternative for investors to ensure the sustainability of their returns. This work analyzed the resilience of stock prices of socially responsible companies during the health crisis, with that of companies not included in sustainability indices. In other words, this paper tested the stock performance of companies meeting ESG (Environmental, Social and Governance) criteria in the context of the global crisis, in order to assess their resilience. The study covered a sample of ESG and non-ESG companies listed on the financial markets of Morocco, Egypt and Turkey, using the event study methodology. We calculated the daily abnormal returns of each company over different event windows to better frame the effect of the pandemic on sustainable and conventional investing. As discussed earlier, the results of the study revealed that ESG firms listed on the Moroccan Stock Exchange posted higher negative returns than non-ESG firms, i.e., the latter were more resilient during the pandemic period. Thus, the Egyptian stock market showed an outperformance of conventional investment over sustainable investment. The results proved that socially responsible companies listed in the S&P ESG index did not perform well during the pandemic compared to non-ESG companies. This confirms the resilience of conventional investment in the Egyptian financial market. This result is similar to that observed in the Moroccan stock market. Non-ESG firms fared better during the pandemic period. On the other hand, for the Turkish stock market, the results showed that ESG firms performed better with some resilience compared to non-ESG firms, exhibiting less volatile negative abnormal returns with a full recovery in the last windows of the analysis. Our study confirmed that during the pandemic period, socially responsible investment is only profitable in the financial market of Turkey compared to other contexts, which provides an opportunity for investors to achieve positive abnormal returns. The implications of the study may be useful to investors, technical analysts, and portfolio managers in their investment strategies in the Middle Eastern context.

Our study has a number of limitations that can be exploited in future research. It is important to expand the study sample, introducing other financial markets that can enrich the study. Similarly, it would be useful to compare sustainable investment in this period of pandemic crisis with previous crises (e.g., the subprime crisis).

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Notes

Note 1. World Health Organization. https://www.who.int/fr

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