Victor Fernando Rodrigues Studer 20-725-131

Sustainable Alpha? Backtesting ESG Momentum Trading Strategies in the Brazilian Market

Executive Summary

The effectiveness of environmental, social, and governance (ESG) factors in investing has been a source of much debate within academia. Some research, such as the article by Hong and Kacperczyk (2009), provides evidence that investing in so-called ”sin” stocks (stocks from companies involved in the production of alcohol, tobacco, and gaming) generates higher returns than comparable stocks. Other research, such as that by Antoncic et al. (2020), provides evidence of a positive link between ESG and alpha.

Although there is already research covering ESG trading strategies, few cover the Brazilian market. Therefore, this paper aims to cover this research gap by analyzing whether the momentum of ESG ratings can be used to generate alpha when trading Brazilian securities. Furthermore, this paper also investigates whether these momentum trading strategies yield similar results in other emerging markets. To investigate this hypothesis, this paper also provides the results of the strategies backtested across the Chinese, Indian, and South African equity markets.

In order to test the efficacy of ESG momentum in generating alpha, this paper evaluates the performance of several trading strategies tested across several holding periods. The first two strategies consist of long-only and long-short top-decile momentum strategies. These strategies aim to capitalize on possible market mispricings of ESG momentum by going long on the top 10% of stocks with positive ESG momentum and, in the case of the long-short strategy, also going short on the bottom 10% of stocks with negative ESG momentum.

The next set of strategies modify the previous long-only and long-short strategies by employing time-series momentum. In these strategies, instead of going long on the 10% of stocks with positive ESG momentum, all stocks with positive ESG momentum are added to the portfolio. Accordingly, the long-short strategy also goes short on all stocks with negative ESG momentum.

Finally, in order to investigate the phenomenon of sin stocks producing higher returns, such as described by Hong and Kacperczyk (2009), the previously cited top-decile and time-series momentum are reversed. These reverse strategies consist of going long on stocks with negative ESG momentum and, in the case of the reversed long-short strategies, also going short on stocks with positive ESG momentum.

This paper finds that applying both regular and reverse top-decile and time-series momentum long-only strategies generates positive alpha in the Brazilian and South African markets. These resultsindicate the relationship between ESG momentum and stock returns is more complex than previously thought, with evidence of mispricing at both ends of the momentum spectrum. On the other hand, all strategies underperformed when applied to the Chinese and Indian markets, suggesting such a relationship is not uniform across markets.

Overall, this paper provides evidence of the efficacy of ESG momentum as a trading strategy in certain markets and contributes to the ongoing debate regarding the efficacy of ESG investing.

Bibliography:

Antoncic, Madelyn, Geert Bekaert, Richard V Rothenberg, and Miquel Noguer (2020). “Sustainable investment-exploring the linkage between alpha, ESG, and SDG’s”. In: ESG, and SDG’s (August 2020).

Hong, Harrison and Marcin Kacperczyk (2009). “The price of sin: The effects of social norms on markets”. In: Journal of financial economics 93.1, pp. 15–36.