Sustainable Finance and COVID-19

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Both the GARCH models and the event study suggest that funds with a higher ESG rating were able to outperform other funds during the COVID-19 period. These funds had a greater level of resilience and exhibited a lower level of risk contagion during the pandemic. These instruments appear to assume the role of risk protection and should be considered a means of both promoting sustainable growth and minimizing portfolio risk.

Keywords: ESG funds ; volatility analysis ; financial performance ; sustainable finance

1. Introduction

Since the end of 2019, humanity has faced problems caused by the SARS-CoV-2 virus. The health emergency caused by the COVID-19 pandemic very quickly turned into a global economic and financial crisis. In fact, to counteract the coronavirus outbreak, in many countries, people were required to stay in their homes and national governments imposed a state of alarm, which brought economic activity to a standstill. This led to the deepest economic recession of the modern era. As a result of this, the beginning of 2020 saw a severe financial market crash.

According to recent research, the spread of the virus and its consequences on people's health could be the result of unsustainable development, which is a major cause of climate change and ecosystem alteration (e.g., [1][2][3]).

The coronavirus outbreak is creating both serious health problems and economic problems. These two problems are linked by the general and extended lockdown [4]. One of the first studies in this field (Coibion et al. [5] found that a large proportion of people reported a reduction in their income and level of consumption and a reduction in the employment rate. Research from the IMF [6] confirmed the same negative trend with regard to work hours and forecast a downturn in GDP in the main developed countries (G20). Aside from these results, Guerrieri et al. [7] demonstrated that the negative supply shock caused by the COVID-19 pandemic could lead to an even more severe negative demand shock. From another point of view, Bonaccorsi et al. [8] demonstrated a relationship between the lockdown and an increase in socio-economic inequality. Given that finance is closely related to the real economy, the rapid and extreme drop in market indexes and the dramatic increase in the VIX between 24 February and 27 March are no surprise. Looking at the returns of many stock market indexes, it is very easy to see the impact of this shock. For example, using an event study-based methodology, a previous study by Liu et al. [9] showed that the unexpected virus outbreak had a profound impact on many stock markets. Moreover, in terms of volatility, there were many negative consequences. In this regard, Meher et al. [10] reported higher volatility in all the markets that they considered in their analysis and this volatility increased as the number of cases of COVID-19 increased.

It is evident that there is the need to face two problems simultaneously: On one hand, it is necessary to revive the economy as quickly as possible, and, on the other, economic growth must be managed in a more sustainable way. One of the possible tools with which to approach this trade-off is responsible finance. Ethical and green finance could be used to achieve this aim because it considers financial returns alongside environmental, social, and governance (ESG) issues. More generally, sustainable finance could help to overcome the economic and environmental crisis because of its capacity to gather resources to promote investment and to foster economic growth with a low socio-environmental impact. To support this hypothesis, we recall the research of McWilliams and Siegel [11] who found that it is possible to maximize the value for the shareholder while adopting a corporate social responsibility policy.

For this reason, we would like to investigate the financial performance of ESG funds during the last economic downturn in greater depth. They could overcome the trade-offs but, as is well known, the results concerning their financial performance are mixed. On one hand, sustainable financial products have been shown to outperform the market during a crisis (e.g., [12][13], and more recently Broadstock et al. [14] and Engelhardt et al. [15]); by contrast, some results are negative or do not show any outperformance during a bear market (e.g., [16][17], and, with a specific focus on the last crisis, Folger-Laronde et al. [18], Demers et al. [19], and Chiappini et al. [20]) or without considering any financial crisis period (e.g., [21][22]).

Given this scenario, our research attempted to provide new insights concerning the conditional heteroskedasticity of ESG funds and their resilience during the COVID-19 pandemic with the aim of improving our knowledge of the performance (both in terms of returns and risk) of these tools and selecting more efficient portfolios.

We based our analysis on a sample of European ESG funds. This was because Europe was one of the areas most affected by the pandemic and because the financial markets in these countries had been less investigated than those in other areas, despite representing a large share of global GDP. We are aware that our sample is small, but this was the price that we had to pay in order to create a portfolio with homogenous funds. In fact, every item considered holds the MSCI Europe index as the benchmark. Given that the funds have the same benchmark, our results our more reliable. Moreover, we chose the MSCI Europe index because it adequately represents the financial markets of the main European countries and firms.

2. The Reaction of ESG Funds to the 2020 Crisis

Sustainable funds outperform funds with a low ESG rating during a period of financial crisis determined by an exogenous shock. This result is in accordance with those of Nofsinger and Varma [12], Lins et al. [13], Albuquerque et al. [23], Mirza et al. [24], and Xiong [25]. By contrast, these findings do not support the conclusions of Broadstock et al. [14], Folger-Laronde et al. [18], Hartzmark and Sussman [22], Demers et al. [19], and Chiappini et al. [20].

Our results derive from the comparison of the financial performance of the funds before the COVID-19 pandemic and during the pandemic period. The more sustainable funds appeared to react better to the unexpected event of the pandemic both in terms of returns and risk. The basic preliminary analysis of the descriptive statistics indicates that, after the structural break (20 February 2020), the high ESG funds were able to recover more rapidly and that, with the event study-based methodology, it was possible to show their superior level of resilience. With regard to risk, the univariate GARCH model exhibits a leverage effect: The negative shocks affected volatility to a greater degree than the positive shocks (which this is true for all the funds analyzed). Instead, the multivariate GARCH models highlight the lower conditional correlation level of the volatility processes between the benchmark (represented by the MSCI Europe index) and the sustainable funds. This finding is even clearer for the estimates related to the pandemic period. The volatility analysis shows that the COVID-19 pandemic increased the contagion risk, but the sustainable funds had a superior ability to face this type of risk, as was already reported by Ouchen [26] for an ESG portfolio.

Sustainable investment funds can be also seen as an insurance instrument against unexpected risks. These financial instruments should be considered not only by investors with pro-social preferences but also by investors aiming to build an optimal portfolio. Investors have to consider that sustainable funds exhibit a higher level of resilience and the ability to reduce the risk of financial contagion, especially during periods of crisis. As already highlighted by Yingxu [27], the ESG rating should be considered as an indicator of resilience in times of crisis.

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