

SIMON GRIFFITHS, CFA

Portfolio Manager
Head of Quant Research

LAURA TOPPOZINI, PhD

Associate Portfolio Manager
ESG Quant Specialist

Gaining an Edge with ESG

In this quantitative research study, we investigate the relationship between environmental, social and governance (ESG) factors and subsequent performance. We believe a systematic approach can provide meaningful exposure to companies that deliver strong ESG performance while potentially increasing overall returns.

Creating a Quantitative ESG Factor

In this section we describe the construction of a proprietary ESG metric that is suitable for integration with quantitative investment processes.

We have created a blended ESG rating that combines third-party data and Neuberger Berman's own fundamental research. We analyze companies across granular themes beneath the broader ESG umbrella; for example, environmental themes encompass issues related to climate change and pollution, while social themes include labor practices and product safety. The higher the theme score, the better a company's performance in hitting ESG targets (such as meeting net-zero transition milestones) and in managing ESG-related risks (say, by not discharging hazardous chemicals and avoiding potential fines).

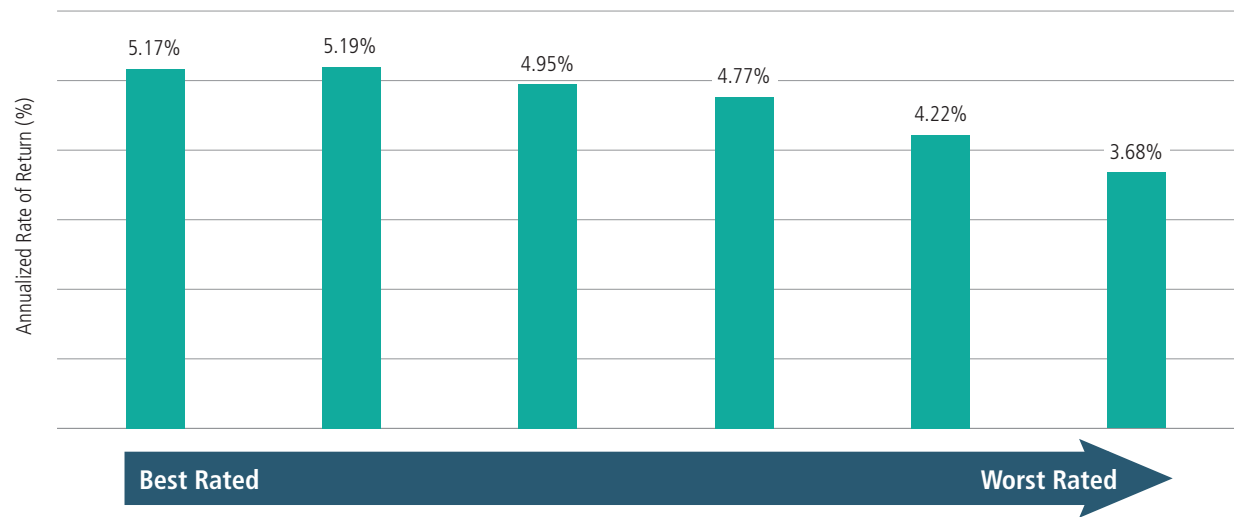
But we don't stop there. While granular ESG scores can be useful, we find that different ESG themes have different sector-specific impacts on expected returns. To capture these nuances, we relate the granular ESG scores with the historical performance of individual stocks to create a sector-by-theme materiality matrix. Using this matrix, we arrive at a blended ESG rating that incorporates a company's most relevant ESG drivers. We believe this approach has potential to deliver higher expected returns driven by ESG.

Returns Analysis

To review the effectiveness of this approach, we used our blended ESG rating to rank the constituents in the MSCI ACWI over a five-year period, from April 2019 to April 2024. The stocks were ranked from best to worst and separated into sixths; each sixth was aggregated across sector and region, then weighted by market capitalization. Sixths were reconstituted at the beginning of each month and returns were calculated over each one-month period.

Annualized returns for the five-year period are shown in the figure below. Result: Higher-rated stocks delivered larger returns than lower-rated ones, while the return spread between the best and worst sixth was 1.49% per year.

ESG FACTOR PROFILE



Source: Neuberger Berman, MSCI ESG Research, S&P Capital IQ.

Conclusion

By combining granular third-party ESG data with fundamental insights from Neuberger Berman’s global equity research team, we believe we constructed a robust rating that meaningfully increases a portfolio’s ESG exposure while potentially modestly increasing expected returns. Specifically, we find that MSCI ACWI constituents which scored in the top 16.67%, based on our blended ESG rating, tend to outperform the bottom 16.67% by 1.49% a year.

This document is addressed to professional clients/qualified investors only.

European Economic Area (EEA): This is a marketing document and is issued by Neuberger Berman Asset Management Ireland Limited, which is regulated by the Central Bank Ireland and is registered in Ireland, 2 Central Plaza, Dame Street, Dublin, D02 T0X4.

United Kingdom and outside the EEA: This document is a financial promotion and is issued by Neuberger Berman Europe Limited, which is authorised and regulated by the Financial Conduct Authority and is registered in England and Wales, at The Zig Zag Building, 70 Victoria Street, London, SW1E 6SQ.

Neuberger Berman Europe Limited is also a registered investment adviser with the Securities and Exchange Commission in the US, and the Dubai branch is regulated by the Dubai Financial Services Authority in the Dubai International Financial Centre. Neuberger Berman Europe Limited is an authorised financial services provider with the South African Financial Sector Conduct Authority, FSP number 45020.

This document is presented solely for information purposes and nothing herein constitutes investment, legal, accounting or tax advice, or a recommendation to buy, sell or hold a security.

We do not represent that this information, including any third-party information, is complete and it should not be relied upon as such.

No recommendation or advice is being given as to whether any investment or strategy is suitable for a particular investor. Each recipient of this document should make such investigations as it deems necessary to arrive at an independent evaluation of any investment, and should consult its own legal counsel and financial, actuarial, accounting, regulatory and tax advisers to evaluate any such investment.

It should not be assumed that any investments in securities, companies, sectors or markets identified and described were or will be profitable.

Any views or opinions expressed may not reflect those of the firm as a whole.

All information is current as of the date of this material and is subject to change without notice.

The product described in this document may only be offered for sale or sold in jurisdictions in which or to persons to which such an offer or sale is permitted. The product can only be promoted if such promotion is made in compliance with the applicable jurisdictional rules and regulations.

Indices are unmanaged and not available for direct investment.

An investment in this product involves risks, with the potential for above-average risk, and is only suitable for people who are in a position to take such risks.

Past performance is not a reliable indicator of current or future results. The value of investments may go down as well as up and investors may not get back any of the amount invested.

The value of investments designated in another currency may rise and fall due to exchange rate fluctuations in respect of the relevant currencies. Adverse movements in currency exchange rates can result in a decrease in return and a loss of capital.

Tax treatment depends on the individual circumstances of each investor and may be subject to change; investors are therefore recommended to seek independent tax advice.

Investment in this strategy should not constitute a substantial proportion of an investor's portfolio and may not be appropriate for all investors. Diversification and asset class allocation do not guarantee profit or protect against loss.

No part of this document may be reproduced in any manner without prior written permission of Neuberger Berman.

The "Neuberger Berman" name and logo are registered service marks of Neuberger Berman Group LLC.

NEUBERGER	BERMAN
-----------	--------

Neuberger Berman
2 Central Plaza
Dame Street
Dublin, D02 T0X4
Ireland

The Zig Zag Building
70 Victoria Street
London, SW1E 6SQ
United Kingdom

www.nb.com