

Is It Easy Being Green?

How ESG-Focused Funds Impact
Client Portfolios



Introduction

The SEC proposed [new rules in early 2022](#) to implement stricter reporting guidelines for investment funds' and investment advisors' environmental, social, and governance (ESG) investment strategies, as well as aggregated greenhouse gas (GHG) emissions. See the SEC's [Rule Fact Sheet](#), the entire [Proposed Rule](#), and this helpful analysis by [Bloomberg Law](#) for more details.

The change will likely be welcomed by advisors and their investor clients, but the requirements add a further reporting burden to company and portfolio managers. They would also introduce a new categorization system for determining which funds are subject to certain disclosure requirements. Historically, companies and fund managers included ESG risks based solely on their own interpretation of materiality.

If adopted, the Proposed Rules would require SEC-registered advisors to include ESG factors and processes in fund prospectuses, annual summaries, and brochures. Additionally, the rules would establish three new fund classifications: [Integration Funds](#), [ESG-Focused Funds](#), and [ESG Impact Funds](#).

So why should financial advisors and planners care?

As you are likely already hearing ESG-related questions from your own clients, the Proposed Rules will significantly impact the course of those discussions. Not only will advisors have more robust ESG information and data to consider in fund selection decisions, but the language used and recommendations given will also evolve. For example,

when balancing expectations for a fund’s ESG merits and its risk-reward profile, it may be reasonable to expect different dynamics from an “Integration Fund” versus an “ESG-Focused Fund” or “ESG Impact Fund”.

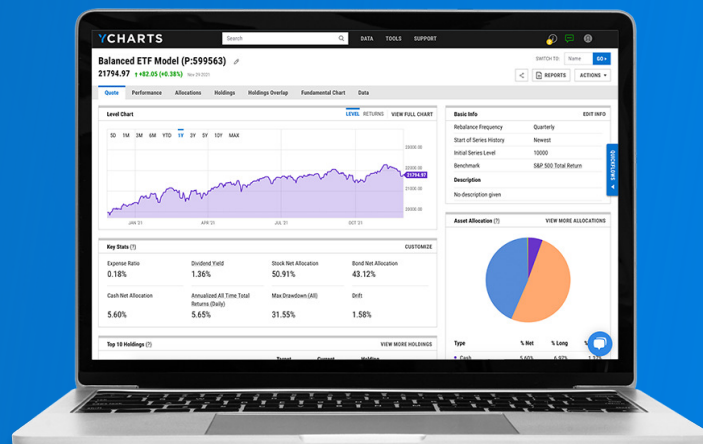
The new ESG-related duties may also create some conflict with advisors’ fiduciary duty to their clients. Some have called the arguments frivolous or **politically-motivated**, but it is possible that too much focus on ESG factors, and too little on fundamentals, could lead decision-makers astray. For a long time, fiduciary duty was considered a barrier to incorporating ESG into investment decisions. However, some forward-lookers give credence to a more modern interpretation of fiduciary duty, offered in two studies ([A Legal Framework for ESG](#) and [A Legal Framework for Impact](#)) by law firm Freshfields

Bruckhaus Deringer. Freshfields’ research suggests that failing to consider long-term investment value factors—which encapsulates ESG issues—in investment decisions would be a failure of fiduciary duty.

To equip advisors and asset managers with data and talking points in advance of the implementation of the SEC’s Proposed Rule, YCharts used qualitative information about funds’ ESG marketing, as well as quantitative ESG Scores from MSCI, to better ascertain these funds’ impact on investor portfolios and other key considerations.

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Questions We'll Answer

1

How do new SEC regulations covering ESG disclosures impact advisors' and wholesalers' day-to-day?

2

To what degree is "greenwashing" driving interest in ESG funds? Is better ESG marketing, or a higher ESG Score the true driver of asset flows?

3

How do the most popular ESG-marketed funds stack up against funds with standout ESG metrics? Are they one and the same?

4

What impact, positive or negative, do ESG mutual funds and ETFs have on portfolio-level performance, risk, and ESG scores?

5

Should you invest in the most popular ESG-marketed funds (by AUM), or funds with the best ESG characteristics (by MSCI ratings)?

Key Findings



Both ESG-marketed funds and those with above-average ESG Scores are more expensive than their non-ESG-marketed and below-average ESG Score counterparts. Among Equity funds, the AUM-weighted average expense ratios are 0.34% for ESG-marketed funds, 0.12% for non-ESG-marketed funds, 0.25% for funds with above-average ESG Scores, and 0.12% for funds with below-average ESG Scores.



For a hypothetical 80/20 portfolio, replacing all its mutual fund holdings with the **Highest ESG-scoring fund in their respective fund categories significantly improved short-term historical returns and risk, but longer-term returns were lower than the baseline 80/20 portfolio.**



Since 2017, intentionally or otherwise, above-average ESG Scores have led to higher per-fund average asset flows in each of the Equity, Fixed Income, and Allocation broad categories. However, funds with ESG marketing in their names and investment strategies have not garnered more flows than non-ESG-marketed funds.



When replacing one portfolio holding at a time, (e.g. swapping only the large blend category fund or only the short-term bond category holding), **adding the most popular ESG-marketed fund in each category increased annualized returns of the hypothetical 80/20 portfolio with virtually no effect on risk metrics.**



The most popular ESG-marketed funds (by total AUM) are actually not the strongest in terms of their ESG Scores from MSCI, but they have outperformed funds with top ESG Scores, on average, across all lookback periods up to five years.



When replacing one portfolio holding at a time, **swapping in the highest ESG-scoring funds slightly reduced portfolio risk but also would have dampened returns in the last five years.**

Background & Info:

Fund Universe:

Our study considers a universe of 4,897 funds in total, made up of 1,175 exchange-traded funds (ETFs) and 3,722 mutual funds. This universe, identified using the [YCharts Fund Screener](#), consists of all U.S.-domiciled mutual funds and ETFs in the Equity, Fixed Income, and Allocation categories with total assets under management (AUM) of \$100 million or greater and adequate ESG data coverage from MSCI.

From this universe, we identified a group of 158 ESG-marketed funds having ESG-related keywords in their names and/or the investment strategy descriptions in the funds' prospectuses. The ESG keywords we searched for are: "ESG", "Environmental", "Social", "Governance", "Responsible", "Renewable", "Green", "Climate", "Clean", "Solar", and "Wind". Additionally, the universe of 4,897 funds was bifurcated into two groups: those with an above-average ESG Score (source: MSCI) and those with below-average ESG Scores, relative to their respective broad categories.

All Fund Universe*			
	Count	Average Fund AUM	Total AUM
Equity	3,437	\$ 4.3 B	\$ 14,775.9 B
Fixed Income	706	\$ 4.5 B	\$ 3,199.3 B
Allocation	754	\$ 4.1 B	\$ 3,067.7 B
Total	4,897	\$ 4.3 B	\$ 21,042.8 B

ESG-Marketed Fund Universe			
	Count	Average Fund AUM	Total AUM
Equity	131	\$ 1.1 B	\$ 148.3 B
Fixed Income	15	\$.5 B	\$ 7.0 B
Allocation	12	\$.6 B	\$ 7.2 B
Total	158	\$ 1.0 B	\$ 162.5 B

Non-ESG-Marketed Fund Universe			
	Count	Average Fund AUM	Total AUM
Equity	3,306	\$ 4.4 B	\$ 14,627.6 B
Fixed Income	691	\$ 4.6 B	\$ 3,192.3 B
Allocation	742	\$ 4.1 B	\$ 3,060.4 B
Total	4,739	\$ 4.4 B	\$ 20,880.3 B

*All Fund Universe = U.S. domiciled mutual funds and exchange-traded funds; Equity, Fixed Income & Allocation broad categories only; total AUM > \$100M

ESG Data:

ESG data on YCharts is sourced from [MSCI](#), a leading provider of data and tools to the global investment industry. In addition to leveraging ESG data as provided by MSCI, we combined several key metrics using a [YCharts Scoring Model](#) to create a more comprehensive score with which funds were compared. Definitions and score components are detailed here:

ESG Score: The MSCI ESG Quality Score (lowest 0 - 10 highest) for funds is calculated using the weighted average of the ESG scores of fund holdings. The Score also considers ESG Rating trend of holdings and the fund exposure to holdings in the laggard category.

Environmental Pillar Score: A fund's Environmental Score (lowest 0 - 10 highest) measures holdings' management of and exposure to key environmental risks and opportunities.

Social Pillar Score: A fund's Social Score (lowest 0 - 10 highest) measures holdings' management of and exposure to key social risks and opportunities.

Governance Pillar Score: A fund's Governance Score (lowest 0 - 10 highest) measures holdings' management of and exposure to key governance risks and opportunities.

Fund ESG Trend Positive & Negative: The percentage of portfolio's market value with a positive ESG rating trend (upgrade) in the year prior to the most recent ESG rating; conversely, the percentage of portfolio's market value with a negative ESG rating trend (downgrade) in the year prior to the most recent ESG rating.

Fund ESG Leaders & Laggards: The percentage of portfolio's market value with an ESG rating of AAA or AA (best in class relative to peers); conversely, the percentage of portfolio's market value with an ESG rating of B or CCC (worst in class relative to peers).

Created by YCharts, the Comprehensive ESG Fund Score used in this research employs a best-to-worst scale of 1.000 (best) to 0.000 (worst). The Score includes the following metrics and weights:

Financial Metric	Is better	Null values	Weight
MSCI ESG Score	Higher ▾	Zero ▾	30%
MSCI ESG Environmental Score	Higher ▾	Zero ▾	10%
MSCI ESG Governance Score	Higher ▾	Zero ▾	10%
MSCI ESG Social Score	Higher ▾	Zero ▾	10%
Fund ESG Leaders (%)	Higher ▾	Zero ▾	10%
MSCI Fund ESG Trend Positive (%)	Higher ▾	Zero ▾	10%
Fund ESG Laggards (%)	Lower ▾	Zero ▾	10%
MSCI Fund ESG Trend Negative (%)	Lower ▾	Zero ▾	10%

Sample Portfolio:

A Sample 80/20 Portfolio, 80% equity and 20% fixed income, was created using five mutual funds to represent the holdings of a typical investor portfolio. The holdings and weights are as follows: 46.66% Vanguard Total Stock Market Index ([VTSMX](#)), 26.67% Vanguard Total International Stock Market Fund Index ([VGTSX](#)), 6.67% Vanguard Total Bond Market Index ([VBMFX](#)), 15.00% Vanguard Total Stock Market Fund ([VTSMX](#)), 5.00% Vanguard Short-term Bond Index ([VBISX](#)).

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What is the appetite for ESG? Does it come with a premium?

Expense Ratio Comparison

Across the board, ESG strategies tend to be more expensive than their non-ESG counterparts. Splitting the universe of funds two ways—pitting ESG-marketed funds against non-ESG-marketed funds, and also comparing funds with above-average ESG Scores to below-average ones—led to the finding that investors pay higher fees for ESG. While a number of funds in the ESG groups are also index funds, the size and quantity of low-cost index funds in the non-ESG-marketed grouping is a likely driver of the cost gap. Most ESG investments are in fact a breed of actively managed strategies.

The AUM-weighted average expense ratios for ESG-marketed funds were anywhere from three to ten times higher than non-ESG-marketed funds, with the largest gap appearing in the Allocation category.

For funds with above-average ESG Scores, investors pay about twice the fee they would for a fund with below-average ESG merits, a difference of 0.25% versus 0.12% for equity funds. Fixed Income funds were an exception, however, as funds that scored poorly on the ESG front were actually more expensive on the basis of an AUM-weighted average.

ESG-Marketed Funds			
	AUM-Weighted Expense Ratio	Count	Total AUM
Equity	0.34%	131	148.26 B
Fixed Income	0.28%	15	7.01 B
Allocation	0.80%	12	7.24 B

Non-ESG-Marketed Funds			
	AUM-Weighted Expense Ratio	Count	Total AUM
Equity	0.12%	3,306	14,627.61 B
Fixed Income	0.05%	691	3,192.29 B
Allocation	0.08%	742	3,060.43 B

Funds with Above-Average Overall ESG Scores			
	AUM-Weighted Expense Ratio	Count	Total AUM
Equity	0.25%	2,025	11,554.31 B
Fixed Income	0.10%	319	1,980.10 B
Allocation	0.31%	401	2,300.23 B

Funds with Below-Average Overall ESG Scores			
	AUM-Weighted Expense Ratio	Count	Total AUM
Equity	0.12%	1,412	3,221.56 B
Fixed Income	0.12%	387	1,219.20 B
Allocation	0.15%	353	767.45 B

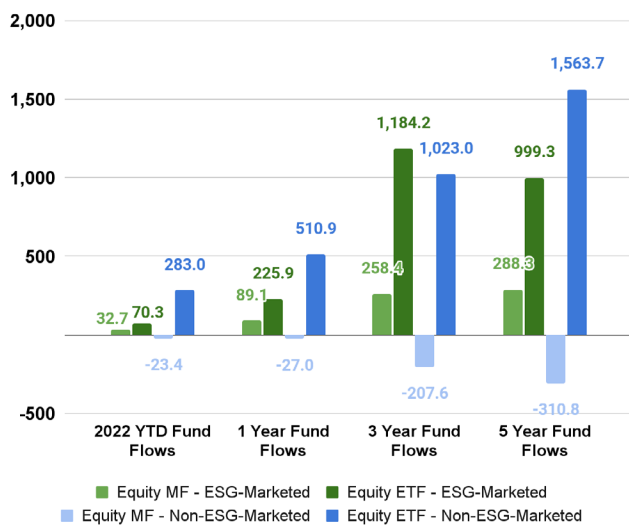
Equity Fund Flows by ESG Marketing & ESG Scores

Despite higher fees, the demand for ESG-friendly investments has risen considerably in recent years. While anecdotal evidence for ESG’s popularity can be found in numerous advisor-client conversations, asset flows give a data-driven historical account of ESG’s rise. Among equity funds, the bigger variable driving asset flows of late has not been ESG, but rather security type. ETFs are quickly becoming the default choice for investor portfolios, and most equity mutual funds have languished from net negative flows for years.

However, ESG marketing was a strong enough force to drive positive flows for those mutual funds over both short and longer-term lookbacks.

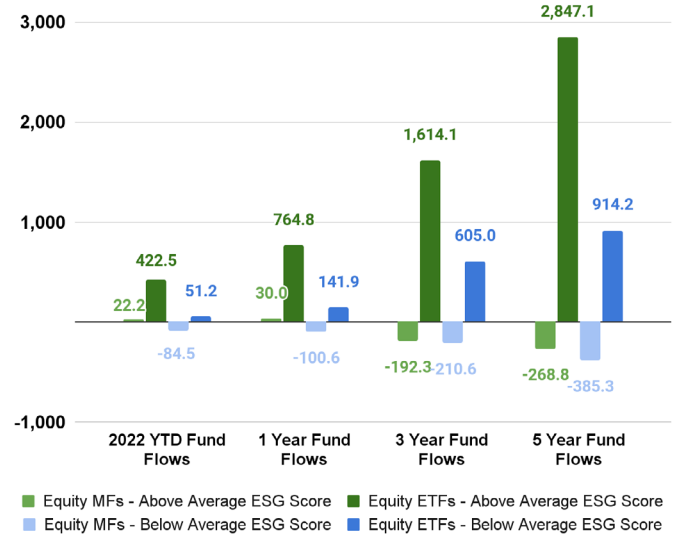
While equity mutual funds have lost assets regardless of their ESG merits, an equity ETF with an above-average ESG Score has attracted more than three times the assets of a below-average ETF on average over the last five years, based on a per-fund average. Year-to-date in 2022, that multiple grows to beyond eight times the asset flows for High ESG-scoring ETFs.

Per-Fund Average Asset Flows (\$M): ESG-Marketed Equity Funds vs. The Field



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Per-Fund Average Asset Flows (\$M): Above vs. Below-Average ESG Scores - Equity



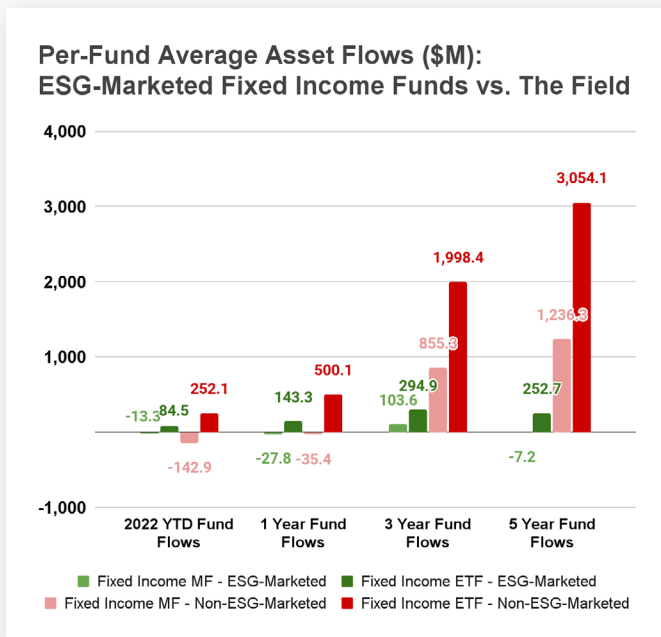
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Fixed Income Fund Flows by ESG Marketing & ESG Scores

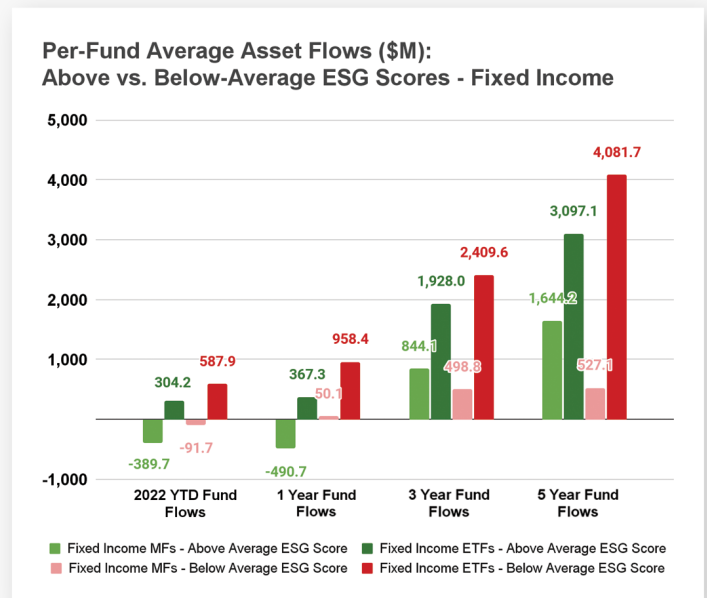
In Fixed Income, neither ESG marketing nor above-average ESG Scores appear to be compelling investors and advisors to select those funds. ETFs are also rapidly usurping mutual funds as the vehicle of choice in this category.

While the average ESG-marketed fixed income fund has garnered markedly fewer flows in the last five years, High ESG-scoring funds were only slightly

behind pace of the Low ESG-scoring funds. Over three and five-year lookbacks, higher-scoring fixed income mutual funds have actually outpaced those with below-average ESG scores in terms of per-fund asset flows. Note: the number of ESG-marketed fixed income funds (15) is less than ideal for making a robust comparison.



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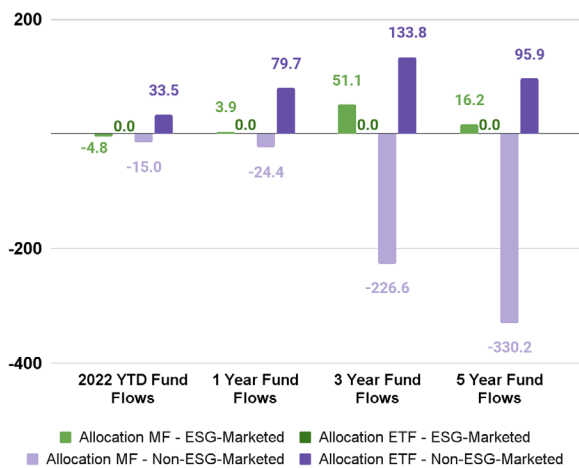
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Allocation Fund Flows by ESG Marketing & ESG Scores

Unlike equity funds but similar to fixed income, ESG marketing does not appear effective for driving asset flows to Allocation funds. While ESG-marketed mutual funds in the category have collected about half the flows of non-ESG-marketed ETFs, on average, over the last three years, non-ESG-marketed mutual funds have posted particularly negative flows. Of the fund universe we studied, no ESG-marketed Allocation funds were ETFs. *Note: the number of ESG-marketed allocation funds (12) is less than ideal for making a robust comparison.*

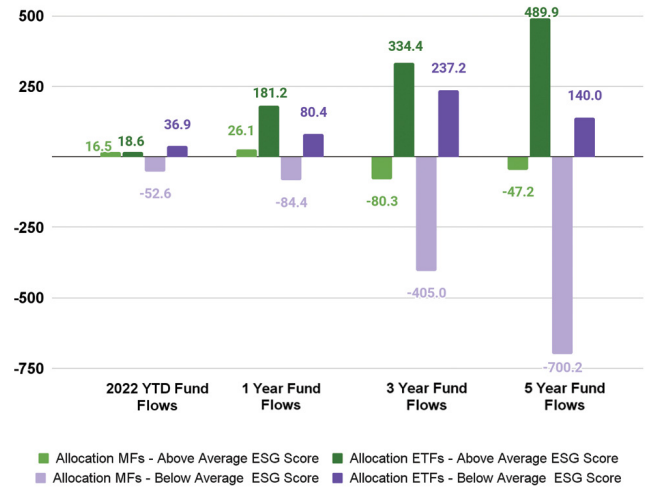
When bifurcating the group of Allocation funds into High and Low ESG-scoring groups, another trend emerges whereby the funds with above-average ESG scores collect more flows than Allocation ETFs with below-average scores. Whether intentionally or not, better ESG traits have been rewarded with more new purchases and fewer redemptions from investors.

Per-Fund Average Asset Flows (\$M): ESG-Marketed Allocation Funds vs. The Field



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Per-Fund Average Asset Flows (\$M): Above vs. Below-Average ESG Scores - Allocation



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The most popular ESG funds (by AUM) vs. the best-scoring ESG funds

ESG Traits - Most Popular ESG Funds

The mutual funds and ETFs below represent the twenty-five largest, by assets under management, ESG-marketed funds (those with ESG keywords in their names and/or investment strategies). The funds come from some of the biggest names in asset management, but their overall ESG Scores and other ESG ratings don't necessarily stand out based on MSCI data.

On average, these large, ESG-marketed funds earned an 8.61 out of 10 ESG Score from MSCI and a 0.776 out of 1.000 Comprehensive ESG Fund Score from YCharts (averages for the entire universe of 4,867 funds are 7.52 and 0.582, respectively). In order, their best ESG Pillar Scores were in the Environmental, Governance, and lastly, Social categories.

The iShares ESG Aware MSCI USA ETF (**ESGU**) is by far the largest fund with over \$21 billion in AUM, and also one of the best-rated for ESG purposes.

	Symbol	Comprehensive ESG Fund Score (by YCharts)	Total Assets Under Management	Expense Ratio	Broad Category	MSCI ESG Score	Environmental Score	Governance Score	Social Score
iShares ESG Aware MSCI USA ETF	ESGU	0.843	21.92 B	0.15%	Equity	9.40	6.44	5.63	5.42
Vanguard FTSE Social Index	VFTAX	0.797	13.50 B	0.14%	Equity	8.91	6.39	5.43	5.16
iShares ESG Aware MSCI EAFE ETF	ESGD	0.908	6.29 B	0.20%	Equity	9.90	6.61	6.49	5.79
TIAA-CREF Social Choice Equity	TISCX	0.796	6.03 B	0.17%	Equity	8.77	6.52	6.00	5.42
Vanguard ESG US Stock ETF	ESGV	0.765	5.79 B	0.09%	Equity	8.63	6.16	5.49	5.09
iShares Global Clean Energy ETF	ICLN	0.711	5.61 B	0.40%	Equity	8.08	7.57	5.73	4.70
iShares ESG Aware MSCI EM ETF	ESGE	0.769	4.06 B	0.25%	Equity	8.67	5.88	4.80	5.57
Calvert US Large Cap Core Responsible Index	CISIX	0.811	3.95 B	0.24%	Equity	8.95	6.28	5.58	5.13
iShares MSCI KLD 400 Social ETF	DSI	0.793	3.58 B	0.25%	Equity	8.43	6.78	5.65	5.38
iShares MSCI USA ESG Select ETF	SUSA	0.879	3.27 B	0.25%	Equity	9.44	6.80	5.93	5.85
iShares ESG MSCI USA Leaders ETF	SUSL	0.820	3.07 B	0.10%	Equity	8.76	6.91	5.62	5.37
Invesco Solar ETF	TAN	0.596	3.01 B	0.66%	Equity	6.79	7.47	5.73	3.79
American Century Sustainable Equity	AFEGX	0.776	3.01 B	0.00%	Equity	8.61	6.67	5.61	5.44
Xtrackers MSCI USA ESG Leaders Equity ETF	USSG	0.820	2.99 B	0.10%	Equity	8.77	6.91	5.61	5.38
Vanguard ESG International Stock ETF	VSGX	0.709	2.78 B	0.12%	Equity	8.19	5.92	5.85	5.21
First Trust NASDAQ Clean-Edge Green Energy ETF	QCLN	0.568	2.45 B	0.58%	Equity	6.60	6.65	5.52	3.85
Fidelity U.S. Sustainability Index	FITLX	0.820	2.26 B	0.11%	Equity	8.77	6.91	5.61	5.38
Pax Global Environmental Markets	PGINX	0.914	2.23 B	0.90%	Equity	9.83	5.95	6.50	6.09
Pax Sustainable Allocation	PAXWX	0.797	2.21 B	0.89%	Allocation	8.65	6.48	5.97	5.44
Calvert US Large Cap Value Responsible Index	CFJIX	0.772	1.76 B	0.24%	Equity	8.76	6.03	5.93	4.81
Nuveen ESG Large-Cap Value ETF	NULV	0.903	1.50 B	0.25%	Equity	10.00	7.04	6.03	5.37
iShares ESG Aware MSCI USA Small-Cap ETF	ESML	0.684	1.47 B	0.17%	Equity	7.92	4.65	6.28	4.70
Fidelity Advisor Energy	FANIX	0.731	1.42 B	0.79%	Equity	8.02	4.35	6.16	6.01
DFA US Social Core Equity 2 Portfolio	DFUEX	0.690	1.41 B	0.21%	Equity	7.96	5.48	5.70	4.95
Neuberger Berman Sustainable Equity	NBSLX	0.725	1.38 B	0.67%	Equity	8.52	6.46	5.84	5.21
Average		0.776	4.28 B	0.32%		8.61	6.37	5.79	5.22

ESG Traits - Top-Scoring Funds by YCharts ESG Score

Turns out, the best ESG funds out there don't necessarily have "ESG" written all over the box.

The 25 mutual funds and ETFs below have the highest ESG Scores in the universe of more than 4,800 funds studied. **Irrespective of ESG marketing language and size, this data-driven screening process resulted in funds with noticeably higher ESG Scores. 13 of 25 received a perfect 10.0 ESG Score from MSCI, and only two scored below 0.8 on the Comprehensive ESG Fund Score from YCharts.**

On average, these funds carry a significantly better overall ESG Score of 9.91 and a higher Comprehensive ESG Fund Score of 0.849 (averages for the entire universe of 4,867 funds are 7.52 and 0.582, respectively). Of note, three funds made the top 25 on both the highest-scoring and most popular lists—iShares ESG Aware MSCI EAFE ETF ([ESGD](#)), Nuveen ESG Large-Cap Value ETF ([NULV](#)), and Pax Global Environmental Markets ([PGINX](#)).

	Symbol	Comprehensive ESG Fund Score (by YCharts)	Total Assets Under Management	Expense Ratio	Broad Category	MSCI ESG Score	Environmental Score	Governance Score	Social Score
iShares MSCI Europe Financials ETF	EUFN	0.932	1.25 B	0.48%	Equity	10.00	8.34	6.48	5.57
Green Century MSCI International Index	GCIFX	0.908	0.15 B	0.98%	Equity	10.00	6.74	6.73	6.09
VanEck Semiconductor ETF	SMH	0.890	6.19 B	0.35%	Equity	10.00	5.63	6.21	6.72
iShares Semiconductor ETF	SOXX	0.880	6.09 B	0.40%	Equity	10.00	5.68	6.22	6.50
Nuveen ESG Int'l Developed Markets Equity ETF	NUDM	0.873	0.26 B	0.30%	Equity	9.95	6.73	6.50	5.94
Invesco Global Water ETF	PIO	0.872	0.25 B	0.75%	Equity	10.00	6.44	6.54	5.73
Pax International Sustainable Econ	PXNIX	0.864	0.81 B	0.47%	Equity	9.99	6.55	6.48	5.94
Goldman Sachs International Equity ESG	GSIEX	0.862	0.56 B	0.86%	Equity	9.73	6.63	6.87	5.61
BlackRock International Dividend	BISIX	0.860	0.25 B	0.84%	Equity	10.00	6.76	6.52	5.75
Pax Global Environmental Markets	PGINX	0.857	2.23 B	0.90%	Equity	9.83	5.95	6.50	6.09
Health Care Select Sector SPDR ETF	XLV	0.857	37.96 B	0.10%	Equity	10.00	7.59	5.75	5.45
Franklin FTSE Canada ETF	FLCA	0.853	0.30 B	0.09%	Equity	10.00	5.45	6.84	4.97
Vanguard Global ESG Select Stock	VEESGX	0.852	0.73 B	0.46%	Equity	9.98	7.28	6.37	5.56
iShares ESG Aware MSCI EAFE ETF	ESGD	0.850	6.29 B	0.20%	Equity	9.90	6.61	6.49	5.79
iShares ESG 1-5 Year USD Corp Bd ETF	SUSB	0.844	0.92 B	0.12%	F.I.	10.00	7.17	6.22	5.35
Nuveen ESG Large-Cap Value ETF	NULV	0.844	1.50 B	0.25%	Equity	10.00	7.04	6.03	5.37
iShares ESG Advanced MSCI EAFE ETF	DMXF	0.842	0.36 B	0.12%	Equity	9.80	6.35	6.45	5.66
Hennessy Gas Utility Fund	GASFX	0.840	0.61 B	1.00%	Equity	10.00	6.31	6.67	5.91
TIAA-CREF Social Choice Int'l Equity	TSOEX	0.835	1.12 B	0.36%	Equity	9.66	6.50	6.51	5.80
JHancock ESG Large Cap Core	JHJIX	0.832	0.15 B	0.87%	Equity	9.99	6.57	5.75	5.41
Nuveen ESG Mid-Cap Value ETF	NUMV	0.832	0.31 B	0.30%	Equity	10.00	6.01	6.55	5.20
iShares MSCI South Africa ETF	EZA	0.829	0.30 B	0.57%	Equity	10.00	4.61	6.16	5.42
Boston Common ESG Impact Int'l	BCAIX	0.808	0.45 B	0.86%	Equity	9.48	6.71	6.39	5.74
Vanguard ESG US Corporate Bond ETF	VCEB	0.794	0.33 B	0.12%	F.I.	9.67	7.41	5.61	4.93
iShares US Healthcare Providers ETF	IHF	0.717	1.62 B	0.39%	Equity	9.82	8.81	6.21	5.76
Average		0.849	2.84 B	0.49%		9.91	6.63	6.36	5.69

Performance - Most Popular ESG Funds by Assets Under Management (AUM)

Knowing that ESG marketing does not necessarily equate to top-of-class ESG metrics, how do these funds' performance and risk profiles differ? **Based on total returns, Alpha and Beta, Sharpe Ratio, and standard deviation of returns, it appears the most popular ESG funds are superior to those with the highest ESG Scores, on average.**

Across both lists, most of the best-performing funds are found among the most popular (largest by AUM). As of August 31, 2022, these funds are down less on a year-to-date and year-over-year basis and have greater returns over three and five-year lookbacks. The group's average Sharpe Ratio is better by 0.21 than that of the cohort with the highest ESG Scores. Though standard deviation (3Y lookback) came in slightly higher at 25.7% compared to 22.3%.

	Symbol	2022 YTD Total Return	1Y Total Return	3Y Total Return (Annld)	5Y Total Return (Annld)	Alpha (3Y)	Beta (3Y)	Historical Sharpe Ratio (3Y)	Std. Dev. (3Y)
iShares ESG Aware MSCI USA ETF	ESGU	-17.7%	-13.9%	12.6%	11.9%	-0.13	1.03	0.67	21.5%
Vanguard FTSE Social Index	VFTAX	-20.4%	-16.3%	11.9%	12.0%	-1.16	1.06	0.61	22.5%
iShares ESG Aware MSCI EAFE ETF	ESGD	-20.3%	-20.6%	2.5%	1.8%	-0.43	1.02	0.18	20.9%
TIAA-CREF Social Choice Equity	TISCX	-17.6%	-13.8%	11.7%	11.2%	-0.83	1.02	0.61	22.0%
Vanguard ESG US Stock ETF	ESGV	-20.4%	-16.6%	12.1%	-	-0.74	1.04	0.62	22.3%
iShares Global Clean Energy ETF	ICLN	5.5%	-3.7%	28.1%	21.2%	17.72	1.20	0.85	42.0%
iShares ESG Aware MSCI EM ETF	ESGE	-20.4%	-25.1%	1.6%	0.2%	-0.94	0.89	0.13	21.8%
Calvert US Large Cap Core Responsible Index	CISIX	-19.3%	-15.7%	12.5%	12.0%	-0.08	1.01	0.65	21.7%
iShares MSCI KLD 400 Social ETF	DSI	-19.7%	-14.3%	12.1%	11.8%	-0.45	1.02	0.65	21.4%
iShares MSCI USA ESG Select ETF	SUSA	-19.9%	-15.6%	13.3%	11.9%	0.86	1.00	0.71	21.2%
iShares ESG MSCI USA Leaders ETF	SUSL	-18.6%	-13.2%	12.0%	-	-0.34	1.00	0.65	21.0%
Invesco Solar ETF	TAN	9.6%	-1.5%	40.4%	31.9%	28.45	1.39	1.04	53.1%
American Century Sustainable Equity	AFEGX	-18.4%	-13.5%	12.5%	12.3%	-0.02	1.01	0.65	21.7%
Xtrackers MSCI USA ESG Leaders Equity ETF	USSG	-18.6%	-13.3%	12.0%	-	-0.31	0.99	0.65	21.1%
Vanguard ESG International Stock ETF	VSGX	-20.6%	-22.5%	2.6%	-	-0.18	0.97	0.18	20.3%
First Trust NASDAQ Clean-Edge Green Energy ETF	QCLN	-5.7%	-4.3%	45.0%	28.6%	31.05	1.64	1.20	48.1%
Fidelity U.S. Sustainability Index	FITLX	-18.6%	-13.3%	12.0%	11.9%	-0.41	1.00	0.64	21.2%
Pax Global Environmental Markets	PGINX	-26.0%	-25.1%	8.5%	6.2%	5.42	1.08	0.45	23.4%
Pax Sustainable Allocation	PAXWX	-14.8%	-13.6%	6.8%	6.7%	-0.93	0.61	0.54	13.3%
Calvert US Large Cap Value Responsible Index	CFJIX	-13.7%	-10.9%	9.6%	8.2%	-2.02	0.94	0.52	21.6%
Nuveen ESG Large-Cap Value ETF	NULV	-12.3%	-8.5%	6.8%	7.7%	-4.48	0.91	0.40	20.9%
iShares ESG Aware MSCI USA Small-Cap ETF	ESML	-15.5%	-15.0%	10.1%	-	-3.75	1.13	0.46	28.0%
Fidelity Advisor Energy	FANIX	49.9%	77.6%	19.9%	9.6%	7.54	1.44	0.68	45.9%
DFA US Social Core Equity 2 Portfolio	DFUEX	-16.9%	-12.9%	11.3%	9.9%	-2.04	1.08	0.57	23.7%
Neuberger Berman Sustainable Equity	NBSLX	-17.5%	-13.6%	10.6%	9.4%	-1.49	0.98	0.58	21.0%
Average		-13.1%	-10.4%	13.5%	11.8%	2.81	1.06	0.60	25.7%

Performance - Top-Scoring Funds by YCharts ESG Score

Unfortunately, the funds with top ESG Scores underperformed compared to their more popular, ESG-marketed counterparts. While a greater number of high ESG-scoring funds have positive Alpha, compared to a higher average Alpha but greater variance of scores on the most popular list, their average returns have been nearly doubled by the latter.

Most noticeably, funds with top ESG Scores have suffered acutely in 2022 as the broader market has also declined. As of August 31, 2022, the S&P 500 was down -16.1% year-to-date and -11.2% year-over-year on a total return basis—the high ESG Score cohort averages are -17.7% and -15.4%, respectively.

	Symbol	2022 YTD Total Return	1Y Total Return	3Y Total Return (Ann'lzd)	5Y Total Return (Ann'lzd)	Alpha (3Y)	Beta (3Y)	Historical Sharpe Ratio (3Y)	Std. Dev. (3Y)
iShares MSCI Europe Financials ETF	EUFN	-21.2%	-19.6%	1.0%	-3.8%	-9.95	1.26	0.16	32.1%
Green Century MSCI International Index	GCIFX	-25.3%	-25.6%	2.0%	1.5%	-0.82	0.99	0.16	20.1%
VanEck Semiconductor ETF	SMH	-30.5%	-20.3%	24.4%	20.8%	13.68	1.24	0.95	30.3%
iShares Semiconductor ETF	SOXX	-31.6%	-20.4%	23.0%	20.9%	12.18	1.25	0.90	30.5%
Nuveen ESG Int'l Developed Markets Equity ETF	NUDM	-20.3%	-20.9%	2.7%	2.0%	-0.22	1.01	0.19	20.5%
Invesco Global Water ETF	PIO	-26.6%	-25.2%	6.0%	7.1%	-2.78	1.00	0.35	22.5%
Pax International Sustainable Econ	PXNIX	-23.0%	-23.5%	2.1%	1.3%	-0.76	1.01	0.17	20.5%
Goldman Sachs International Equity ESG	GSIEX	-22.3%	-21.0%	8.1%	5.8%	4.85	1.18	0.44	23.0%
BlackRock International Dividend	BISIX	-16.5%	-14.3%	3.8%	2.9%	1.29	0.85	0.26	17.5%
Pax Global Environmental Markets	PGINX	-26.0%	-25.1%	8.5%	6.2%	5.42	1.08	0.45	23.4%
Health Care Select Sector SPDR ETF	XLV	-10.8%	-6.4%	13.3%	10.8%	6.97	0.70	0.77	18.6%
Franklin FTSE Canada ETF	FLCA	-11.0%	-6.3%	9.3%	-	6.13	1.13	0.47	24.4%
Vanguard Global ESG Select Stock	VESGX	-15.7%	-12.1%	10.1%	-	7.44	0.91	0.60	18.6%
iShares ESG Aware MSCI EAFE ETF	ESGD	-20.3%	-20.6%	2.5%	1.8%	-0.43	1.02	0.18	20.9%
iShares ESG 1-5 Year USD Corp Bd ETF	SUSB	-5.6%	-6.5%	-0.3%	1.1%	0.67	0.58	-0.13	5.3%
Nuveen ESG Large-Cap Value ETF	NULV	-12.3%	-8.5%	6.8%	7.7%	-4.48	0.91	0.40	20.9%
iShares ESG Advanced MSCI EAFE ETF	DMXF	-23.5%	-24.5%	-	-	-	-	-	-
Hennessy Gas Utility Fund	GASFX	11.9%	18.1%	8.0%	6.5%	2.16	0.65	0.44	20.9%
TIAA-CREF Social Choice Int'l Equity	TSOIX	-20.2%	-19.9%	3.2%	2.0%	0.24	1.03	0.22	20.7%
JHancock ESG Large Cap Core	JHJIX	-18.3%	-14.2%	11.0%	12.0%	-1.27	0.99	0.59	21.5%
Nuveen ESG Mid-Cap Value ETF	NUMV	-13.0%	-8.5%	8.7%	7.9%	-4.79	1.09	0.43	25.8%
iShares MSCI South Africa ETF	EZA	-12.2%	-16.7%	0.4%	-3.6%	-3.29	1.34	0.14	31.2%
Boston Common ESG Impact Int'l	BCAIX	-25.7%	-29.1%	1.0%	0.5%	-1.87	1.00	0.11	20.4%
Vanguard ESG US Corporate Bond ETF	VCEB	-13.8%	-14.9%	-	-	-	-	-	-
iShares US Healthcare Providers ETF	IHF	-7.5%	0.3%	17.5%	14.0%	9.92	0.87	0.81	24.1%
Average		-17.7%	-15.4%	7.5%	6.0%	1.75	1.00	0.39	22.3%

The Portfolio- level impact of ESG funds

ESG Scores

To represent the holdings of a typical investor portfolio, a Sample 80/20 Portfolio, 80% equity and 20% fixed income, was created using five mutual funds. Please see the [\[Background & Info\]](#) section for more details about the portfolio's holdings and weights.

As of August 2022, the Sample 80/20 Portfolio registered an overall ESG Score of 7.73 out of 10. In terms of ESG Pillar Scores, that baseline portfolio scored 5.84 out of 10 in the Environment category, 5.35/10 in Social, and 5.58 in Governance. Additionally, 74.1% of the Sample 80/20 Portfolio's exposure to underlying holdings earned AA or AAA ESG ratings.

Holdings Replacement with Most Popular ESG Funds (by AUM)	Overall ESG Score (MSCI)	ESG Environment Score (MSCI)	ESG Social Score (MSCI)	ESG Governance Score (MSCI)	Portfolio ESG Leaders (%)
Original Portfolio					
80/20 Sample Portfolio	7.73	5.84	5.35	5.58	74.1%
Tested Replacements					
Swap VBISX w/ SUSB , Largest Fund in Short-Term Bond Category	+0.15	+0.05	-0.06	+0.02	+4.6pts
Swap VBMFX w/ DSFIX , Largest Fund in Intermediate Core Bond Category	+0.15	+0.00	-0.16	+0.01	+14.5pts
Swap VEIEX w/ ESGE , Largest Fund in Diversified Emerging Market Category	+0.22	+0.06	+0.04	+0.02	+5.9pts
Swap VGT SX w/ ESGD , Largest Fund in Foreign Large Blend Category	+0.53	+0.22	+0.15	+0.18	-0.4pts
Swap VTSMX w/ ESGU , Largest Fund in Large Blend Category	+0.47	+0.24	+0.19	+0.05	-0.5pts
Swap ALL HOLDINGS w/ Largest ESG-marketed Funds in Each Category	+1.55	+0.60	+0.15	+0.29	+25.9pts

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Replacing all five fund holdings of the Sample 80/20 Portfolio with ESG-focused funds significantly boosted its ESG Scores. Utilizing the most popular ESG-marketed fund (by AUM) in each category increased the portfolio's overall ESG Score from 7.73 to 9.28. The same replacement exercise using the Highest ESG-scoring funds brought the portfolio's

overall score up to 9.47. Swapping out the Short-Term Bond and Intermediate Core Bond categories with their respective most popular ESG-marketed and Highest ESG-scoring replacements marginally decreased the ESG Social pillar scores.

Holdings Replacement with Most Popular ESG Funds (by AUM)	Overall ESG Score (MSCI)	ESG Environment Score (MSCI)	ESG Social Score (MSCI)	ESG Governance Score (MSCI)	Portfolio ESG Leaders (%)
Original Portfolio					
80/20 Sample Portfolio	7.73	5.84	5.35	5.58	74.1%
Tested Replacements					
Swap VBISX w/ SUSB , Highest ESG Score in Short-Term Bond Category	+0.15	+0.05	-0.06	+0.02	+4.6pts
Swap VBMFX w/ JIBFX , Highest ESG Score in Intermediate Core Bond Category	+0.17	+0.04	-0.17	+0.03	+14.5pts
Swap VEIEX w/ ESGE , Highest ESG Score in Diversified Emerging Market Category	+0.22	+0.06	+0.04	+0.02	+5.9pts
Swap VGT SX w/ GCIFX , Highest ESG Score in Foreign Large Blend Category	+0.56	+0.25	+0.23	+0.24	-0.5pts
Swap VTSMX w/ HAVGX , Highest ESG Score in Large Blend Category	+0.75	+0.22	+0.06	+0.14	-0.6pts
Swap ALL HOLDINGS w/ Highest ESG-Scoring Funds in Each Category	+1.74	+0.56	-0.14	+0.22	+25.9pts

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Portfolio Metrics with ESG-Focused Fund Replacements

Replacing the individual holdings of the Sample 80/20 Portfolio one at a time, and using the most popular ESG-marketed funds had little effect on performance over the last five years. Whether swapping out a single fund or all five at the same time, the 80/20 Portfolio's annualized returns were affected by less than 1% in either direction. Risk, as measured by Standard Deviation (3Y Lookback), was reduced when replacing the existing Large Blend fund

(Vanguard's Total Stock Market Index, **VTSMX**) but increased or remained the same for the other fund categories. However, Alpha (3Y) was significantly improved and Beta (3Y) was reduced across the board when using ESG-marketed funds.

Holdings Replacement with Most Popular ESG Funds (by AUM)	1Y Total Return 8/31/21 - 8/31/22	3Y Annualized Total Return 8/31/19 - 8/31/22	5Y Annualized Total Return 8/31/17 - 8/31/22	Alpha (3Y)	Beta (3Y)	Sharpe Ratio (3Y)	Std. Dev. (3Y)
Original Portfolio							
80/20 Sample Portfolio	-14.9%	6.6%	6.1%	-1.600	1.167	0.431	17.0%
Tested Replacements							
Swap VBISX w/ SUSB , Largest Fund in Short-Term Bond Category	+0.0pts	-0.1pts	+0.0pts	+1.544	-0.160	-0.005	+0.2pts
Swap VBMFX w/ DSFIX , Largest Fund in Intermediate Core Bond Category	-0.1pts	+0.0pts	+0.0pts	+1.576	-0.161	-0.002	+0.1 pts
Swap VEIEX w/ ESGE , Largest Fund in Diversified Emerging Market Category	-0.4pts	-0.2pts	+0.0pts	+1.481	-0.166	-0.008	+0.1pts
Swap VGTSX w/ ESGD , Largest Fund in Foreign Large Blend Category	-0.2pts	-0.3pts	+0.0pts	+1.377	-0.166	-0.013	+0.0pts
Swap VTSMX w/ ESGU , Largest Fund in Large Blend Category	+0.0pts	+0.4pts	+0.4pts	+2.052	-0.174	+0.032	-0.3pts
Swap ALL HOLDINGS w/ Largest ESG-marketed Fund in Each Category	-0.8pts	+0.0pts	+0.3pts	+1.629	-0.160	+0.004	+0.1pts

Green Highlight = Greater Total Return, Sharpe Ratio, Alpha; Lesser Beta, Standard Deviation
 Red Highlight = Lesser Total Return, Sharpe Ratio, Alpha; Greater Beta, Standard Deviation

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Replacing all five of the Sample 80/20 Portfolio's holdings with the Highest ESG-scoring fund in each category significantly reduced risk and boosted 1Y performance. However, this wholesale replacement also slightly weakened longer-term performance and Sharpe Ratios.



Holdings Replacement with Most Popular ESG Funds (by AUM)	1Y Total Return 8/31/21 - 8/31/22	3Y Annualized Total Return 8/31/19 - 8/31/22	5Y Annualized Total Return 8/31/17 - 8/31/22	Alpha (3Y)	Beta (3Y)	Sharpe Ratio (3Y)	Std. Dev. (3Y)
Original Portfolio							
80/20 Sample Portfolio	-14.9%	6.6%	6.1%	-1.600	1.167	0.431	17.0%
Tested Replacements							
Swap VBISX w/ SUSB , Highest ESG Score in Short-Term Bond Category	+0.0pts	-0.1pts	+0.0pts	+1.544	-0.160	-0.005	+0.2pts
Swap VBMFX w/ JIBFX , Highest ESG Score in Intermediate Core Bond Category	-0.1pts	+0.0pts	+0.1pts	+1.690	-0.170	+0.004	+0.0pts
Swap VEIEX w/ ESGE , Highest ESG Score in Diversified Emerging Market Category	-0.4pts	-0.2pts	+0.0pts	+1.481	-0.166	-0.008	+0.1pts
Swap VGTSX w/ GCIFX , Highest ESG Score in Foreign Large Blend Category	-1.6pts	-0.4pts	-0.1pts	+1.230	-0.166	-0.019	-0.1pts
Swap VTSMX w/ HAVGX , Highest ESG Score in Large Blend Category	+2.5pts	-0.5pts	-0.2pts	+1.566	-0.233	-0.008	-1.1pts
Swap ALL HOLDINGS w/ Highest ESG-Scoring Fund in Each Category	+3.8pts	-1.9pts	-0.4pts	+1.644	-0.474	-0.023	-5.0pts

Green Highlight = Greater Total Return, Sharpe Ratio, Alpha; Lesser Beta, Standard Deviation
 Red Highlight = Lesser Total Return, Sharpe Ratio, Alpha; Greater Beta, Standard Deviation

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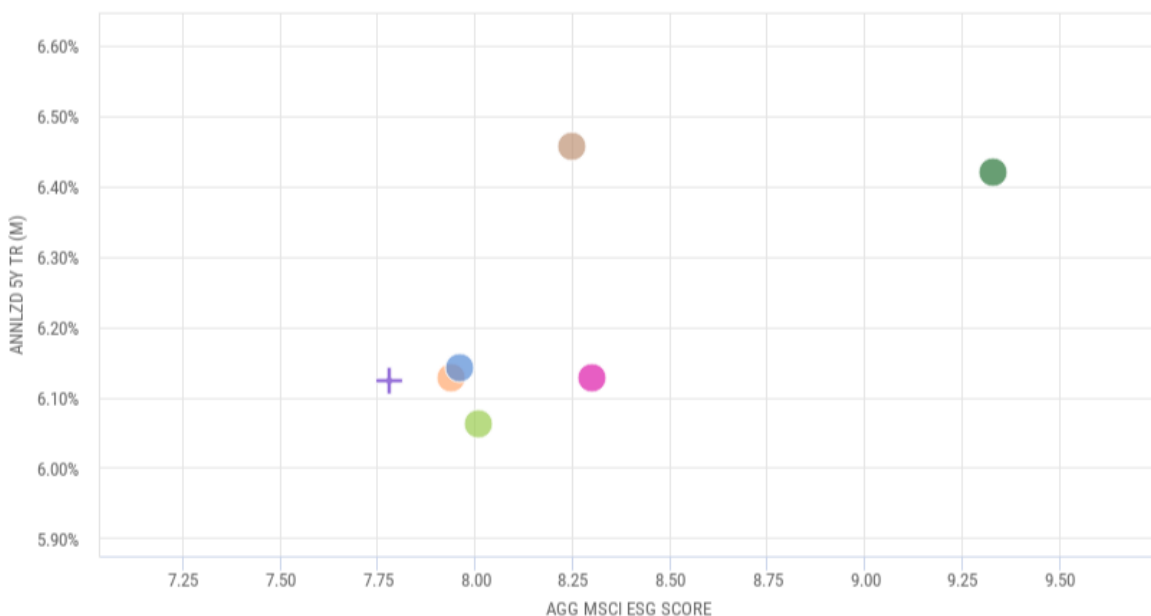
Comparing Portfolio Performance & ESG Scores

Do typical 80/20 Portfolios with greater ESG tilts produce better historical performance? In most cases, the answer is “yes”.

When replacing holdings of the Sample 80/20 Portfolio with the most popular (largest by AUM) ESG-marketed funds in each category, five-year total returns increased or remained the same. The one exception came in the Diversified Emerging Markets category, where replacing **VEIEX** with **ESGE** reduced annualized 5Y total return by six basis points.

ESG Scores vs. Annualized 5Y Returns of Sample 80/20 Portfolios (with Largest ESG-Marketed Fund Replacements)

	X	Y
+ 80/20 Sample Portfolio	7.78	6.12%
● 80/20 Portfolio swapping VBISX w/ SUSB, Largest Fund in Short-Term Bonds	7.94	6.13%
● 80/20 Portfolio swapping VBMFX w/ DSFIX, Largest Fund in Intermediate Core Bonds	7.96	6.14%
● 80/20 Portfolio swapping VEIEX w/ ESGE, Largest Fund in Diversified Emerging Markets	8.01	6.06%
● 80/20 Portfolio swapping VGTSX w/ ESGD, Largest Fund in Foreign Large Blend	8.30	6.13%
● 80/20 Portfolio swapping VTSMX w/ ESGU, Largest Fund in Large Blend	8.25	6.46%
● 80/20 Portfolio swapping All Holdings w/ Largest ESG-Marketed Fund in Each Category	9.33	6.42%



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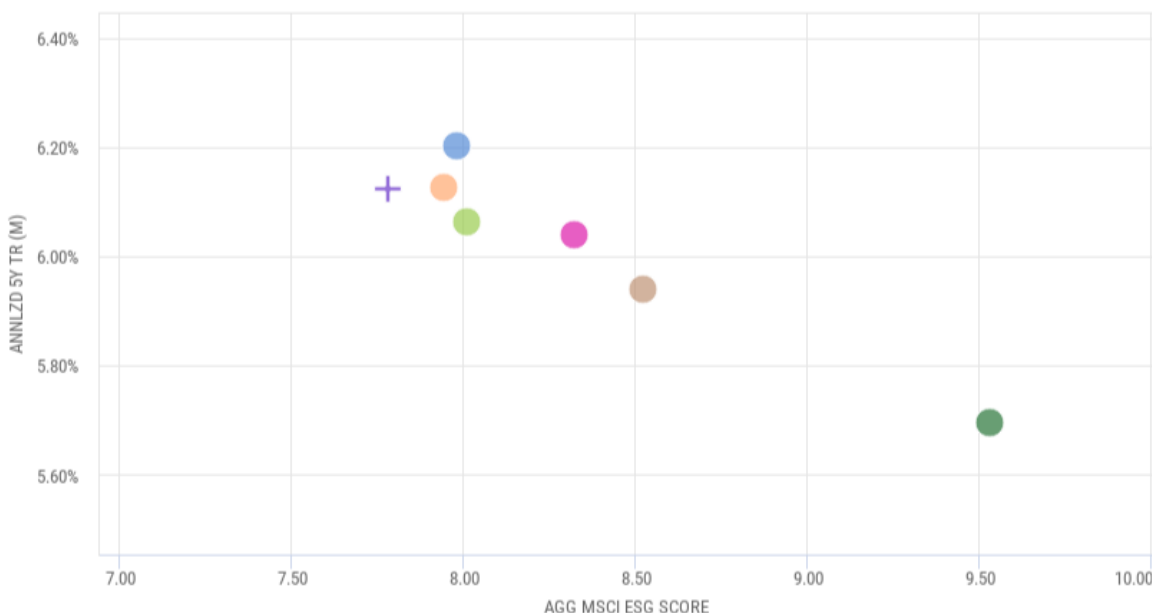
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The opposite occurred when replacing equity fund holdings with High ESG-scoring funds. Annualized 5Y total returns of the Sample 80/20 Portfolio decreased when replacing the Large Blend, Foreign Large Blend, and Diversified Emerging Markets holdings.

Performance was increased, however, when swapping the bond category holdings (**VBMFX** and **VBISX**) with either **SUSB** or **JIBFX**, High ESG-scoring funds, into the Sample 80/20 Portfolio.

ESG Scores vs. Annualized 5Y Returns of Sample 80/20 Portfolios (with Highest ESG-Scoring Fund Replacements)

	X	Y
+ 80/20 Sample Portfolio	7.78	6.12%
80/20 Portfolio swapping VBISX w/ SUSB, Highest ESG Score Fund in Short-Term Bonds	7.94	6.13%
80/20 Portfolio s wapping VBFMX w/ JIBFX, Highest ESG Score Fund in Intermediate Core Bonds	7.98	6.20%
80/20 Portfolio swapping VEIEX w/ ESGE, Highest ESG Score Fund in Diversified Emerging Markets	8.01	6.06%
80/20 Portfolio swapping VGTSX w/ GCIFX, Highest ESG Score Fund in Foreign Large Blend	8.32	6.04%
80/20 Portfolio swapping VTSMX w/ HAVGX, Highest ESG Score Fund in Large Blend	8.52	5.94%
80/20 Portfolio swapping All Holdings w/ Highest ESG Score Fund in Each Category	9.53	5.70%

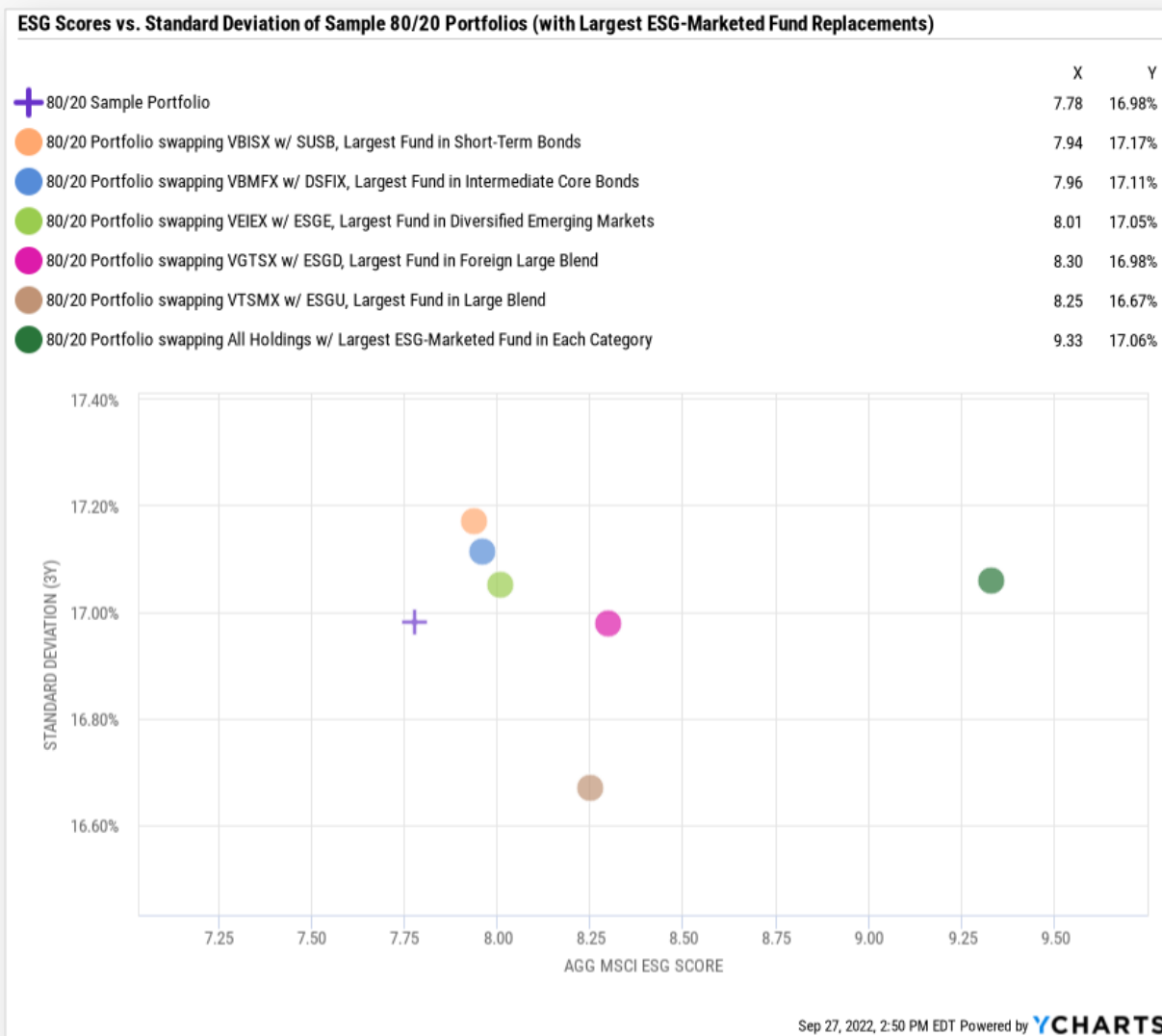


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Comparing Portfolio Risk & ESG Scores

Do ESG-focused funds reduce portfolio risk? Apparently, not when replacing holdings with the most popular ESG-marketed fund in most categories. **The only variation of the Sample 80/20 Portfolio that logged less standard deviation came from replacing the Large Blend category holding, [VTSMX](#), with [ESGU](#).**



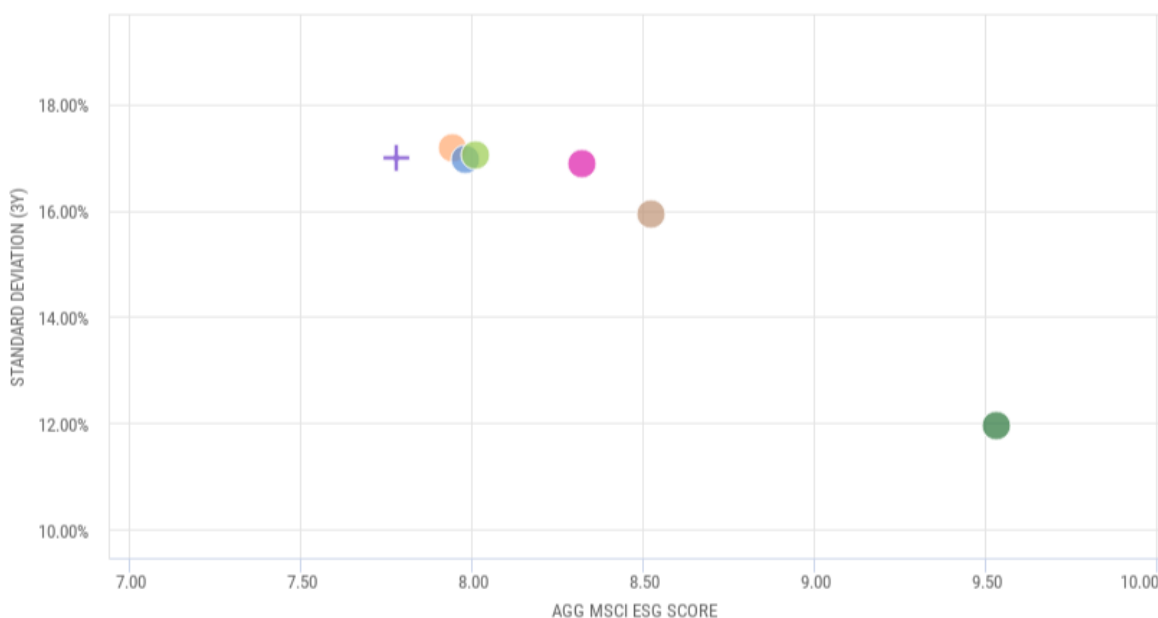
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However, risk was lowered in most instances when swapping out the Sample 80/20 Portfolio's holdings for the Highest ESG-scoring funds. Replacing all five funds with the Highest ESG-scoring alternative in each fund category lowered performance but significantly reduced risk—measured by the

portfolio's five-year annualized standard deviation—by five full percentage points. The only two swaps which caused an increase in portfolio-level risk were in the Short-Term Bonds (**SUSB**) and Diversified Emerging Markets (**ESGE**) categories.

ESG Scores vs. Standard Deviation of Sample 80/20 Portfolios (with Highest ESG-Scoring Fund Replacements)

	X	Y
+ 80/20 Sample Portfolio	7.78	16.98%
80/20 Portfolio swapping VBISX w/ SUSB, Highest ESG Score Fund in Short-Term Bonds	7.94	17.17%
80/20 Portfolio swapping VBFMX w/ JIBFX, Highest ESG Score Fund in Intermediate Core Bonds	7.98	16.97%
80/20 Portfolio swapping VEIEX w/ ESGE, Highest ESG Score Fund in Diversified Emerging Markets	8.01	17.05%
80/20 Portfolio swapping VGTSX w/ GCIFX, Highest ESG Score Fund in Foreign Large Blend	8.32	16.89%
80/20 Portfolio swapping VTSMX w/ HAVGX, Highest ESG Score Fund in Large Blend	8.52	15.93%
80/20 Portfolio swapping All Holdings w/ Highest ESG Score Fund in Each Category	9.53	11.97%



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Conclusion

While ESG investing is a relatively new concept, with most ESG-marketed funds being introduced in the last five years, the SEC's Proposed Rules stand to only accelerate adoption. Advisors and their clients would be well-served to familiarize themselves with ESG verbiage, data, and general tenets of ESG investing.

Using the most popular ESG-marketed fund in each category tended to boost annualized returns of a hypothetical 80/20 portfolio without adding on marginal risk. Separately, replacing a portfolio's holdings with the highest ESG-scoring fund in each category slightly reduced risk and resulted in lower portfolio returns over the last five years. Ultimately, the net impact of ESG investing depends on the individual funds you select, but this analysis shows there are ways to improve both performance and risk when selecting ESG strategies for your portfolios.

Considering that above-average ESG scores have contributed to positive asset flows for equity ETFs, but that ESG marketing still appears less than effective for stimulating flows, a robust and informed process for looking "under the hood" of ESG funds is very warranted. Additionally, investors who are interested in environmental, social, and governance tenets will surely want to know that higher fees are justified by better ESG statistics.

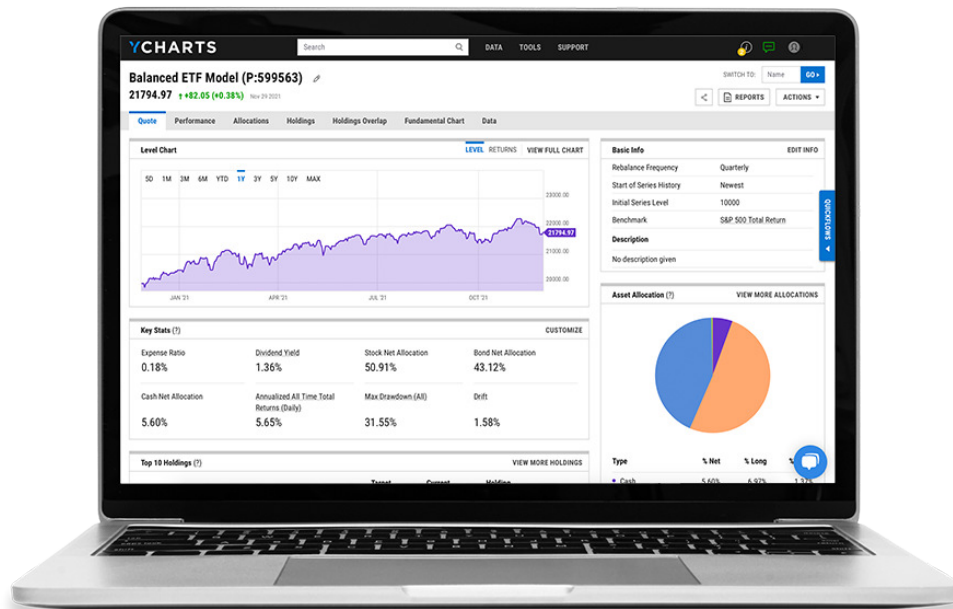
Just as proposed rules from the SEC will require fund managers to detail their ESG selection process in prospectuses and marketing materials, advisors should consider doing the same for their own clients.

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