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Global CIO Office | ARTICLE 2

ESG Performance: the Role of Factors

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As more assets flowed towards ESG investment, and the term started to become popular, financial media headlines have become more sensationalist, either claiming that ESG consistently outperforms other investment strategies, or that it underperforms them.

This debate, which obviously matters greatly to financial professionals and asset owners, has often been based on relatively flimsy empirical evidence and in a relatively quickly changing landscape, making it difficult to extrapolate the future from past behavior.

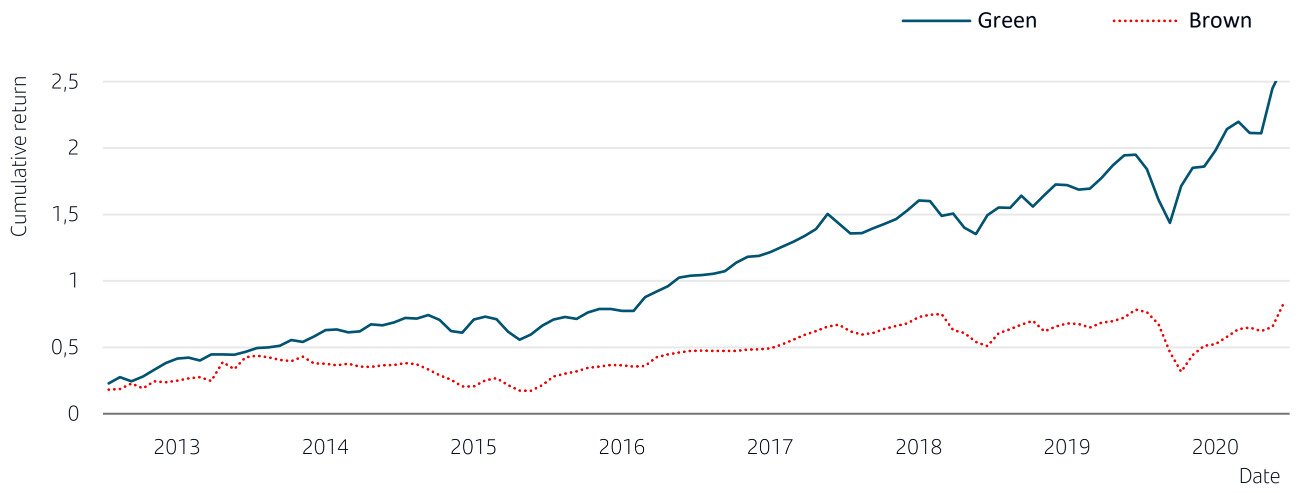
Even academic research has been divided on the question of returns. Some studies showed outperformance of specific ESG issues (e.g., in terms of social issues, there is evidence that a portfolio of firms with higher employees' satisfaction outperforms the market) or more broadly, of financially material ESG issues. Others instead suggested that some ESG practices like negative screening might increase the returns of stocks with lower ESG performance, and thus ESG investing might underperform.

Any serious discussion on ESG investment return should avoid the temptation of arriving at a simple headline, "ESG generates Alpha!" As we know that no asset class, factor, or investment style, will always outperform. However, research is starting to shed light on the conditions under which ESG can perform well.

A recent study, for instance, focused on the E in ESG and explored the driver of Environmental returns in US equities. Over the 2012-2020 period, a value-weighted portfolio of stocks in the top third of MSCI environmental ratings outperformed the bottom third by a cumulative return difference of 174%, with a monthly return difference **averaging 65 bps per month.**

Returns on value-weighted green and brown portfolios

Source: Author, based on Pastor, Stambaugh, and Taylor (2021)

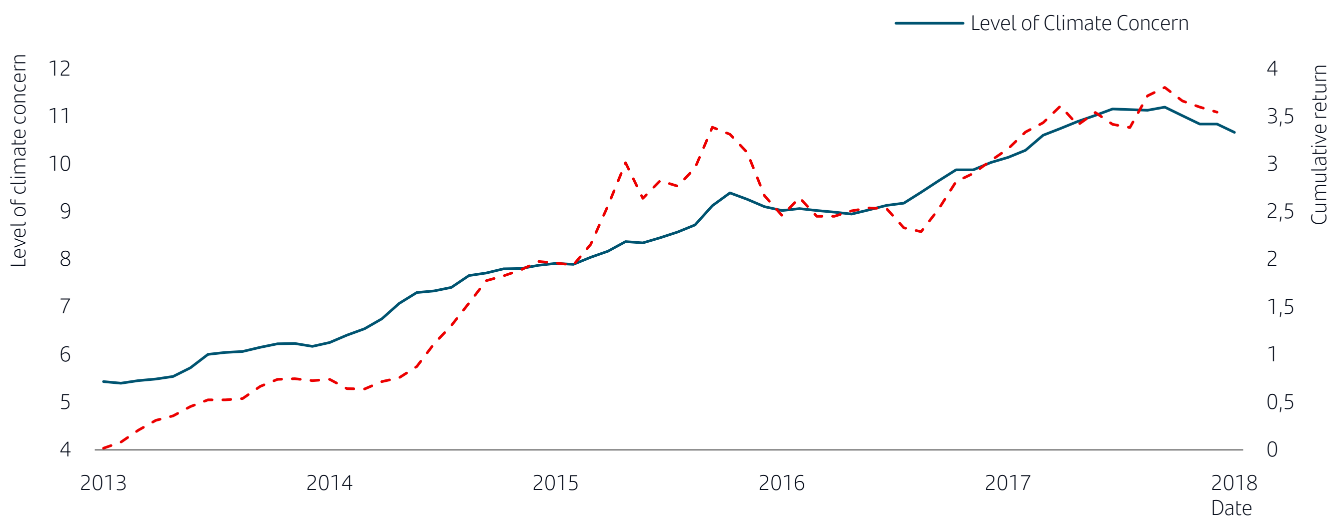


Case closed? Not so fast. First, we need to understand what drove these returns. The study took a factor approach to do that. According to Andrew Ang, one of the foremost experts on factor investing, "factors are to assets what nutrients are to food," and can better explain the risk and return of a portfolio than its asset class composition. Factors are usually divided into macro and investment style factors, and it is especially interesting to explore whether ESG investing, or specifically E investing, relates to any existing style factors (value, volatility, momentum, quality, etc). Following this approach, the study identified an underlying green factor and explored the drivers behind its return.

This study suggests that one of the critical drivers of the return is the sudden spike in climate change concern we experienced in the last decade. To test this hypothesis, they construct a measure of climate concern in the media and show that the climate concern **shock explains 17%** of the green factor's monthly variance. This factor drove investors towards stocks with better environmental ratings and drove their returns

Climate Concerns and the Green Factor

Source: Author, based on Pastor, Stambaugh, and Taylor (2021)

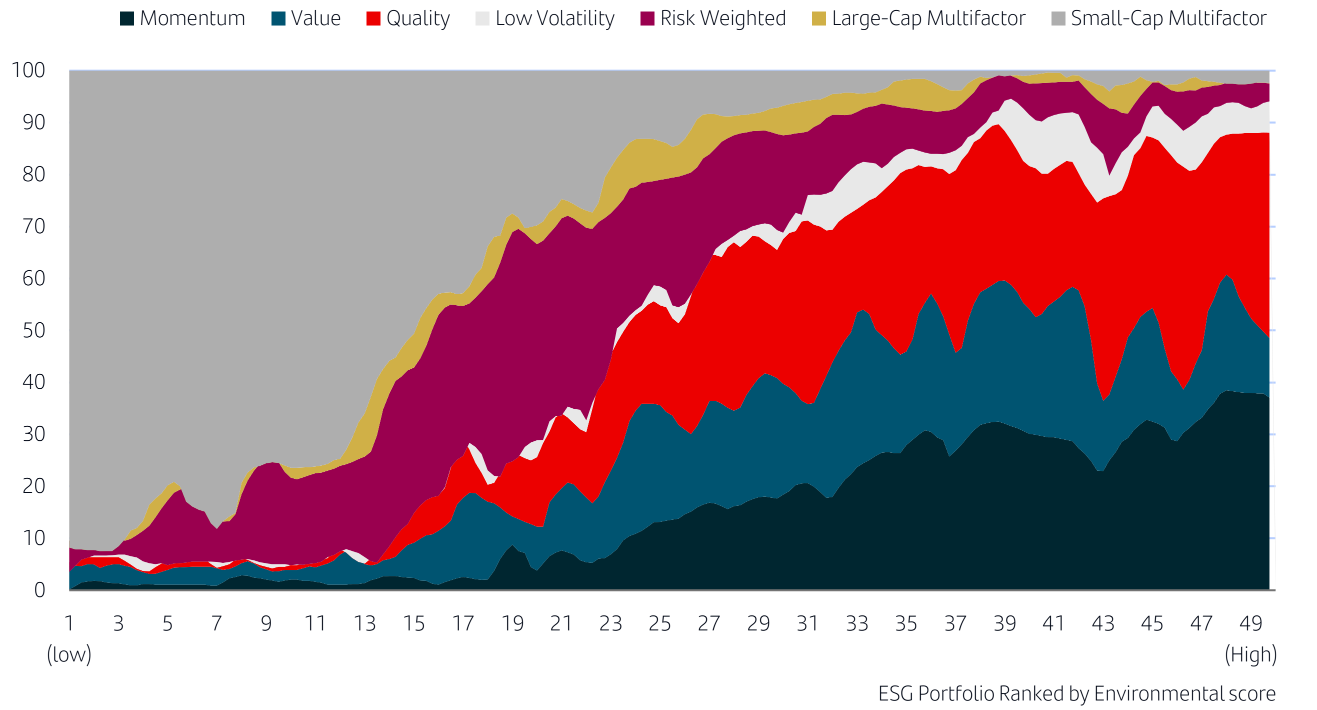


In terms of investment style factors, they show that the green factor is highly correlated with the **momentum factor** and negatively correlated with the **value factor**. Indeed, they go as far as suggesting that "Green stocks' recent outperformance helps us understand the poor performance of value stocks in the 2010s".

The findings on style factors were confirmed in another study of mutual funds that showed that funds with the higher environmental scores had high exposure to the **momentum** (light blue in the graph below) and **quality** (blue) factors. Moreover, it shows that E scores do not have a linear relationship with the value factor. The exposure to the value factor (orange) was low for low and high environmental scores, but moderate for funds with medium-high environmental scores.

Factor Composition of Decile Portfolios Ranked by Environmental Score

Source: Author, based on Madhavan, Sobczyk, and Ang (2021).



These studies suggest an important way forward for understanding when and under what conditions will ESG generate alpha in the future.

For instance, the findings on the role of the climate shock do not necessarily mean that we should expect this shock to be over, and one could even argue that as our global efforts to mitigate global warming are not successful, climate concern in the news will actually increase. This concern will likely drive more regulatory intervention (see Carbon Transition Risk Pill), and this might continue to drive returns.

In any case, a factor approach to ESG will be key to better understanding the relationship between various ESG factors in their portfolio and traditional factors. This will open novel and exciting investment opportunities.

To Learn More

- Ang, A., Madhavan, A., & Sobczyk, A. (2020). Toward ESG Alpha: Analyzing ESG Exposures through a Factor Lens. Financial Analysts Journal, 77(1), 69-88 Read more

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- Pastor, L., Stambaugh, R., & Taylor, L. A. (2021). Dissecting Green Returns. National Bureau of Economics Research – Working Paper 28940. Read more

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