

RESEARCH

Beyond the Label, ESG Funds May Miss Their Mark

Warwick Schneller, PhD
Senior Researcher and Vice President

Nov 19, 2021

KEY TAKEAWAYS

- Components of ESG in an investment strategy, how they're measured, and the method of incorporation can lead to a wide range of investment outcomes.
- ESG strategies exhibit a broad spectrum of characteristics, which may drive expected returns that differ from the market.
- Greenhouse gas emissions exposure has varied substantially across ESG strategies, highlighting the importance of looking beyond ESG labels to determine whether an ESG investment is consistent with one's goals.

The absence of a universally accepted definition of environmental, social, and governance (ESG) investing has resulted in a broad array of approaches.¹ This presents a potential dilemma for investors, as the components of ESG considered in an investment strategy, variables by which they are measured, and the method of incorporation can lead to a wide range of investment outcomes. Our study of US-domiciled ESG-focused funds highlights a variety of both fund characteristics and sustainability profiles, a reminder that investors may need to look beyond ESG branding to evaluate whether an investment approach is consistent with their goals.

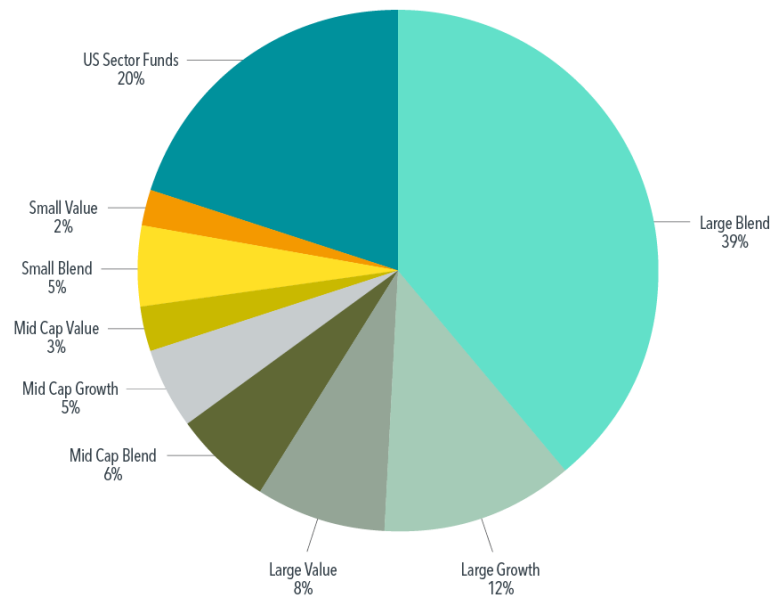
MANY FLAVORS TO ESG INVESTING

The first sign of a varied ESG investment landscape is the breadth of investment categories among ESG-focused strategies. **Exhibit 1** shows the Morningstar category breakdown for a sample of US equity mutual funds and ETFs categorized as "Sustainable Investments" as of October 31, 2020. While the majority of the \$131 billion in this sample's assets under management (AUM) is focused on large cap stocks, the 165 ESG funds are spread across 16 categories spanning size, style, and sector composition. In contrast to the mutual fund industry at large, the majority of these ESG funds are actively managed; less than 40% by net assets were categorized as index funds.

Exhibit 1

Variety Show

US equity funds with a sustainability focus, percentage of AUM by Morningstar category, as of October 31, 2020



Source: Morningstar. Sample includes all US-domiciled open-end and exchange-traded equity funds that invest in US equities only that are categorized as Sustainable Investments-Overall based on the Morningstar Sustainability attributes field, as of October 31, 2020. Morningstar defines a fund as a Sustainable Investment-Overall if it is described as focusing on sustainability or impact or as considering ESG factors in its prospectus, offering document, or regulatory filings.

While research suggests ESG characteristics do not provide additional information about expected returns (Bebchuk et al., 2013; Blitz and Fabozzi, 2017; Dai and Meyer-Brauns 2020; Polbennikov et al., 2016), an emphasis on ESG characteristics might impact the performance of ESG strategies. For example, if the incorporation of ESG considerations leads to a systematic over- or underweighting of drivers of expected returns, such as size, relative price, or profitability, the expected returns of ESG strategies may be systematically higher or lower than the expected return of the market.

Viewed in aggregate, ESG-focused US equity funds differ from the broad US market. Characteristics for an asset-weighted sample of ESG funds as of October 31, 2020, in **Exhibit 2** show a tilt toward higher relative price and smaller market capitalization than the Russell 3000 Index. Interestingly, the number of distinct US stocks included in the aggregate ESG sample totals more than 2,700, approaching the index's 3,023 holdings. This implies that, depending on whom you ask, more than 90% of stocks in the US market fit the bill for ESG investing.

Aggregate characteristics obscure the range of outcomes across ESG strategies. Exhibit 2 also shows characteristics for the cross-section of ESG funds at the 25th, 50th, and 75th percentiles of the distribution. Portfolio positioning runs the full spectrum along all three characteristics. In particular, the interquartile range of weighted average market cap spans from a market-like \$348 billion down to under \$25 billion, the latter bordering on mid cap territory. The observed variation in size, relative price, and profitability implies meaningful differences in expected returns among these funds.

Exhibit 2

All Shapes and Sizes

US equity sustainability funds aggregate characteristics, as of October 31, 2020

	Russell 3000 Index	Aggregate US Sustainability Fund Sample	Percentiles of US Sustainability Fund Sample		
			25th Percentile	50th Percentile	75th Percentile
Valuation					
Aggregate Price-To-Book (No negatives)	3.28	4.25	3.13	3.82	4.83
Size					
Weighted Average Total Market Capitalization (millions)	\$366,483.71	\$268,374.74	\$24,901.43	\$169,413.90	\$348,248.03
Profitability					
Weighted Average Profitability	0.41	0.43	0.24	0.41	0.54
Market					
Number of Holdings	3,023	2,749	34	60	214

Data source: Morningstar. Sample includes all US-domiciled open-end and exchange-traded equity funds that invest in US equities only that are categorized as Sustainable Investments-Overall based on the Morningstar Sustainability attributes field, as of October 31, 2020. The aggregate sample of US sustainability funds is asset-weighted and based on individual fund holdings. To be included, a share class must have had net assets on October 31, 2020. Securities with negative book values are excluded when computing aggregate price-to-book ratios. Frank Russell Company is the source and owner of the trademarks, service marks, and copyrights related to the Russell Indexes.

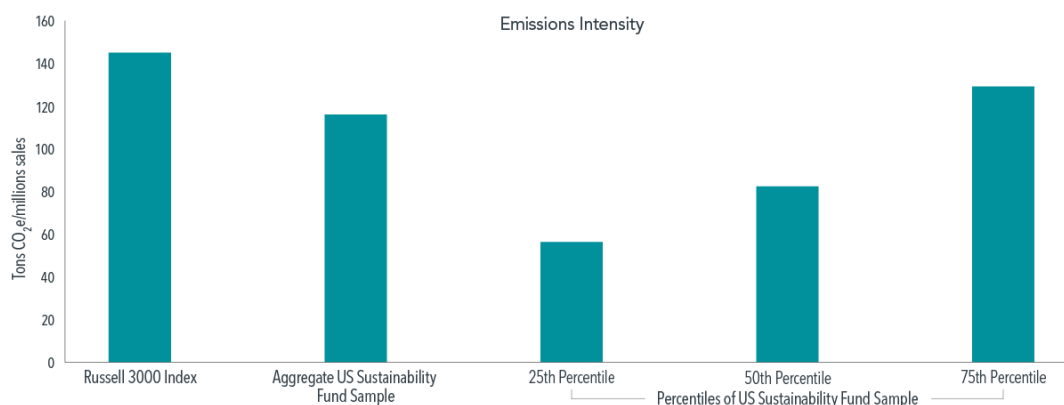
In addition to the broad range of individual fund characteristics, the results indicate many ESG funds select only a small subset of companies, an approach that leads to a limited investment universe and lower diversification. For example, Exhibit 2 shows that, at the 25th percentile, the number of stocks held in a sustainability fund is just 34.

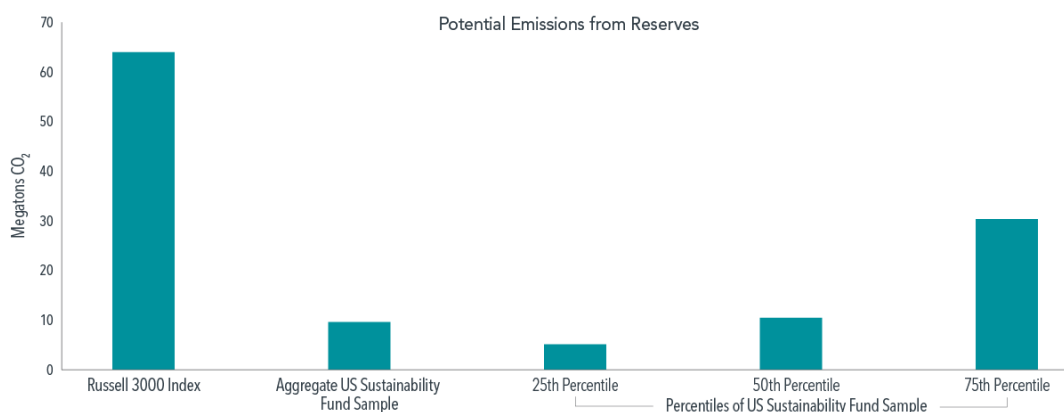
With so many approaches to ESG investing, one might expect substantial variation when assessing strategies through the lens of any individual ESG measure. This is exactly what we see in the greenhouse gas (GHG) emissions exposure data for our sample of ESG funds. As shown in **Exhibit 3**, both the emissions intensity and potential emissions of ESG funds in aggregate are meaningfully lower than those of the broad market. But the range of reduction is considerable. For example, for the 75th percentile of funds, emissions intensity is 11% lower than that of the Russell 3000 Index; by comparison, the reduction is 61% at the 25th percentile.

Exhibit 3

Looking Under the Hood

Emissions exposure for the US equity sustainability fund sample, as of October 31, 2020





Sample includes all US-domiciled open-end and exchange-traded equity funds that invest in US equities only that are categorized as Sustainable Investments-Overall based on the Morningstar Sustainability attributes field, as of October 31, 2020. Source: Morningstar. The aggregate sample of US sustainability funds is asset-weighted and based on individual fund holdings. To be included, a share class must have had net assets on October 31, 2020. Greenhouse Gas Emissions Intensity represents a company's recently reported or estimated Scope 1 (direct) + Scope 2 (indirect) greenhouse gas emissions in carbon dioxide equivalents (CO₂) normalized by sales in USD (metric tons CO₂ per USD million sales). Potential Emissions from Reserves is a theoretical estimate of carbon dioxide produced if a company's reported reserves of oil, gas, and coal were converted to energy, given estimated carbon and energy densities of the respective reserves. Source: Institutional Shareholder Services Inc (ISS) and MSCI ESG Research Inc. Frank Russell Company is the source and owner of the trademarks, service marks, and copyrights related to the Russell Indexes.

The emissions results are instructive in the context of investor expectations. The latest science² unequivocally pinpoints GHG emissions as the primary contributor to climate change. And data on GHG emissions are widely available for public companies (Chi, Geffroy, Thornton, and Whittington, 2021). To the extent that investors expect an ESG investment to reflect their concerns over environmental sustainability, the wide gamut in emissions exposure outcomes may be disappointing.

A ROAD MAP FOR CHANGE

Our findings show that the ESG label is hardly prescriptive when it comes to investing, highlighting the importance of evaluating an investment approach based on one's goals. Those with concerns over climate change may seek out strategies with reduced exposure to companies and sectors that drive climate change through carbon emissions. That means asking questions of the investment managers to evaluate which ones have delivered on the claim of reducing exposure to emissions vs. simply paying lip service.

Investors should also be wary of claims by ESG managers that their sustainability funds will meaningfully impact climate change. There is a distinction between GHG emissions exposure in one's asset allocation and actual GHG emissions in the real world: just because you're not holding shares of a company doesn't mean it stops burning hydrocarbons. As a result, while managers may use divestment to avoid companies with high greenhouse gas emissions, this does not mean that these types of strategies necessarily have a real-world impact. Investors should make sure that managers claiming to have actual real-world impact can provide objectively measurable reporting that backs up their claims.

GLOSSARY

Relative Price: Refers to a company's price, or the market value of its equity, in relation to another measure of economic value, such as book value.

Profitability: A company's operating income before depreciation and amortization minus interest expense scaled by book equity.

Price to Book: The ratio of a firm's market value to its book value, where market value is computed as price multiplied by shares outstanding and book value is the value of stockholders' equity as reported on a company's balance sheet.

Market Capitalization: The total market value of a company's outstanding shares, computed as price times shares outstanding.

Asset-Weighted Sample: A sample that weights each fund in proportion to its fund assets under management.

-
1. See Berg, Kölbel, and Rigobon (2020) and Chi, Geffroy, Thornton, and Whittington (2021).
 2. Per the Intergovernmental Panel on Climate Change 2021 study: [AR6 Climate Change 2021: The Physical Science Basis — IPCC](#).

REFERENCES

Bebchuk, Lucian A., Alma Cohen, and Charles C.Y. Wang. 2013. "Learning and the Disappearing Association Between Governance and Returns." *Journal of Financial Economics* 108, no. 2: 323–348.

Berg, Florian, Julian F. Kölbel, and Roberto Rigobon. 2020. "Aggregate Confusion: The Divergence of ESG Ratings" (SSRN working paper no. 3438533).

Blitz, David, and Frank J. Fabozzi. 2017. "Sin Stocks Revisited: Resolving the Sin Stock Anomaly." *Journal of Portfolio Management* 44, no. 1: 105–111.

Chi, Joseph, Eric Geffroy, Jeromey Thornton, and Jim Whittington. 2021. "ESG Data, Ratings, and Investor Objectives." Dimensional Fund Advisors (article).

Chi, Joseph, Mathieu Pellerin, and Jacobo Rodriguez. 2020. "The Economics of Climate Change." Dimensional Fund Advisors (research paper).

Dai, Wei, and Philipp Meyer-Brauns. 2020. "Greenhouse Gas Emissions and Expected Returns." Dimensional Fund Advisors (research paper).

Polbennikov, Simon, et al. 2016. "ESG Ratings and Performance of Corporate Bonds." *Journal of Fixed Income* 26, no. 1: 21–41.

The information in this document is provided in good faith without any warranty and is intended for the recipient's background information only. It does not constitute investment advice, recommendation, or an offer of any services or products for sale and is not intended to provide a sufficient basis on which to make an investment decision. It is the responsibility of any persons wishing to make a purchase to inform themselves of and observe all applicable laws and regulations. Unauthorized copying, reproducing, duplicating, or transmitting of this document are strictly prohibited. Dimensional accepts no responsibility for loss arising from the use of the information contained herein.

"Dimensional" refers to the Dimensional separate but affiliated entities generally, rather than to one particular entity. These entities are Dimensional Fund Advisors LP, Dimensional Fund Advisors Ltd., Dimensional Ireland Limited, DFA Australia Limited, Dimensional Fund Advisors Canada ULC, Dimensional Fund Advisors Pte. Ltd., Dimensional Japan Ltd., and Dimensional Hong Kong Limited. Dimensional Hong Kong Limited is licensed by the Securities and Futures Commission to conduct Type 1 (dealing in securities) regulated activities only and does not provide asset management services.

Frank Russell Company is the source and owner of the trademarks, service marks, and copyrights related to the Russell Indexes. Indices are not available for direct investment.

UNITED STATES: Dimensional Fund Advisors LP is an investment advisor registered with the Securities and Exchange Commission.

Investment products: • Not FDIC Insured • Not Bank Guaranteed • May Lose Value
Dimensional Fund Advisors does not have any bank affiliates.

CANADA: These materials have been prepared by Dimensional Fund Advisors Canada ULC. Commissions, trailing commissions, management fees, and expenses all may be associated with mutual fund investments. Unless otherwise noted, any indicated total rates of return reflect the historical annual compounded total returns, including changes in share or unit value and reinvestment of all dividends or other distributions, and do not take into account sales, redemption, distribution, or optional charges or income taxes payable by any security holder that would have reduced returns. Please read the prospectus before investing. Mutual funds are not guaranteed, their values change frequently, and past performance may not be repeated.

AUSTRALIA and NEW ZEALAND: This material is issued by DFA Australia Limited (AFS License No. 238093, ABN 46 065 937 671). This material is provided for information only. No account has been taken of the objectives, financial situation or needs of any particular person. Accordingly, to the extent this material constitutes general financial product advice, investors should, before acting on the advice, consider the appropriateness of the advice, having regard to the investor's objectives, financial situation and needs. Any opinions expressed in this material reflect our judgement at the date of publication and are subject to change.

WHERE ISSUED BY DIMENSIONAL IRELAND LIMITED OR DIMENSIONAL FUND ADVISORS LTD.

Neither Dimensional Ireland Limited (DIL) nor Dimensional Fund Advisors Ltd. (DFAL), as applicable (each an "Issuing Entity," as the context requires), give financial advice. You are responsible for deciding whether an investment is suitable for your personal circumstances, and we recommend that a financial adviser helps you with that decision.

NOTICE TO INVESTORS IN SWITZERLAND: This is an advertising document.

WHERE ISSUED BY DIMENSIONAL IRELAND LIMITED

Issued by Dimensional Ireland Limited (DIL), with registered office 10 Earlsfort Terrace, Dublin 2, D02 T380, Ireland. DIL is regulated by the Central Bank of Ireland (Registration No. C185067). Information and opinions presented in this material have been obtained or derived from sources believed by DIL to be reliable, and DIL has reasonable grounds to believe that all factual information herein is true as at the date of this document.

DIL issues information and materials in English and may also issue information and materials in certain other languages. The recipient's continued acceptance of information and materials from DIL will constitute the recipient's consent to be provided with such information and materials, where relevant, in more than one language.

WHERE ISSUED BY DIMENSIONAL FUND ADVISORS LTD.

Issued by Dimensional Fund Advisors Ltd. (DFAL), 20 Triton Street, Regent's Place, London, NW1 3BF. DFAL is authorised and regulated by the Financial Conduct Authority (FCA). Information and opinions presented in this material have been obtained or derived from sources believed by DFAL to be reliable, and DFAL has reasonable grounds to believe that all factual information herein is true as at the date of this document.

DFAL issues information and materials in English and may also issue information and materials in certain other languages. The recipient's continued acceptance of information and materials from DFAL will constitute the recipient's consent to be provided with such information

and materials, where relevant, in more than one language.

RISKS

Investments involve risks. The investment return and principal value of an investment may fluctuate so that an investor's shares, when redeemed, may be worth more or less than their original value. Past performance is not a guarantee of future results. There is no guarantee strategies will be successful. Diversification neither assures a profit nor guarantees against loss in a declining market.

Sustainability funds use environmental and social screens that may limit investment opportunities for the fund.

JAPAN

Provided for institutional investors only. This document is deemed to be issued by Dimensional Japan Ltd., which is regulated by the Financial Services Agency of Japan and is registered as a Financial Instruments Firm conducting Investment Management Business and Investment Advisory and Agency Business. This material is solely for informational purposes only and shall not constitute an offer to sell or the solicitation to buy securities or enter into investment advisory contracts. The material in this article and any content contained herein may not be reproduced, copied, modified, transferred, disclosed, or used in any way not expressly permitted by Dimensional Japan Ltd. in writing. All expressions of opinion are subject to change without notice.

Dimensional Japan Ltd.

Director of Kanto Local Finance Bureau (FIBO) No. 2683

Membership: Japan Investment Advisers Association

FOR PROFESSIONAL INVESTORS IN HONG KONG.

This material is deemed to be issued by Dimensional Hong Kong Limited (CE No. BJE760) ("Dimensional Hong Kong"), which is licensed by the Securities and Futures Commission to conduct Type 1 (dealing in securities) regulated activities only and does not provide asset management services.

This material should only be provided to "professional investors" (as defined in the Securities and Futures Ordinance [Chapter 571 of the Laws of Hong Kong] and its subsidiary legislation) and is not for use with the public. This material is not directed to any person in any jurisdiction where (by reason of that person's nationality, residence, or otherwise) the publication or availability of this material are prohibited or which would subject Dimensional Hong Kong (including its affiliates) or any of Dimensional Hong Kong's products or services to any registration, licensing, or other such legal requirements within such jurisdiction or country. When provided to prospective investors, this material forms part of, and must be provided together with, applicable fund offering materials. This material must not be provided to prospective investors on a standalone basis. Before acting on any information in this material, you should consider whether it is suitable for your particular circumstances and, if appropriate, seek professional advice.

Unauthorized copying, reproducing, duplicating, or transmitting of this material are prohibited. This material and the distribution of this material are not intended to constitute and do not constitute an offer or an invitation to offer to the Hong Kong public to acquire, dispose of, subscribe for, or underwrite any securities, structured products, or related financial products or instruments nor investment advice thereto. Any opinions and views expressed herein are subject to change. Neither Dimensional Hong Kong nor its affiliates shall be responsible or held responsible for any content prepared by financial advisors. Financial advisors in Hong Kong shall not actively market the services of Dimensional Hong Kong or its affiliates to the Hong Kong public.

SINGAPORE

This material is deemed to be issued by Dimensional Fund Advisors Pte. Ltd., which is regulated by the Monetary Authority of Singapore and holds a capital markets services license for fund management.

This advertisement has not been reviewed by the Monetary Authority of Singapore. This information should not be considered investment advice or an offer of any security for sale. All information is given in good faith without any warranty and is not intended to provide professional, investment, or any other type of advice or recommendation and does not take into account the particular investment objectives, financial situation, or needs of individual recipients. Before acting on any information in this material, you should consider whether it is suitable for your particular circumstances and, if appropriate, seek professional advice. Dimensional Fund Advisors Pte. Ltd. does not accept any responsibility and cannot be held liable for any person's use of or reliance on the information and opinions contained herein. Neither Dimensional Fund Advisors Pte. Ltd. nor its affiliates shall be responsible or held responsible for any content prepared by financial advisors.