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Performance Analysis of Sustainable Exchange-Traded Funds in context of COVID19 pandemic: case of Emerging Markets

Analyse de la performance des ETF ESG dans le contexte de crise COVID19 : le cas des marchés émergents

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Abstract :

The main objective of this paper is to examine the financial performance of ESG ETFs versus their traditional counterparts in an emerging market context, focusing on the market size and development perspectives of these products. For this purpose a statistical and graphical analysis were performed on the iShares ESG Aware MSCI EM ETF assets versus their traditional counterparts for the period post and pre-crisis COVID 19.The study found that the financial performance of ESG ETFs is not statistically different from traditional one , both funds have the same trend of market in the context of post and pre-crisis. The research focused on ETFs concerning emerging countries domiciled in the NASDAQ exchange, a limit can be found in the regional analysis of the performances of these funds due to the characteristics of each stock exchange.This study is one of the fewest to look at the financial performance of ESG ETFs and more specifically in an emerging country context.

Keywords: Exchange-traded funds; ESG (Environmental, Social,Governance) ; Sustainable; Social Responsibility; COVID19.

Résumé:

L'objectif de cet article est d'examiner la performance financière des ETF ESG par rapport à leurs homologues traditionnels dans un contexte de marché émergent, en se concentrant sur la taille du marché et les perspectives de développement de ces produits. A cette fin, une analyse statistique et graphique a été réalisée sur les actifs des ETF iShares ESG Aware MSCI EM par rapport à leurs homologues traditionnels pour la période post et pré-crise COVID 19. L'étude a montré que la performance financière des ETF ESG n'est pas statistiquement différente de celle des ETF traditionnels, les deux fonds ont la même tendance de marché dans le contexte post et pré-crise. La recherche s'est concentrée sur les ETF concernant les pays émergents domiciliés dans la bourse NASDAQ, une limite peut être trouvée dans l'analyse régionale des performances de ces fonds en raison des caractéristiques de chaque bourse.Cette étude est l'une des plus rares à s'intéresser à la performance financière des ETF ESG et plus spécifiquement dans un contexte de pays émergents.

Mots clés : ETF ; ESG (Environnemental, Social, Gouvernance) ; Durable ; Responsabilité sociale ; COVID19.

Introduction:

There is a growing trend today around environmental, social and governance (ESG) considerations in the corporate social responsibility debate, or also what is now called socially responsible investing, which is increasingly popular in passive management. These considerations support a green and sustainable development, notably through a range of products aimed at generating an impact known as ESG.

The rise of ESG funds has allowed emergence of some dynamic products in terms of investment and efficiency known as ESG ETFs, which have the potential to become a mass investment vehicle for sustainable development.

This paper aims to provide an overview of the landscape of ESG ETFs in the context of emerging market and to assess their financial performance against their traditional counterparts in a post-crisis and pre-crisis context COVID19, by answering the question if the ESG ETFs in spite of their selection criteria generates a much higher financial performance than their traditional counterpart ?.

In this regard this article attempts to provide answer to this question by placing these funds in their historical context also the main filtering criteria used and reviewing the literature that has focused on these funds. In addition to the theoretical contribution, the empirical contribution of this article consists in comparing the iShares MSCI Emerging Markets ETF with its socially responsible counterpart (iShares ESG Aware MSCI EM ETF), using daily returns from both indices for the period of:

Pre-crisis COVID 19: 01/02/2018 to 12/31/2018

Post-Crisis COVID 19: 12/02/2019 to 12/01/2020.

1.Overview of the ETF universe:

Index management is a technique that has been developed by Markovitz (1952) on portfolio theory or the research of Fama (1965, 1970) on the notion of financial market efficiency. This technique was first developed for the first time by American management company Wells Fargo. The main objective of index management is to replicate as closely as possible a benchmark index in its composition and the trend of his performance.

We identify two types of portfolio management:

-***Active management***:: which aims to outperform a market or a benchmark, a stock that constitute the index, can be replaced by another that is very similar in terms of characteristics, if it turns out that the replacement security achieves attractive performance to beat the performance of the benchmark.

-Passive management: which consists in reproducing the performance of a stock market index. ETFs are one form of index funds, they are mutual funds that allow investors to buy or sell a basket of securities traded on an exchange, allowing them to optimally diverse their portfolios and achieve a good risk-adjusted return. According to Hill, Nadig, and Hougan (2015, p. 2), ETFs can be defined as hybrid investment products that combine the investment characteristics of mutual funds with the trading characteristics of stocks.

ETFs can also be created to meet sustainability objectives such as environmental, social and governance (ESG) or thematic ETFs that replicate indices which incorporate extra-financial known as ESG criteria.ESG ETFs can be considered an emerging part of the global ETF market (Meziani, 2016).

Within the ESG ETF universe, we can identify four strategies presented as follows:

-General integration strategy: This strategy concerns ETFs that integrate ESG criteria in their asset selection process.

-Best-in-class strategy: consists of selecting the best performing companies in their sectors in terms of sustainability.

-ESG theme strategy: includes ETFs that focus only on one of the ESG pillar. ESG ETFs are also classified in this strategy group.

-Exclusion screening strategy: is also considered a strategy that exclude assets from certain sectors that do not comply with standards or practices such as the UN Guiding Principles on Business and Human Rights, the UN Global Compact, etc.

The ESG factors include a lot of factors such us :

Table 1: What are ESG factors?

Environmental	Social	Governance
• Climate change • Greenhouse gas (GHG) emissions • Resource depletion (including water) • Waste and pollution	• Working conditions (incl. slavery and child labor) • Local communities (incl. indigenous communities) • Health and safety • Employee relations and diversity	• Executive pay • Bribery and corruption • Board diversity and structure • Tax strategy

Source: Principles for Responsible Investment (PRI)

1.1.ESG ETF trends:

The consideration of ESG concerns are growing. As a result, the number of ESG ETFs has increased from 39 in December 2009 to 221 in June 2019, and then from 2015 to June 2019, assets under management quadrupled from 6 billion USD to 25 billion USD, this is due to the massive investment in these products as a must-have rather than a nice-to-have, or the adoption of smart regulations that aim to promote more sustainable investment practices by many countries , As evidenced of some countries such as France and the Netherlands, which have strengthened their financial regulations following the introduction of the European Union's Markets in Financial Instruments Directive II (MiFID II) in January 2018, these rules increasingly focus on sustainable investment and sustainability risks as well as ESG reporting. In addition, the number of stock exchanges requiring ESG disclosure has increased from 2 in 2009 to 24 in 2019. This has been further supported by the introduction of sustainability indices, with more than 40 stock exchanges now using these indices, including several in developing countries.

Figure1: Number of ESG ETFs worldwide and assets under management 2009-2019[1]

Source: UNCTAD Based on ETFGI, TrackInsight

ESG ETFs have the largest share in the United States and Europe, respectively 41% and 56% of assets in July 2019. The US market, despite being the largest, is taking a slow pace compared to the European market. This is mainly due to the slow adoption of regulatory texts that reflect the integration of ESG criteria in investment decisions. On the other hand, in recent years, driven by US retail investors, ESG ETFs or sustainability-related products have seen a spike due to investor confidence in terms of the positive impact on the performance of their portfolios (Morningstar, 2018) this has allowed 52 ESG ETFs to be launched in the last three years.

[1] As of 30 June 2019

Figure 2: ESG ETFs by region : June 2019 (Number of ETFs and per cent)

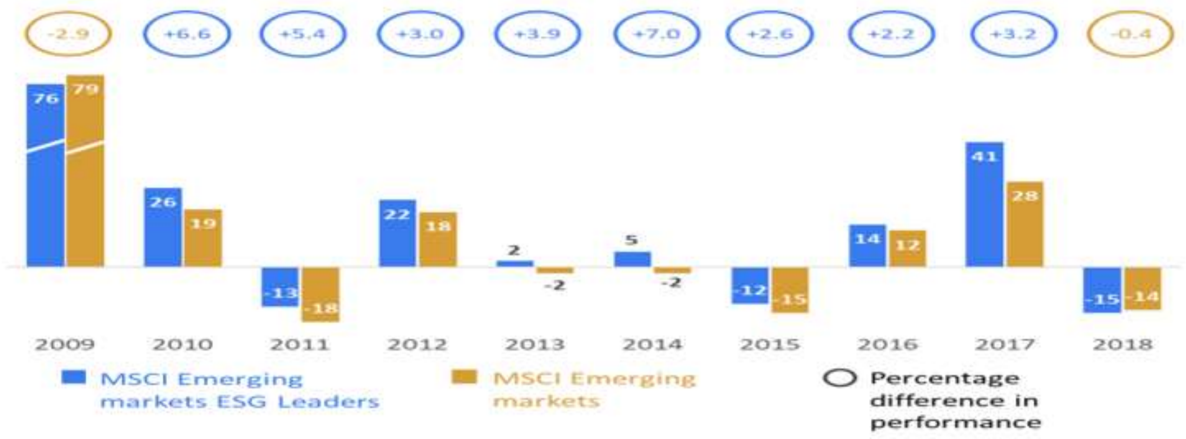
Source: UNCTAD calculation based on TrackInsight data

Although the ETF universe accounts for nearly 30% of global equity market capitalization, they are almost absent in developing countries. Of 21 emerging market ESG ETFs domiciled in international exchanges, only 5 ESG ETFs are domiciled in exchanges (3 in China and 2 in the Republic of Korea).This should raise concerns about the potential of ESG assets but also overlooks very important market opportunities. The growth of the global green bond market has shown that developing countries can also lead in some areas of sustainable finance and policy, these countries need to put in place a reliable regulatory framework, provide financial and tax incentives for the development of ESG ETFs, require high quality ESG reporting, create segments or partnerships with ESG ETF specialists, and open up markets internationally.

1.3.How do ESG ETFs perform financially?

Many investors believe that ESG criteria or selection tends to penalize the financial performance of their portfolios, others believe that ESG ETFs can outperform their benchmarks. Indeed, data from ESG index providers has shown that, for example, the MSCI Emerging Markets ESG Leaders Index has outperformed its conventional benchmark for eight out of ten years, indicating no performance penalty.

Figure3: Financial performance: ESG index versus conventional index 2009-2018 (Calendar year returns and relative performance, Per cent)



Source: UNCTAD (2019) World Investment Report: Special Economic Zones. United Nations

The number of studies related to the financial performance of ESG ETFs is very limited due to their limited presence in the financial industry worldwide. Among the studies that can be found on ESG ETFs is that of Crigger (2018) who analyzed the growth of ESG ETFs in the US. Hale (2018) examined the aggregate U.S. market for sustainable investment funds, including ETFs.And in an analysis of the performance of SRI ETFs M Lobato et al (2014) showed that it is not different from conventional ETFs.The study of Tzu-Man Huang et al (2019) showed that the performance of SRI ETFs is positively associated with those of the market.

In the context of a crisis the emergence of COVID19 and its impacts on all aspects, the world has taken an alternative approach to navigate towards sustainable outcomes. While the results of socially responsible investment show that they are resilient to crises, studies such as Achary Folger-Laronde et al (2020) showed that the sustainability performance of ETFs do not protect investments from crises.

In this research, we try to further explore the financial performance of ESG ETFs versus their conventional counterparts in an emerging market context. For this purpose, the two funds MSCI ishares ESG ETF with its traditional counterpart listed on the US market have been chosen. The context of the study goes hand in hand we will check the performance in a post-crisis period COVID 19 and a pre-covid19.

2.Data and Methodology:

We compare le iShares ESG Aware MSCI EM ETF with it's traditionnel counterpart (iShares MSCI Emerging Markets ETF (EEM)), using the daily return for the post- and pre-crisis COVID19 period. The data was obtained directly from the Investing platform. Using SPSS software, we propose to compare the financial performance of the two funds and their stochastic properties.

We have chosen a short term period to evaluate the direct impact of the crisis also to analyze if these ESG ETFs are more resilient and perform better than their traditional counterparts in a post or pre crisis period COVID19.

The study concern the iShares MSCI Emerging Markets ETF seeks to track the performance of an index of large and mid-cap emerging market equities , and the iShares ESG Aware MSCI EM ETF seeks to replicate the performance of an index composed of large- and mid-cap emerging market equities that present environmental, social and governance characteristics defined by the index provider.

2.1.Descriptive statistics:

The analysis of descriptive statistics (Table 2) allows us to make a two-level comparison:

A pre-crisis comparison COVID 19: The average performance of the iShares ESG Aware MSCI EM ETF versus its traditional counterpart is not statistically significant, respectively -0.000661 and -0.000656 which means that both funds underperform in the non-crisis analysis period, in addition the ESG ETF underperforms its traditional counterpart. Regarding the volatility respectively 0.012716 and 0.0134388 we notice that ESG ETF is less risky compared to its traditional benchmark. We further highlight that both series of returns do not follow the normal distribution with regard to their Kurtosis and Skewness.

A post-crisis comparison COVID 19: The average performance of the iShares ESG Aware MSCI EM ETF against its counterpart respectively 0.000791 and 0.00079 which means that both funds perform in the period of crise, in addition the ESG ETF performs its traditional counterpart this result confirms the hypothesis that assumes that ESG ETFs are resilient in times of crisis[2]. Regarding the volatility respectively 0.0195736 and 0.203305 we point out that ESG ETF is less risky compared to its traditional benchmark. We also observe that both series of returns do not follow the normal distribution with respect to their Kurtosis and Skewness.

Regardless to the results obtained, we can conclude that ESG ETFs perform better and are less risky than their traditional counterparts in times of COVID 19 crisis analysis. This can be

[2] Voir I. Jeune. 2020. Les indices MSCI ESG surperforment pendant la pandémie de COVID-19 au premier trimestre 2020. Tendances des ETF. (27 avril). https://www.etftrends.com/msci-esg-indexes-outperform-during-covid-19/; J. Hale. 2020. Les fonds durables résistent mieux au premier trimestre que les fonds conventionnels. L'étoile du matin. (3 avril). https://www.morningstar.com/articles/976361/sustainable-funds-endure-the-first-quarter-better-than-conventional-funds

explained by the fact that ESG companies are better prepared to deal with unexpected risks and events, such as the COVID 19 pandemic. In contrast to the non-COVID 19 analysis period, ESG ETFs are less efficient but still less risky. This result cannot be conclusive as it depends on several factors.

Table 2:

	Performance of iShares ESG Aware MSCI EM ETF(Pre-crisis)	Performance of iShares MSCI Emerging Markets ETF (Pre-crisis)
N	251	251
Mean	-0,000661	-0,000656
Standard deviation	0,012716	0,0134388
Minimum	-0,0328	0,0351
Maximum	0,0342	0,0357
Skewness	-0,115	-0,125
Kurtosis	-0,0123	-0,104

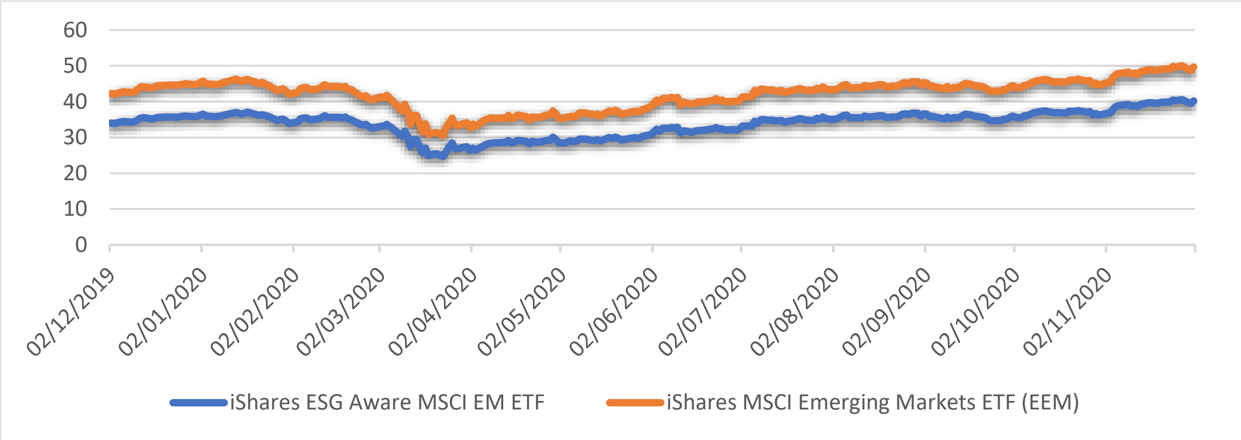
Source: Authors

	Performance of iShares ESG Aware MSCI EM ETF(Post-crisis)	Performance of iShares MSCI Emerging Markets ETF (Post-crisis)
N	279	279
Mean	0,000791	0,00079
Standard deviation	0,0195736	0,203305
Minimum	-0,1248	-0,1248
Maximum	0,0712	0,0751
Skewness	-1,487	-1,3
Kurtosis	9,856	9,489

Source: Authors

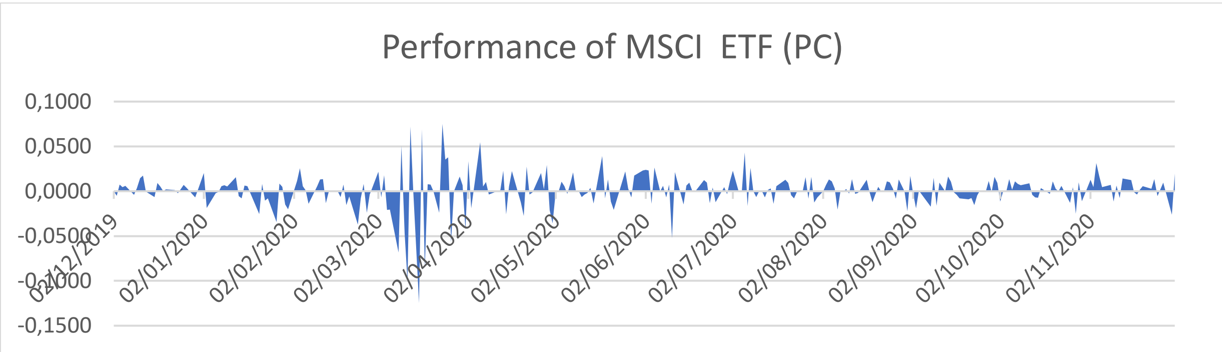
2.3.Chart analysis of the two funds :

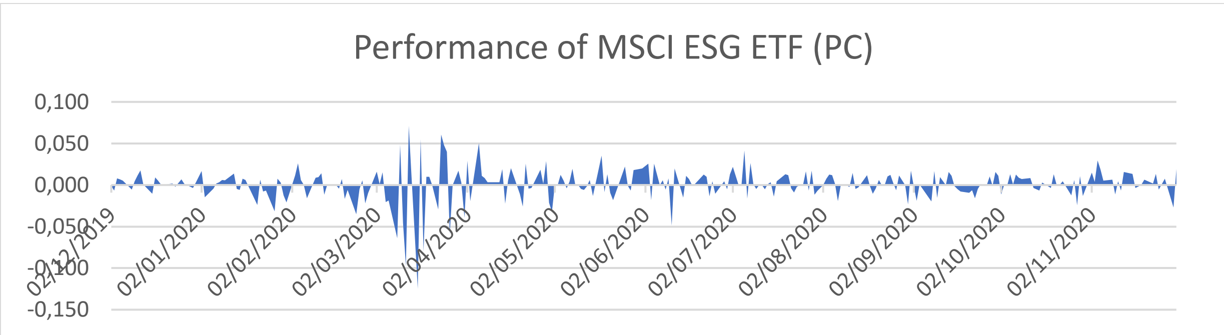
In the context of the crisis, the historical comparison of the two funds shows that they follow the same trend, which proves according to the literature that the two funds offer the same return.



Source: Authors

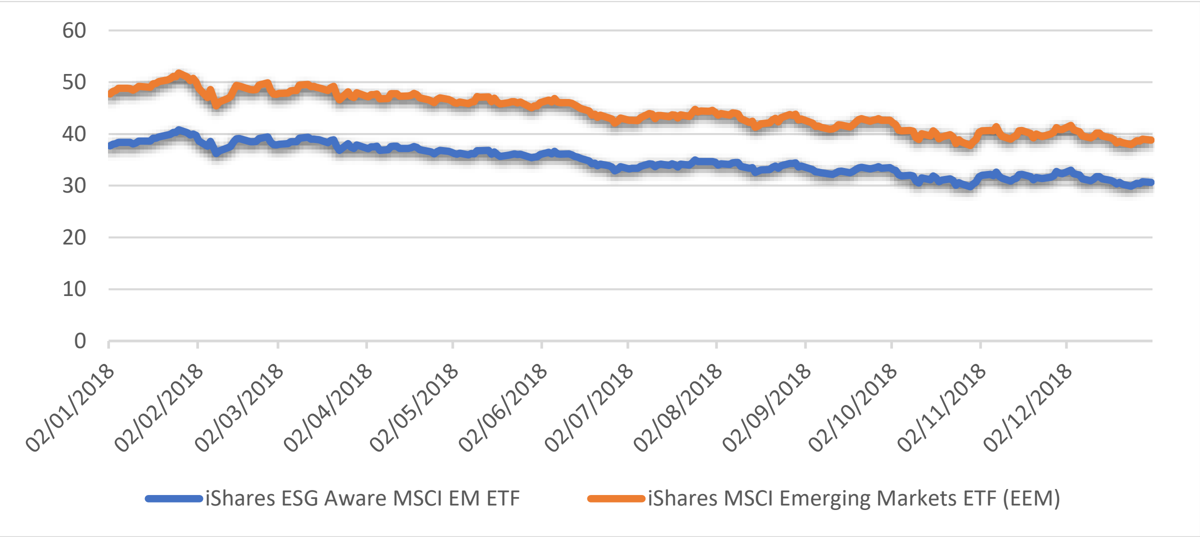
The comparison of the return of the two series P(iShares ESG Aware MSCI EM ETF) and P(iShares MSCI Emerging Markets ETF (EEM)) shows that there is no significant difference between the funds.





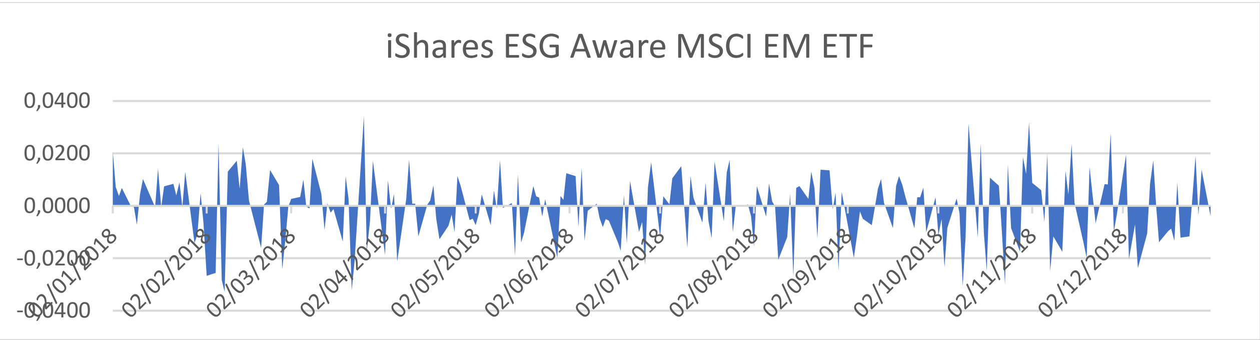
Source: Authors

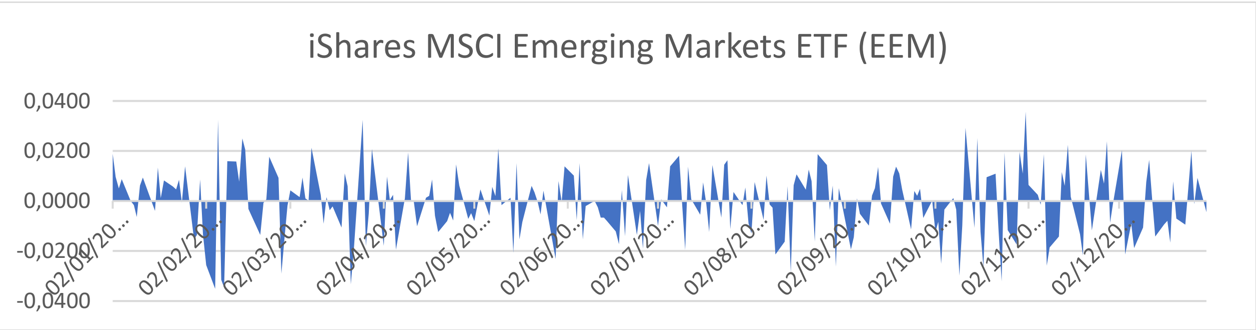
In a non-crisis context, the historical comparison of the two funds shows that they follow the same trend, they aim to underperform in this period.



Source: Authors

Also, comparing the performance of the two series P(iShares ESG Aware MSCI EM ETF) and P(iShares MSCI Emerging Markets ETF (EEM)) shows that there is no significant difference between the funds.





Source: Authors

This comparison in the two periods makes us conclude that iShares ESG Aware MSCI EM ETFs tend to be more resilient in a crisis period and follow the same market trend.

2.4.Correlation test:

The descriptive statistics and the graphical visualization showed us that there is no significant difference between the two funds, that is to say that both funds follow the trend of their benchmark in the same way. From this result one would expect a very high correlation between the two funds.

Since the index series do not follow the normal distribution, we have performed the non-parametric "Spearman" correlation test, we find that there is a high correlation between the two indices with a rate of 98.4% in a non crisis COVID19 context and 98.8% in the crisis of COVID19.

Table 3: Correlation rate between the returns of the iShares ESG Aware MSCI EM ETF and the iShares MSCI Emerging Markets ETF (EEM) in the non-crisis period COVID 19

	iShares ESG Aware MSCI EM ETF	iShares MSCI Emerging Markets ETF (EEM)
iShares ESG Aware MSCI EM ETF	1	0.984**
iShares MSCI Emerging Markets ETF (EEM)	0,984**	1

**The correlation is significant at the 0.01 level

Source: Authors

Table 4: Correlation rate between the returns of the iShares ESG Aware MSCI EM ETF and the iShares MSCI Emerging Markets ETF (EEM) in the crisis period COVID 19

	iShares ESG Aware MSCI EM ETF	iShares MSCI Emerging Markets ETF (EEM)
iShares ESG Aware MSCI EM ETF	1	0.988**
iShares MSCI Emerging Markets ETF (EEM)	0,988**	1

**The correlation is significant at the 0.01 level

Source: Authors

Conclusion :

The emergence of financial engineering has allowed the appearance of products that are not widely known to some, but which have the potential to become a promising investment vehicle especially for emerging markets. ETFs allow investors to invest in a basket of securities while reducing fees and providing risk-adjusted performance. Ethical investors can simultaneously seek financial performance and extra-financial performance (for ethical added value) through a range of products called ESG ETFs that take into consideration sustainable development criteria, in particular ESG criteria (environmental, social and governance).

This article focuses on two emerging market funds iShares ESG Aware MSCI EM ETF and the iShares MSCI Emerging Markets ETF (EEM) present in the NASDAQ exchange, the study covers a time interval post and pre-crisis in order to analyze the behavior or financial performance of the two funds, with the objective of answering the question if the ESG ETFs in spite of their selection criteria generates a much higher performance than their traditional counterpart. For this purpose, a statistical study and a technical analysis were conducted. Our results show that both funds follow the same trend and therefore there is no significant difference in terms of financial performance, but ESG ETFs have a lower risk than traditional funds. The graphical analysis led to the same results, these results support the thesis that there is no real financial sacrifice to be an ethical investor, but far from it what is important for the ethical investor is the ethical value of his investment or if his investment will generate an ESG impact.

The contribution of our article resides in its originality, few studies have been interested in ETF funds in a context of emerging countries despite their good for the stock markets, especially emerging in terms of liquidity, etc.... As each study has its limits, indeed, the analysis of financial performance differs from one context of analysis to another because of the effect of size and characteristics of each stock market, for this reason, other studies on ESG ETFs can be conducted in other emerging markets.

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