

Sustainable Investment Insights

Quarterly Report: February 2022

FOR PROFESSIONAL INVESTORS ONLY

Environmental strategies suffer as Energy stocks rally

Decarbonization and green-technology-focused strategies suffered most from surging fossil-fuel prices and the resulting sell-off in Alternative Energy stocks. Yield-curve steepening weighed on SI strategies that have large underweights in Financials, while only the European indexes were hurt by the sell-off in Technology.

Highlights

Yield-curve steepening favors Financials over Tech

Environmental Opportunities (EO) suffered most from the recent spike in bond yields, reflecting its structural underweight in rallying Financials (page 7). Tech pull-back hurt the European indexes (page 11), but did not have the same impact on the US Indexes (page 9).

Rising oil prices knock Alt Energy stocks

The impact of the recent Alternative Energy stock sell-off was mixed, with the EO All-share falling, and the FTSE4Good Developed continuing its uptrend for the three months (Chart 1). UK EO and ESG Low Carbon Target indexes, underweight Energy, were hit the hardest by rising energy prices (page 10).

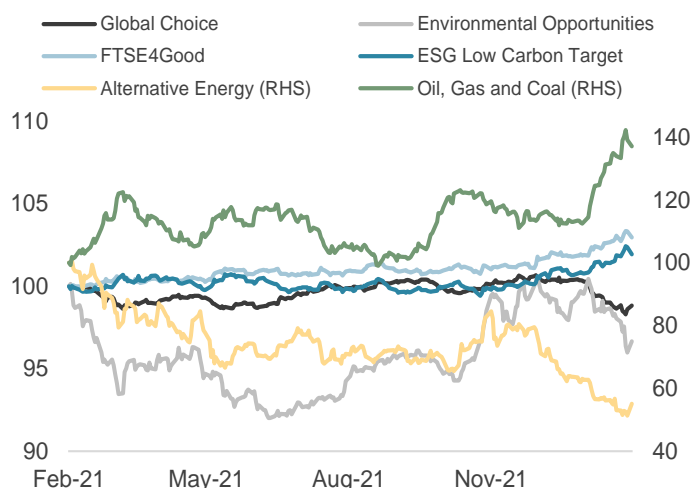
Index performance & contributions to ESG uplift

The FTSE4Good outperformed across markets over the last three months, reflecting its focus on good ESG practices, particularly in EM (page 6). Industry contributions to ESG uplift were mostly broad-based, except in the US and EM, where Technology was the dominating contributor.

Regional performance

In EM, FTSE4Good was the best three-month performer, benefiting from an underweight in Consumer Discretionary (page 14).

Chart 1. Global EO versus Oil Gas & Coal and Alternative Energy returns and other SI strategies* (USD,%).



Note: SI indexes are for developed markets except EO which is Global.

+3.8%

FTSE-All Share
3M (TR, LC)

-2.8%

FTSE USA
3M (TR, LC)

+11.8%

Oil Gas & Coal Sector
Developed 3M (TR, USD)

-36.1%

Alternative Energy Sector
Developed 3M (TR, USD)

+3.2%

FTSE UK ESG Low
Carbon Target 3M (TR,

-6.3%

FTSE USA Environmental
Ops 3M (TR, LC)

Source: FTSE Russell / Refinitiv. Data as of January 31, 2022.

ESG & Sustainable Index Coverage – as of January 31, 2022*

At FTSE Russell, sustainable investing includes a range of index strategies that aim to provide purpose-driven outcomes aligned with investors' sustainable investment policies. Investors seeking close alignment with the benchmark can choose to apply screens to exclude companies with undesirable features or to overweight those with strong ESG practices. A more concentrated option, Thematic indexes, can help address specific social or environmental issues, and the transition to a greener economy, focusing on particular sectors. These indexes share rules-based selection methodologies and are market-cap weighted.

The FTSE Russell Target exposure methodology is for investors looking to integrate multiple climate-change objectives, such as hedging specific climate risks, into an index, while gaining exposure to potential upsides from rising demand for green products. It is also used to support investor's decarbonization or net zero strategies, such as European investors' requirement to align with the minimum standards for EU Low Carbon Benchmarks Requirements. We hope this report provides the transparency and investment insights for investors in the sustainable investment universe.



Market-Cap Weighted Indexes

FTSE Global Choice Indexes select companies based on the impact of their products and conduct on society and the environment.

FTSE4Good Indexes include companies with an ESG and climate-change scores above a minimum threshold, with exclusions.

FTSE Environmental Opportunities Indexes include companies that derive at least 20% of their revenue from green products.

Target Exposure Indexes

FTSE ESG Low Carbon Target Exposure Indexes target a 20% uplift in the ESG score and a 50% reduction in carbon emissions, controlling for country and ICB industry exposures.

*Please refer to the Appendix 3: Glossary Products and Methodology for a comprehensive list of FTSE Russell SI Index Solutions.

Risk and Climate Characteristics – as of January 31, 2022

Key Observations

Sustainable investing encompasses a range of strategies with different investment outcomes. In this section, we summarize the key risk and climate characteristics of the indexes covered in this report.

Global Choice filters out stocks based on conduct and product screens. Product category (“non-renewable energy”) filters out fossil fuels, resulting in significant carbon reductions (29% to 52%), except in the UK (+0.8%). Market-cap weighting the remaining stocks results in an index with risk characteristics close to the benchmark (beta ~ 1 and, high % of benchmark stocks in the index).

FTSE4Good’s best-in-class ESG selection thresholds result in significant ESG uplifts with low tracking errors, except in EM (5.27).

Environmental Opportunities selects companies with significant environmental business activities, resulting in large improvements in active green revenues exposure (475% to 1477%). The focus on “greenness” leads to index concentration and higher tracking errors.

ESG Low Carbon Target broadly achieves the targeted 20% ESG uplift and 50% carbon reduction across regions; in the UK the carbon reduction is achieved, but not the full ESG uplift, despite a larger tracking error than in other regions.

Risk Characteristics: In green are lower risk (tracking error, beta) and more diversified (high % of stocks in benchmark, low weight in Top 10) indexes; in red the more risky, concentrated indexes.

Risk	FTSE Russell SI Index	US	UK	Europe	Japan	Asia Pac	Emerging
Tracking Error	Global Choice	1.30	1.65	2.56		5.20	1.61
	FTSE4Good	1.68	1.47	1.68	2.08	2.21	5.27
	Environmental Ops	7.46	8.52	6.68	6.21	7.13	
	ESG Low Carbon Target	1.98	4.94	1.76	1.09	1.54	1.98
Beta	Global Choice	1.00	0.99	1.00		1.00	0.98
	FTSE4Good	0.99	0.97	0.99	1.02	0.98	0.92
	Environmental Ops	1.18	0.92	1.04	1.11	1.00	
	ESG Low Carbon Target	0.97	0.84	0.98	1.00	0.99	0.95
Number of stocks% of benchmark	Global Choice	84.4	97.6	82.1		88.1	84.8
	FTSE4Good	40.1	35.5	61.0	38.7	38.3	29.6
	Environmental Ops	7.6	6.3	10.6	6.0	4.4	
	ESG Low Carbon Target	75.0	50.1	42.4	84.5	42.0	54.3
Weight in Top 10	Global Choice	27.5	40.7	21.2		19.3	26.5
	FTSE4Good	38.8	41.7	21.6	29.7	23.5	30.7
	Environmental Ops	64.5	60.9	48.2	61.8	63.8	
	ESG Low Carbon Target	37.7	67.6	40.9	33.2	37.1	33.8

Climate Characteristics: In green are indexes achieving the highest uplift relative to the benchmark in the E,S,G and ESG Score and Green Revenues, and the largest carbon reduction. These reflect the different objectives embedded in the indexes.

Climate	FTSE Russell SI Index	US	UK	Europe	Japan	Asia Pac	Emerging
Active E score	Global Choice	1.7	-0.5	-6.0		-2.4	-5.3
	FTSE4Good	25.0	15.4	8.4	22.2	18.4	43.9
	Environmental Ops	19.9	-17.3	2.9	4.6	25.3	24.7
	ESG Low Carbon Target	29.8	21.2	25.8	21.8	24.1	24.7
Active S score	Global Choice	2.2	-1.4	-3.4		-2.1	-2.0
	FTSE4Good	15.2	11.6	6.8	21.5	18.1	37.2
	Environmental Ops	2.1	-16.9	-3.3	-3.1	20.3	
	ESG Low Carbon Target	19.2	13.1	16.1	20.2	22.2	22.0
Active G score	Global Choice	0.3	0.1	-2.7		-2.5	-0.8
	FTSE4Good	4.1	9.0	3.8	13.0	12.0	20.0
	Environmental Ops	6.6	-7.1	-1.7	-0.5	10.9	
	ESG Low Carbon Target	8.5	3.4	7.9	12.9	10.4	10.9
Active ESG score	Global Choice	1.5	-0.8	-3.7		-2.3	-2.1
	FTSE4Good	14.2	11.9	6.2	18.7	16.0	31.8
	Environmental Ops	7.8	-14.6	-1.8	0.3	15.8	
	ESG Low Carbon Target	18.6	11.6	16.1	18.3	18.3	18.2
Carbon Reduction	Global Choice	-48.0	0.8	-52.3		-30.7	-29.4
	FTSE4Good	-37.0	15.8	-12.3	-4.8	-14.4	20.7
	Environmental Ops	71.4	72.2	67.3	36.1	47.9	
	ESG Low Carbon Target	-49.6	-47.0	-52.7	-48.9	-45.9	-39.5
Active Green Revenues	Global Choice	2.6	9.4	-13.1		-9.1	10.1
	FTSE4Good	-11.2	-3.4	5.3	-13.3	-13.3	31.3
	Environmental Ops	475.3	1447.4	545.3	419.8	674.2	
	ESG Low Carbon Target	-5.1	8.0	23.3	-0.2	18.4	10.2

Note: Tracking error and Beta calculations are based on five-years of monthly data, all other calculations are 12-month averages.

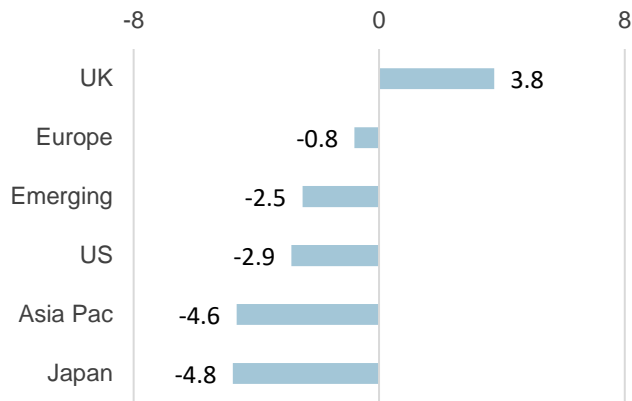
Source: FTSE Russell/Refinitiv. All data as of January 31, 2022. Past performance is no guarantee of future results. This report should not be considered “research” for the purposes of MIFID II. Please see the end for important legal disclosures. Results in this report are for research / illustrative purposes and do not represent the official performance of the indexes.

Absolute Returns – 3M & 12M (TR, LC %) as of January 31, 2022

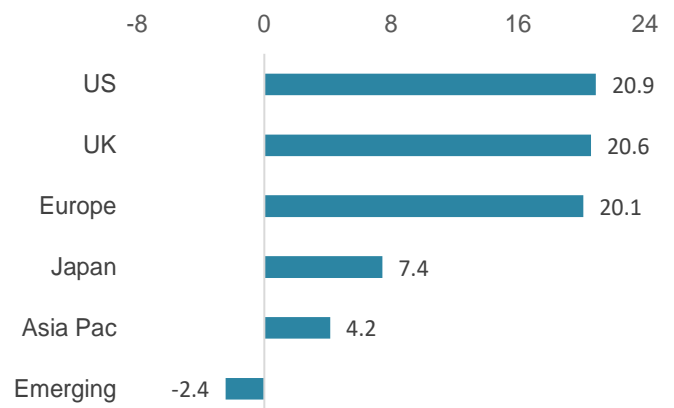
Key Observations

Amid the Tech-led sell-off in global equity markets in January, the US fell 2.9%, while the UK ranked among the best performers, rising 3.8%, as Energy and Financials exposures benefited from rising oil prices and the reflation trade. Three out of four UK SI Indexes topped the winners' list: Low Carbon Target Exposure, FTSE4Good and UK Choice. The EO indexes had a tough time across markets, with USA EO ranking as the worst performer for the three months (down 6.3%).

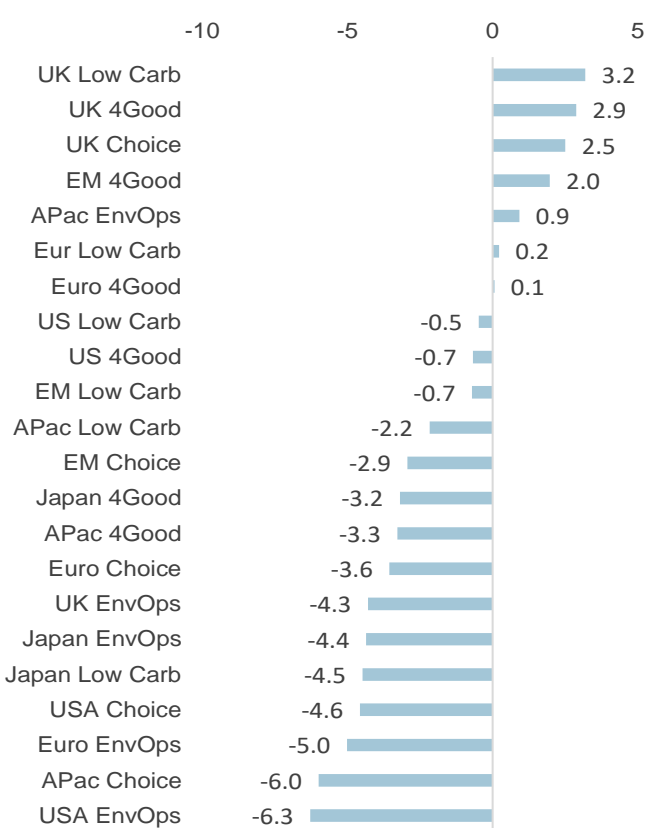
Regional 3M Absolute Returns (LC %). Tech sell-off hurt the US & Japan; rising oil prices & Financials helped the UK.



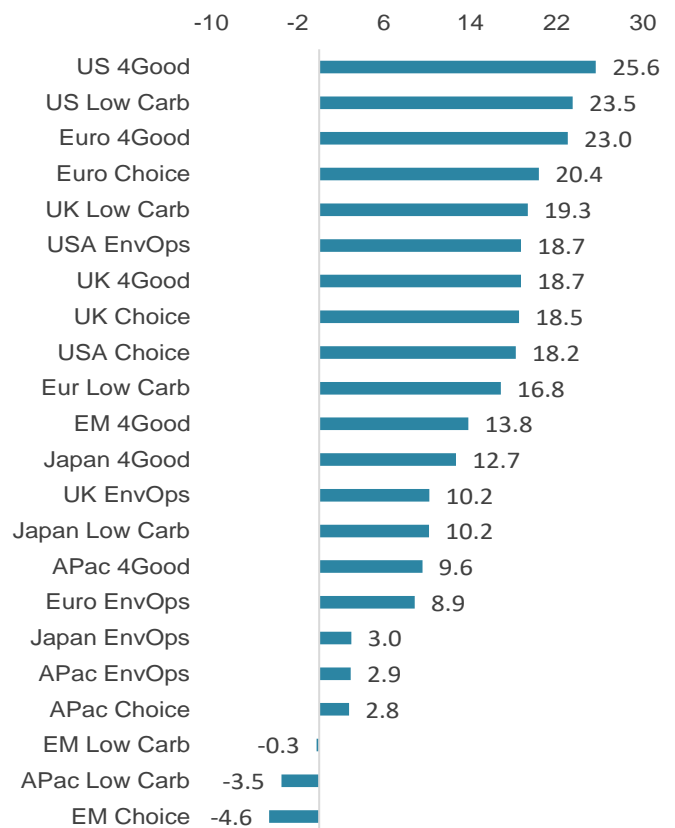
Regional 12M Absolute Returns (LC %). US, UK and Europe delivered double-digit returns.



SI Index 3M Absolute Returns (LC %). Three out of 4 UK indexes led performance due to high correlation to the bench.



SI Index 12M Absolute Returns (LC %). US, Europe and UK SI Indexes delivered the highest absolute returns.



The regional Indexes above are: FTSE USA, FTSE UK, FTSE Developed Europe, FTSE Japan, FTSE Developed Asia-Pacific and FTSE Emerging Markets. Benchmarks for the listed SI Indexes may vary. Appendix 1 shows the appropriate benchmark and market-cap coverage for the SI Indexes covered in this report.

Source: FTSE Russell/Refinitiv. All data as of January 31, 2022. Past performance is no guarantee of future results. This report should not be considered "research" for the purposes of MIFID II. Please see the end for important legal disclosures. Results in this report are for research / illustrative purposes and do not represent the official performance of the indexes.

FTSE Global Choice Indexes – as of January 31, 2022

Global Choice fell for the three months, with markets that have large underweights to the Energy industry suffering the most (e.g., Europe). The Overweight in Financials helped mitigate these losses. Global Choice filters stocks using conduct and product screens, but without explicit ESG or carbon targets so the active ESG score is close to benchmark (see page 3), with small positive contributions from Financials, Technology and Health Care, offset by Energy and other cyclicals. Most regions, except the UK, achieved significant carbon reductions (see page 3), particularly from Energy, Utilities and Basic Materials.

Chart 1: Active performance (TR, LC %)

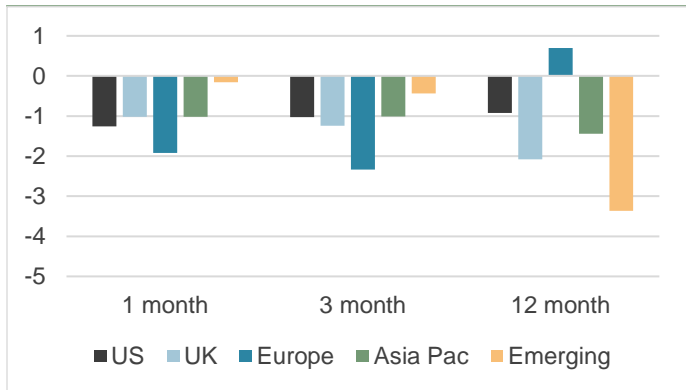


Chart 2: Benchmark ESG scores

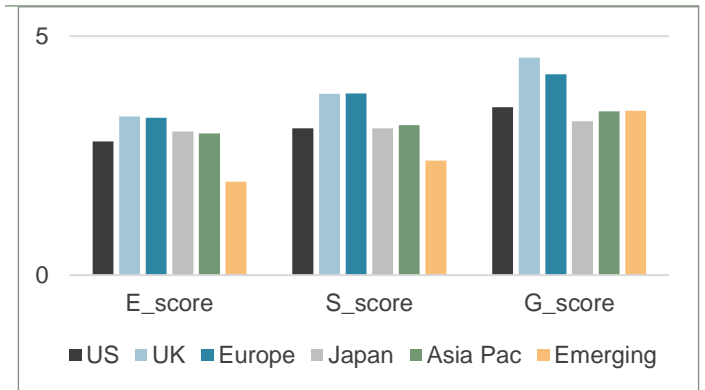


Chart 3: Contribution to ESG uplift (%)

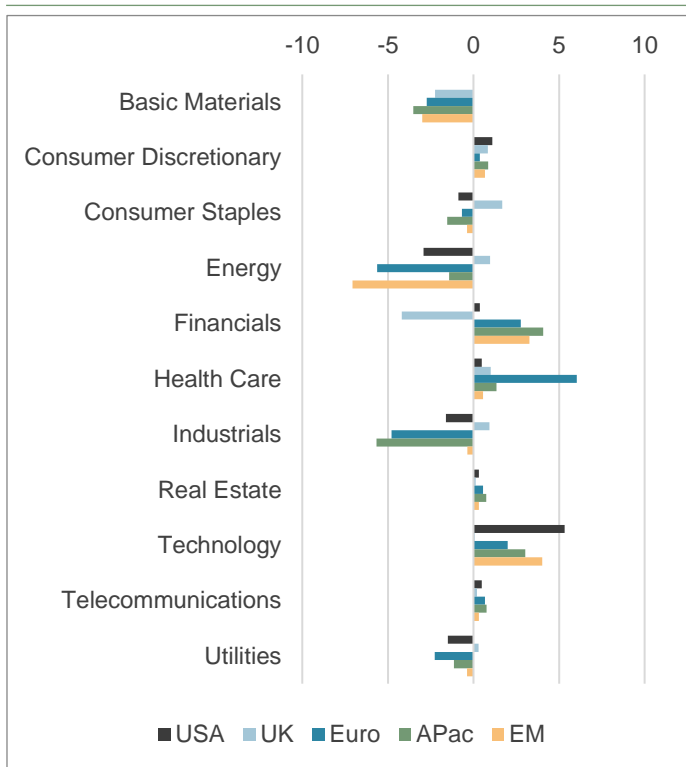


Chart 4: Contribution to Carbon reduction (%)

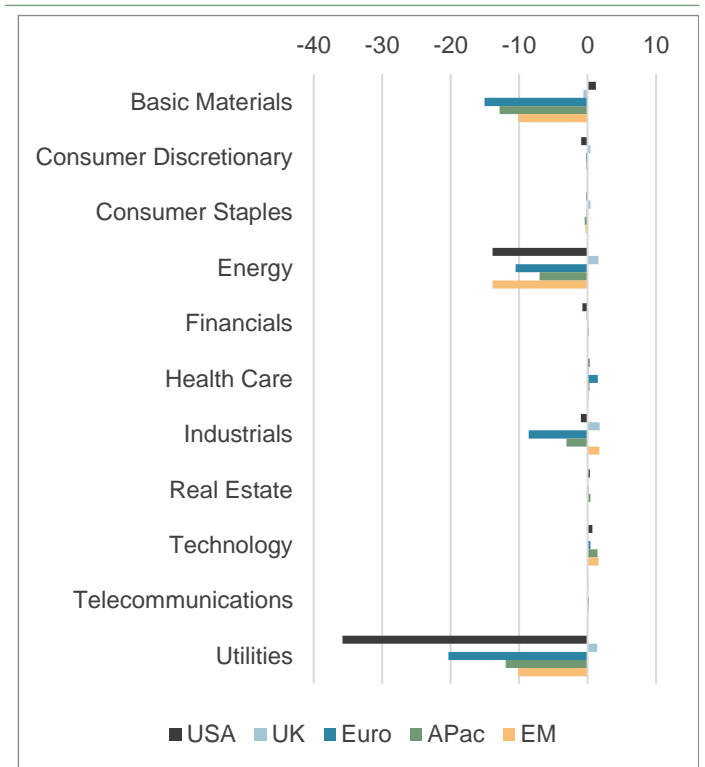
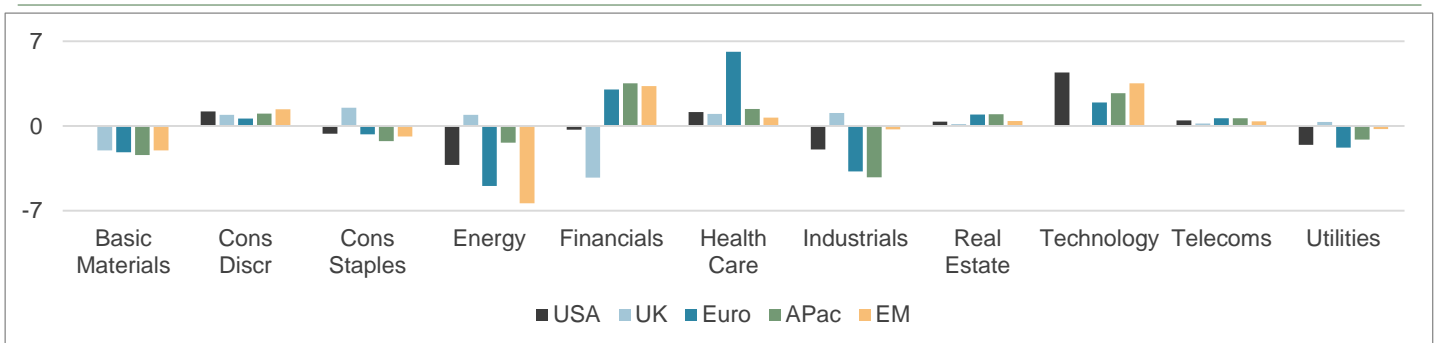


Chart 5: Active industry weights (%)



Source: FTSE Russell/Refinitiv. All data as of January 31, 2022. Past performance is no guarantee of future results. This report should not be considered "research" for the purposes of MIFID II. Please see the end for important legal disclosures. Results in this report are for research / illustrative purposes and do not represent the official performance of the indexes.

FTSE4Good Indexes – as of January 31, 2022

FTSE4Good indexes modestly outperformed across all regions, and modestly higher in the last three months. The applied threshold for minimum ESG and climate standards resulted in substantial ESG uplifts (see page 3) and contributions were broad-based across industries (Chart 3), except for the US and EM, where the largest contributions came from Technology. EM FTSE4Good saw the largest ESG uplift (32%) but also a significant increase (21%) in relative carbon emissions (see page 3). Carbon reduction was the largest in the US, with a decline of 43%, largely coming from stock selection within Utilities (as active weight is neutral Chart 5).

Chart 1: Active performance (TR, LC %)

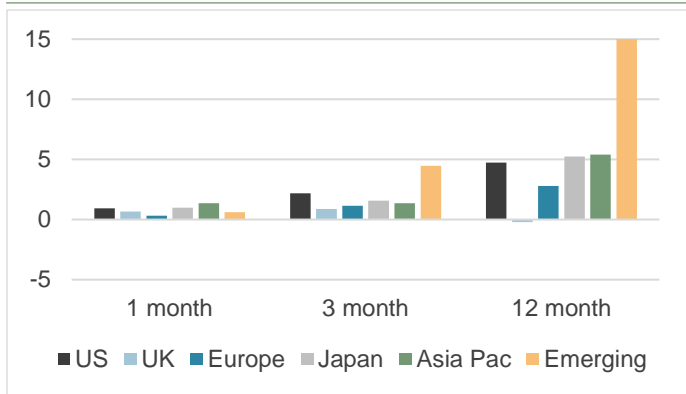


Chart 2: Benchmark ESG scores

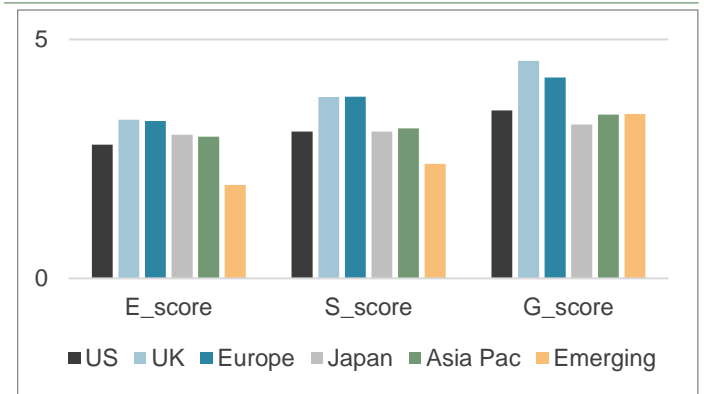


Chart 3: Contribution to ESG uplift (%)

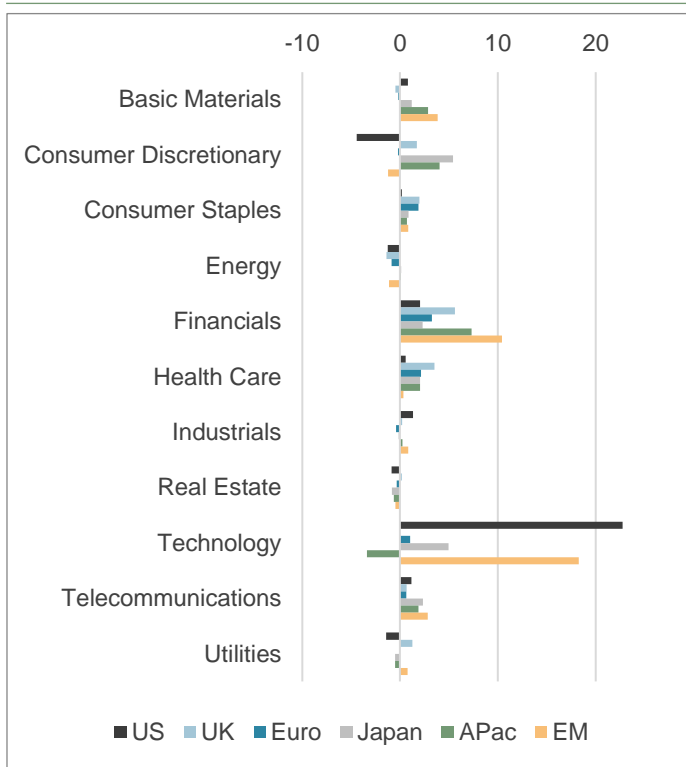


Chart 4: Contribution to Carbon reduction (%)

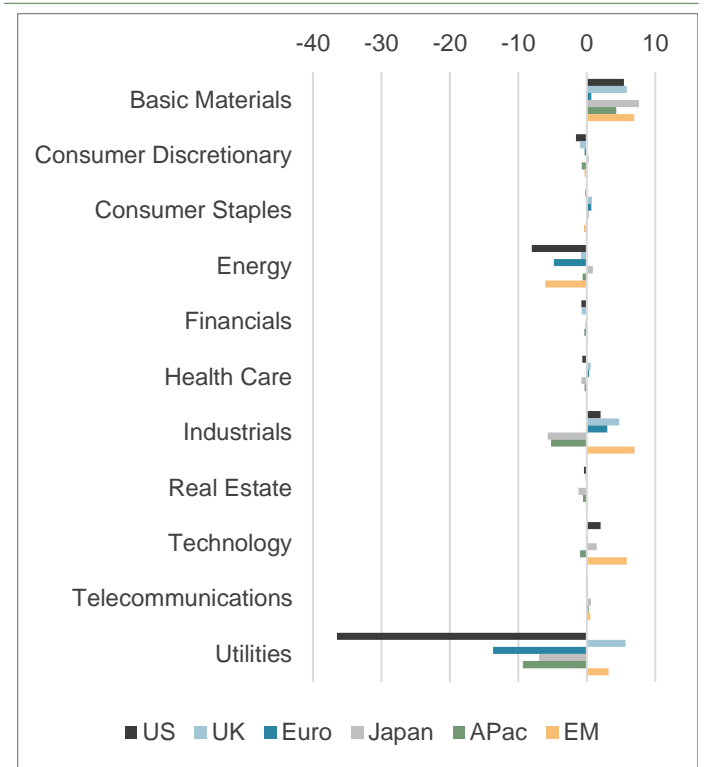
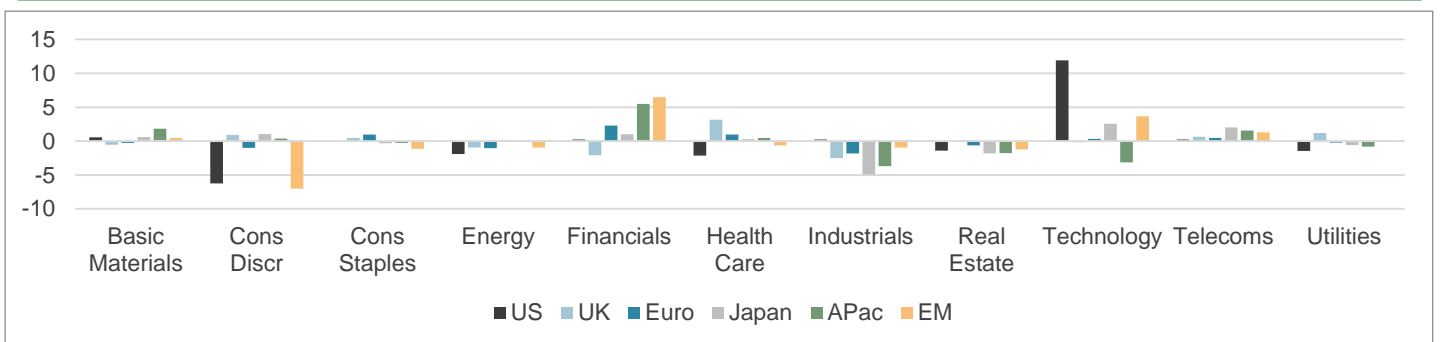


Chart 5: Active industry weights (%)



Source: FTSE Russell/Refinitiv. All data as of January 31, 2022. Past performance is no guarantee of future results. This report should not be considered "research" for the purposes of MIFID II. Please see the end for important legal disclosures. Results in this report are for research / illustrative purposes and do not represent the official performance of the indexes.

FTSE Environmental Opportunities Indexes – as of January 31, 2022

With the exception of Asia Pacific, EO performance has been disappointing in the last 12 months, mostly reflecting its large structural underweights in Financials and Energy in the UK. Green-revenue selection thresholds (20% or more) resulted in significant index concentration and large active weights (Chart 5) in Industrials & Utilities and Technology, but led to substantial uplifts ranging from 420% in Japan to 1,447% in the UK (see page 3). Whilst the green-revenue uplift was quite concentrated in Industrials in Japan and Europe, it was more broad-based in the UK, with also major contributions from Utilities and Financials.

Chart 1: Active Performance (TR, LC %)

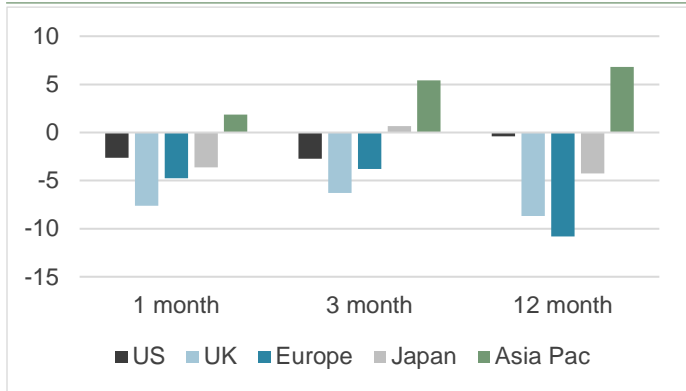


Chart 2: Benchmark Green Revenues scores

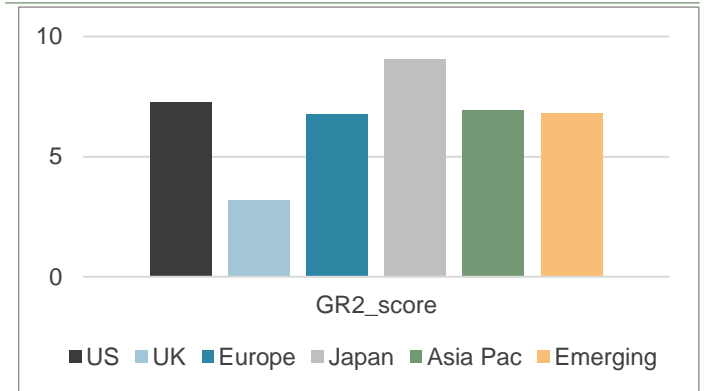


Chart 3: Contribution to ESG uplift (%)

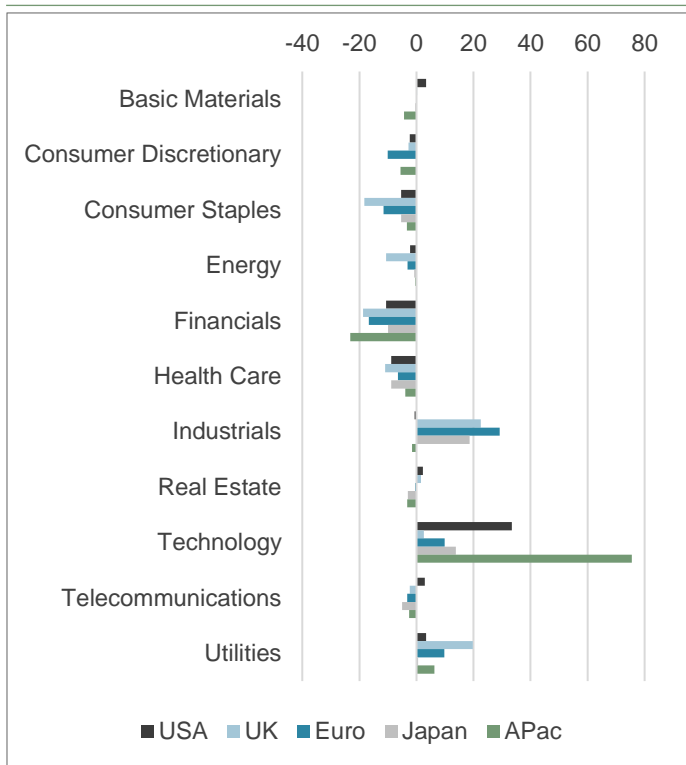


Chart 4: Contribution to Green Revenues uplift (%)

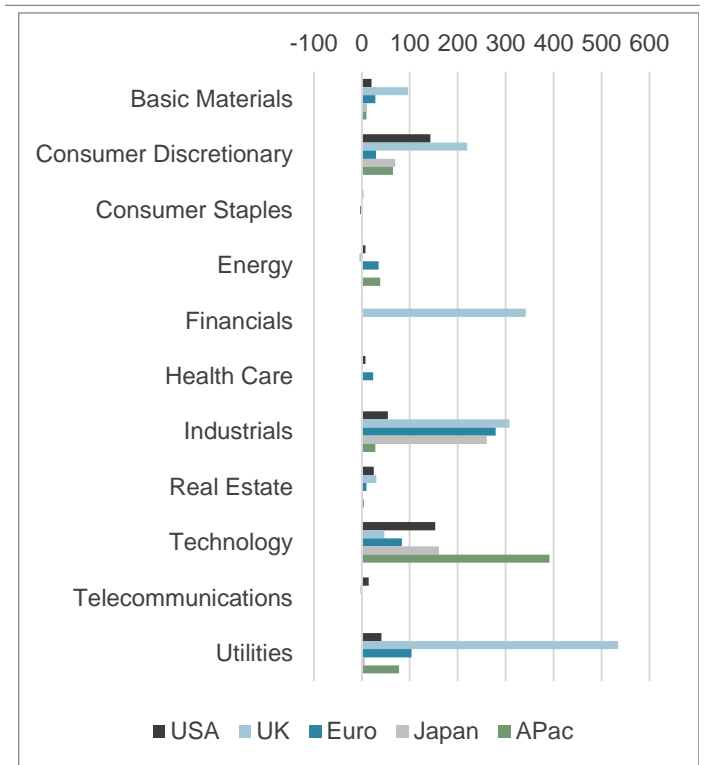
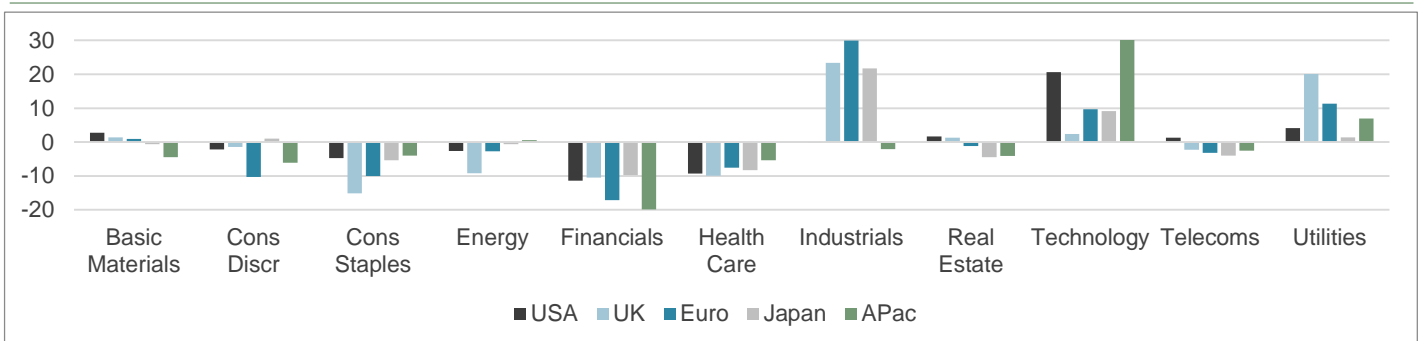


Chart 5: Active industry weights (%)



Source: FTSE Russell/Refinitiv. All data as of January 31, 2022. Past performance is no guarantee of future results. This report should not be considered "research" for the purposes of MIFID II. Please see the end for important legal disclosures. Results in this report are for research / illustrative purposes and do not represent the official performance of the indexes.

FTSE ESG Low Carbon Target Exposure Indexes – as of January 31, 2022

Performance was mixed across regions, with the UK Index lagging over all periods (owing to its underweight in Energy, Chart 5), in contrast to a rebound in Europe. The targeted 20% uplift in ESG scores was broadly achieved across regions, with broad-based industry contributions, except in the UK, where Energy reduced the average ESG score. The targeted 50% carbon reduction is broadly achieved by reweighting companies in carbon-intensive industries – i.e., Energy, Basic Materials, Industrials and Utilities. The EM index has a much higher carbon intensity than other regions (Chart 2), and a substantial reduction of 40% (see page 3).

Chart 1: Active Performance (TR, LC %)

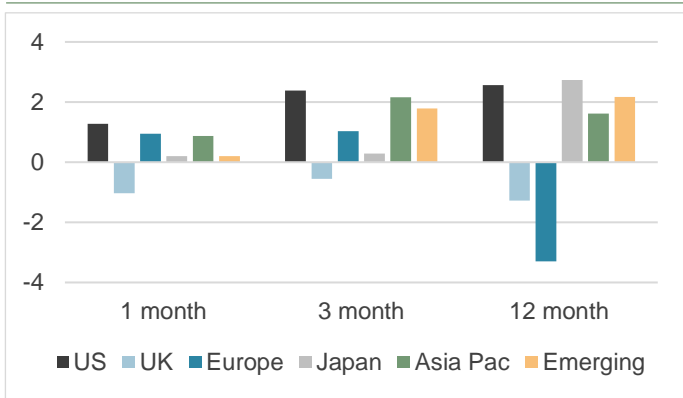


Chart 2: Benchmark Carbon Intensity scores

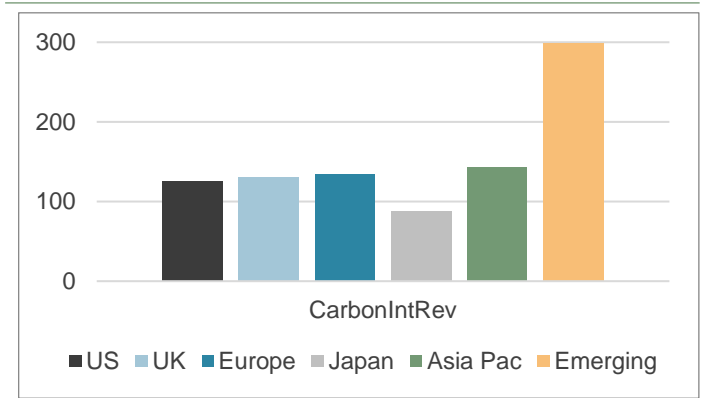


Chart 3: Contribution to ESG uplift (%)

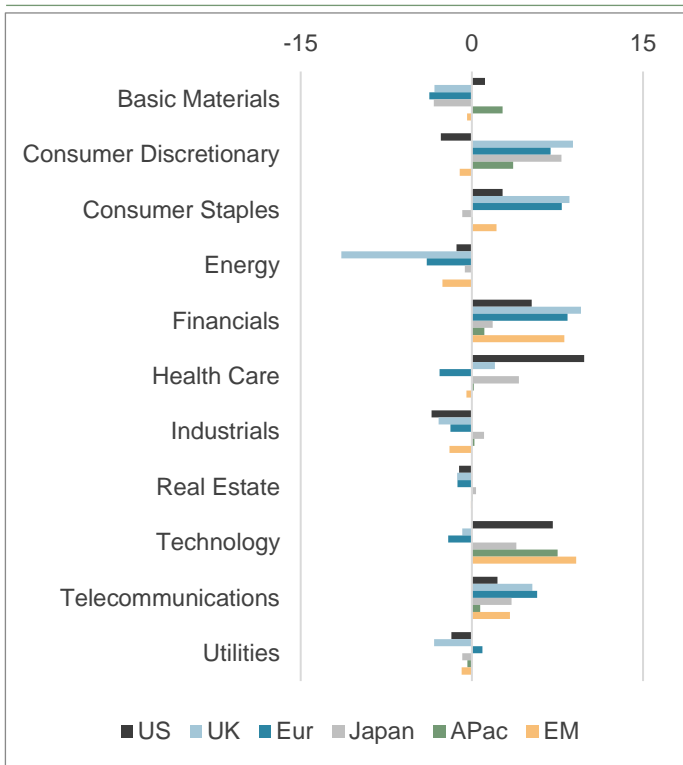


Chart 4: Contribution to Carbon reduction (%)

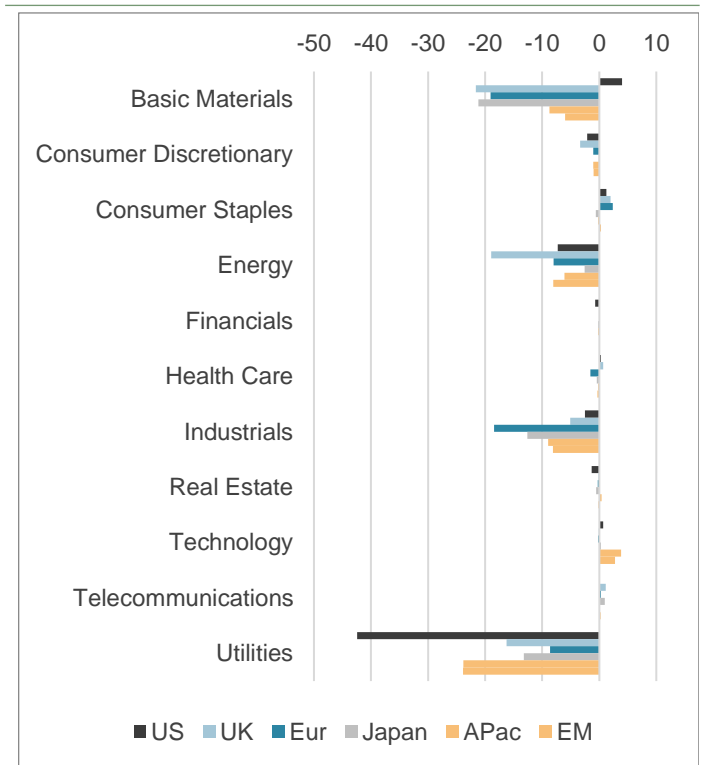
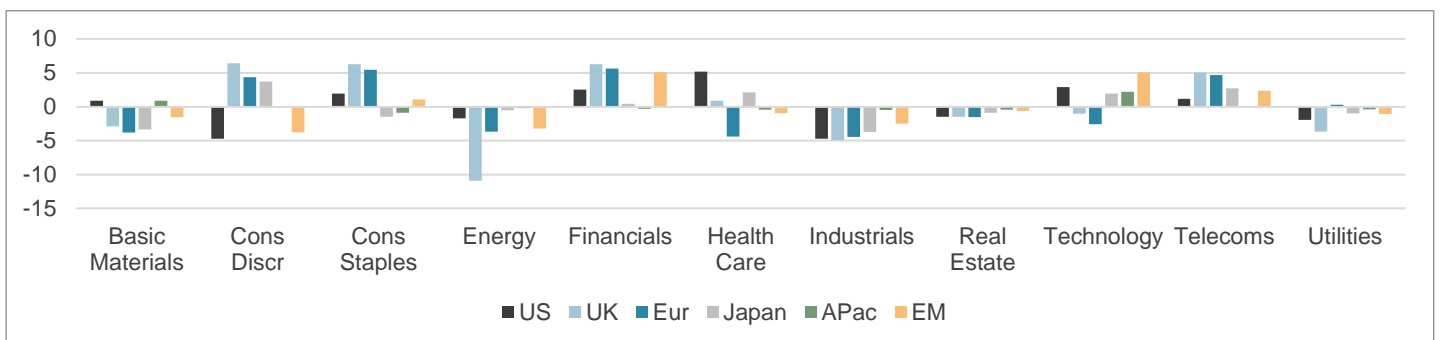


Chart 5: Active industry weights (%)



Source: FTSE Russell/Refinitiv. All data as of January 31, 2022. Past performance is no guarantee of future results. This report should not be considered "research" for the purposes of MIFID II. Please see the end for important legal disclosures. Results in this report are for research / illustrative purposes and do not represent the official performance of the indexes.

US Index Comparisons – as of January 31, 2022

FTSE4Good and ESG Low Carbon Target benefited from yield-curve steepening and the rotation from Growth into Value stocks in January and over the three months, while EO and US Choice lagged (Chart 5). EO was the worst-performing strategy, underperforming the benchmark by 2.7% over the three-month period. While EO's underweight in Financials had little impact, the drag on the three-month returns from the small underweight in Energy was a common theme. EO's tracking error (7.5) and beta (1.2) exceeded those of peers (see page 3), underpinning its greater return volatility over time.

Chart 1: Active Performance (LC %)

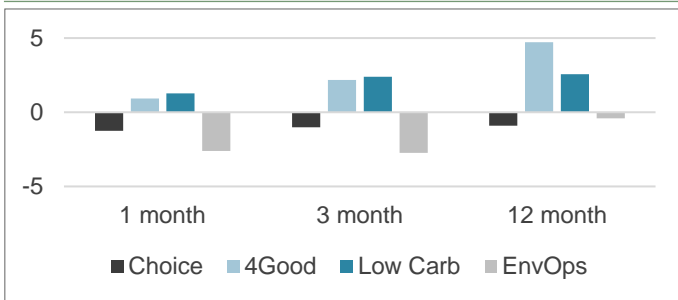


Chart 2: Index tracking error (%)

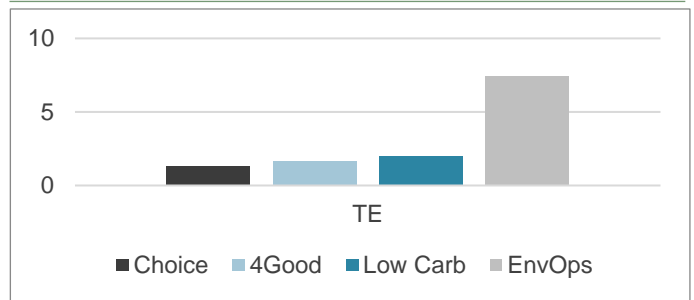


Chart 3: Active Industry weights (%)

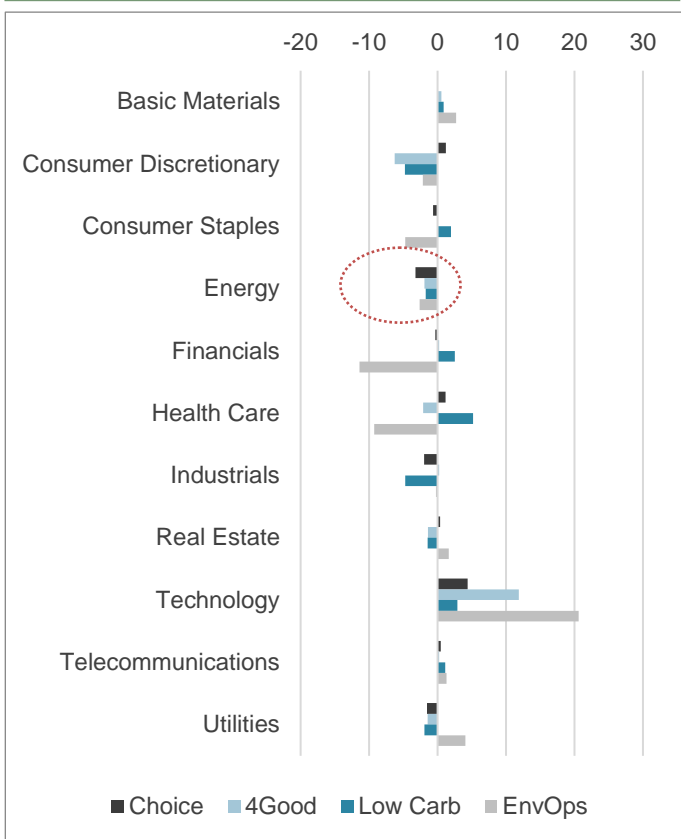


Chart 4: Industry allocation effect - 3M (LC %)

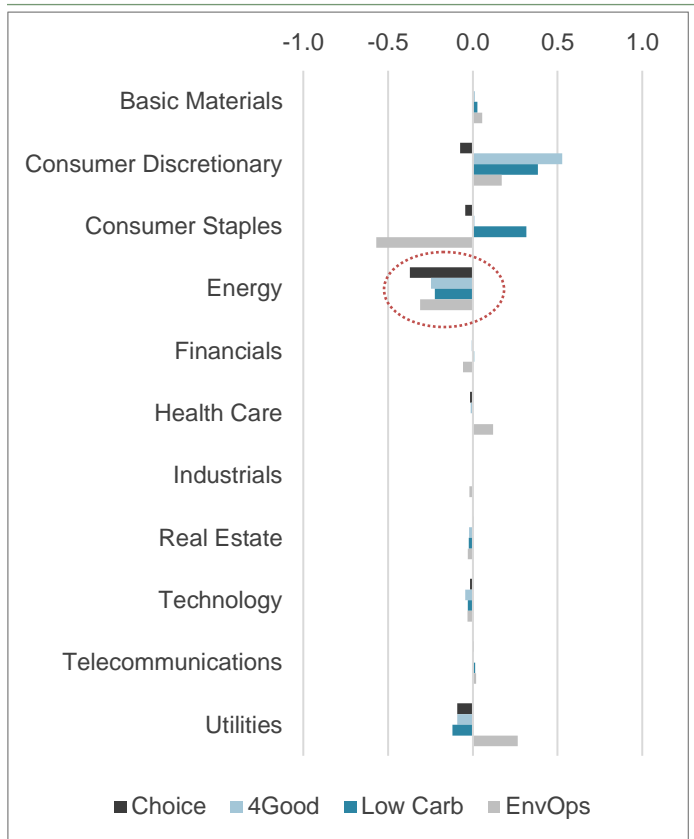
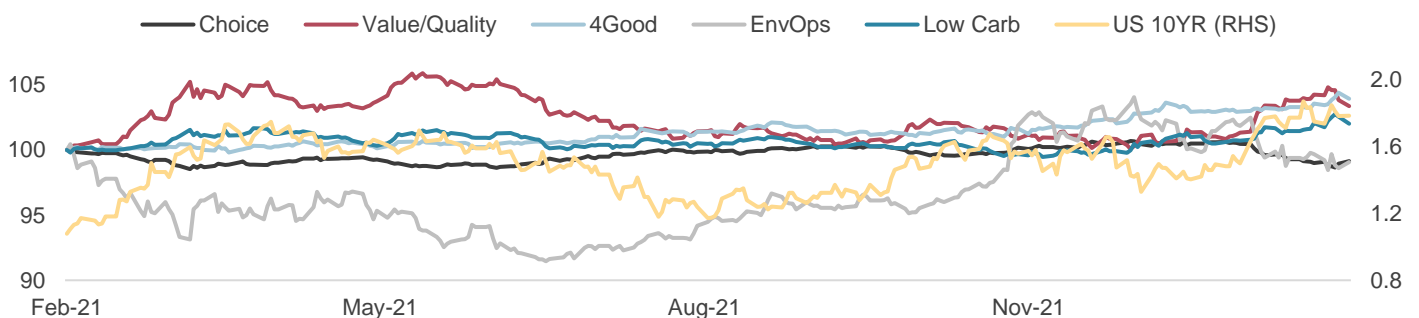


Chart 5: US Indexes relative performance vs Value/Quality (TR, LC %) and 10-year US bond yield (%)



Source: FTSE Russell/Refinitiv. All data as of January 31, 2022. Past performance is no guarantee of future results. This report should not be considered "research" for the purposes of MIFID II. Please see the end for important legal disclosures. Results in this report are for research / illustrative purposes and do not represent the official performance of the indexes.

UK Index Comparisons – as of January 31, 2022

In the UK, ESG Low Carbon Target (3.2%), FTSE4Good (2.9%) and Global Choice (2.5%) topped the performance charts for the 3-month period, though they performed in line with the strong UK market. EO lagged its UK peers, though its underweight in Financials, which rebounded with the steepening UK yield curve (Chart 5), had little impact. EO's Industrials exposure detracted, but its overweight in Utilities was particularly additive. ESG Low Carbon and EO were both hurt by their underweight in Energy. Global Choice performed in line with the benchmark, an outgrowth of its small active industry weights and a beta close to one

Chart 1: Active Performance (LC %)

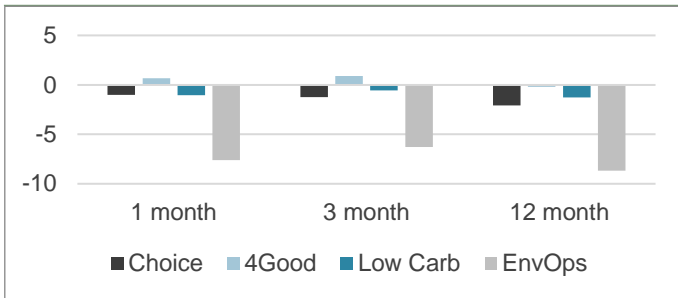


Chart 2: Index beta (%)

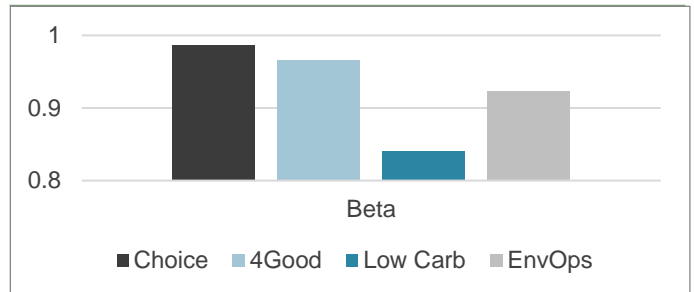


Chart 3: Active Industry weights (%)

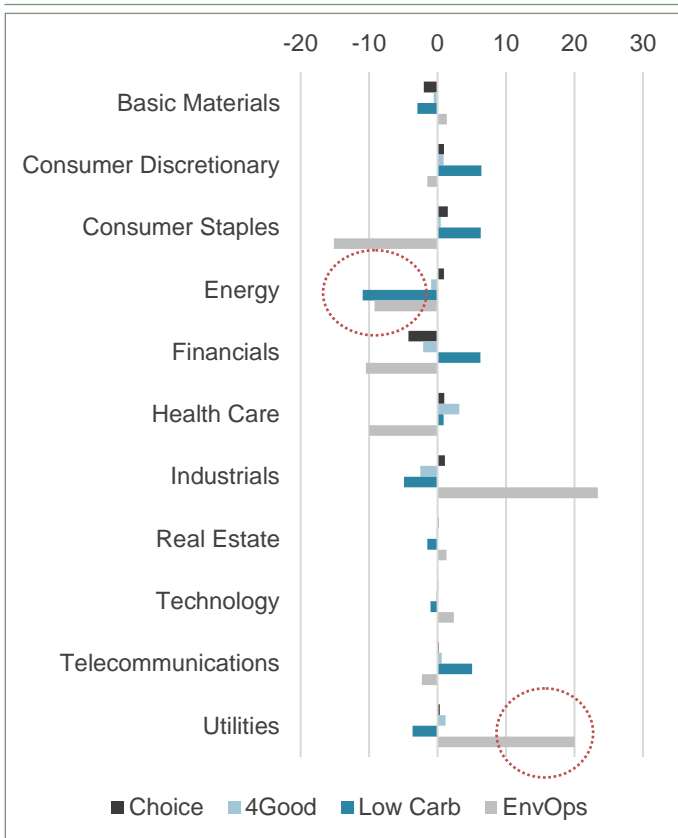


Chart 4: Industry allocation effect - 3M (LC %)

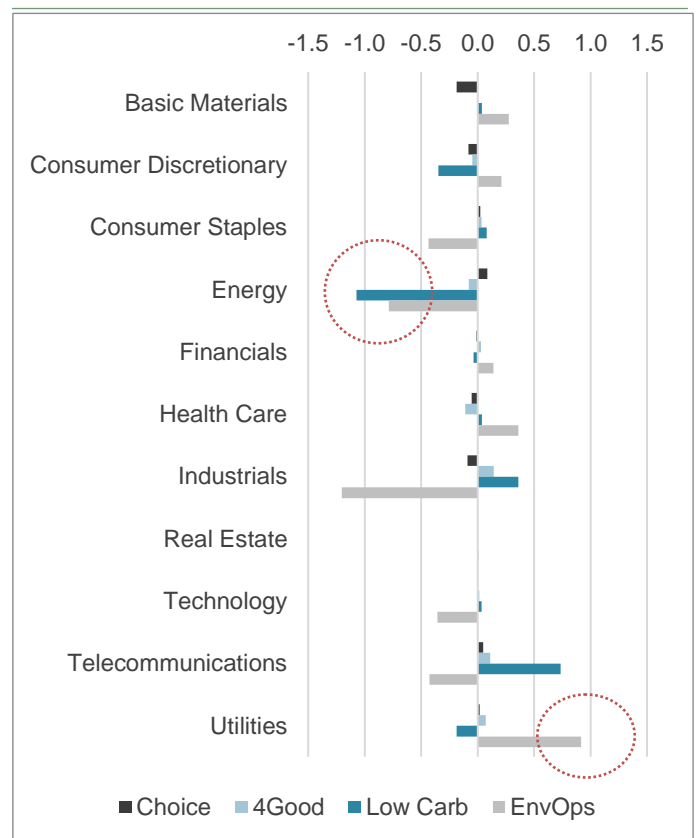
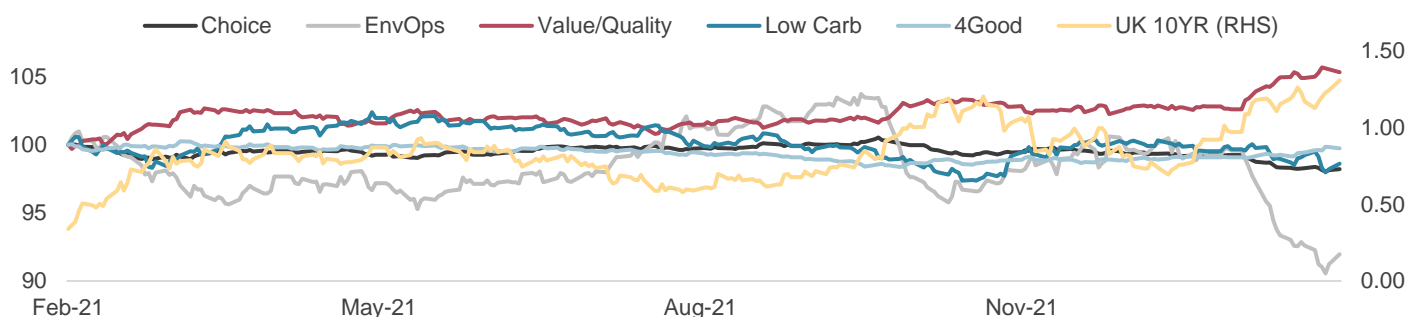


Chart 5: UK Indexes relative performance vs Value/Quality (TR, LC %) and 10-year UK bond yield (RHS)



Source: FTSE Russell/Refinitiv. All data as of January 31, 2022. Past performance is no guarantee of future results. This report should not be considered "research" for the purposes of MIFID II. Please see the end for important legal disclosures. Results in this report are for research / illustrative purposes and do not represent the official performance of the indexes.

Europe Index Comparisons – as of January 31, 2022

European SI index returns matched, or modestly lagged, the benchmark in the last three months. As in other regions, EO was hurt by the recent spike in bond yields (Chart 5) and its underweight in Financials. EO Europe’s overweight in Technology and “green” Industrials added further to losses. EO’s focus on environmental opportunities has resulted in a high index concentration: it holds just 10% of benchmark stocks and has a 48% weight in the top 10 stocks (Chart 2). Global Choice is well-diversified, holding 82% of benchmark stocks, and its performance has been closely aligned with that of the broad market.

Chart 1: Active Performance (LC %)

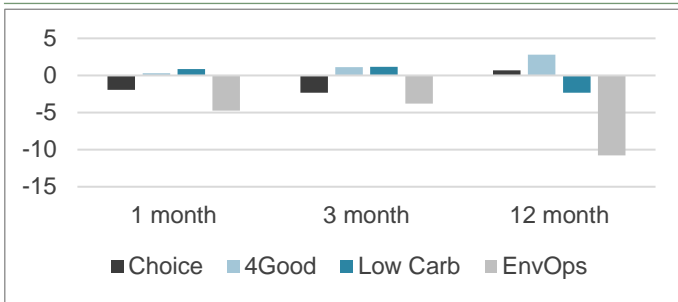


Chart 2: Index concentration

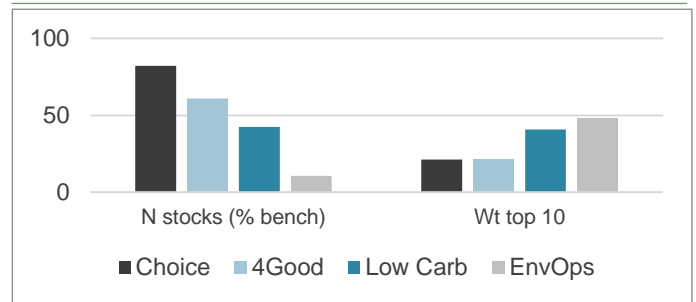


Chart 3: Active Industry weights (%)

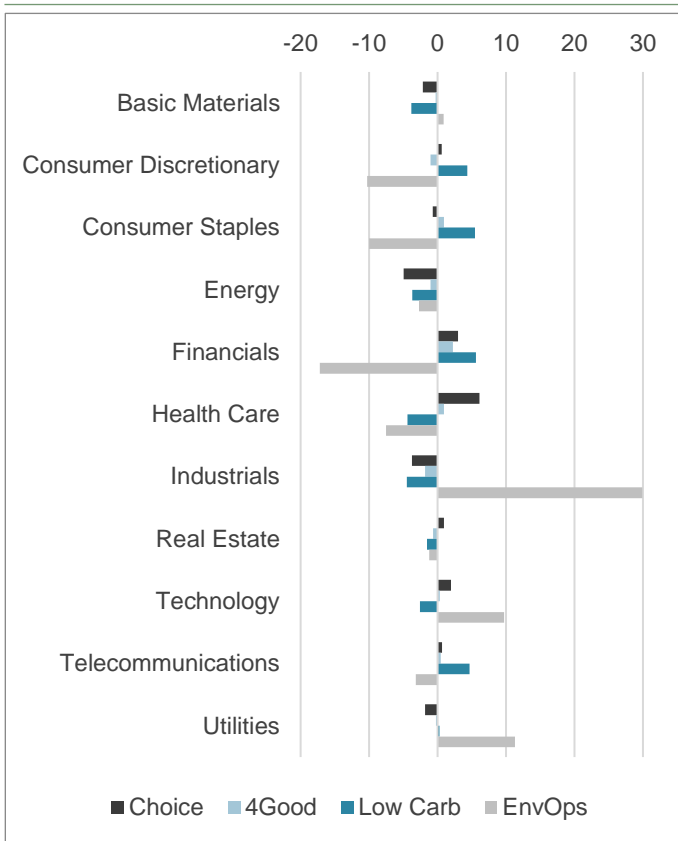


Chart 4: Industry allocation effect - 3M (LC %)

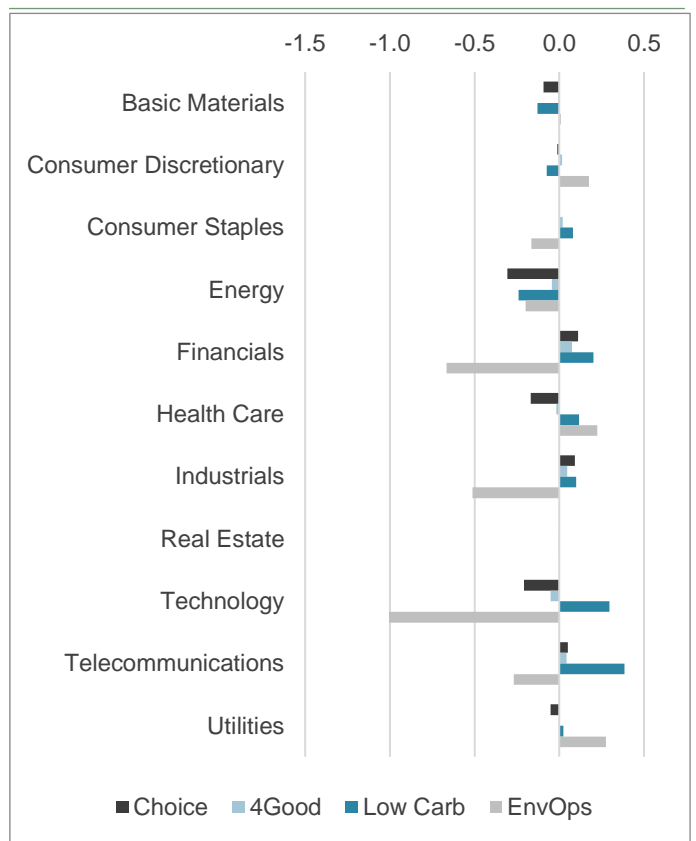
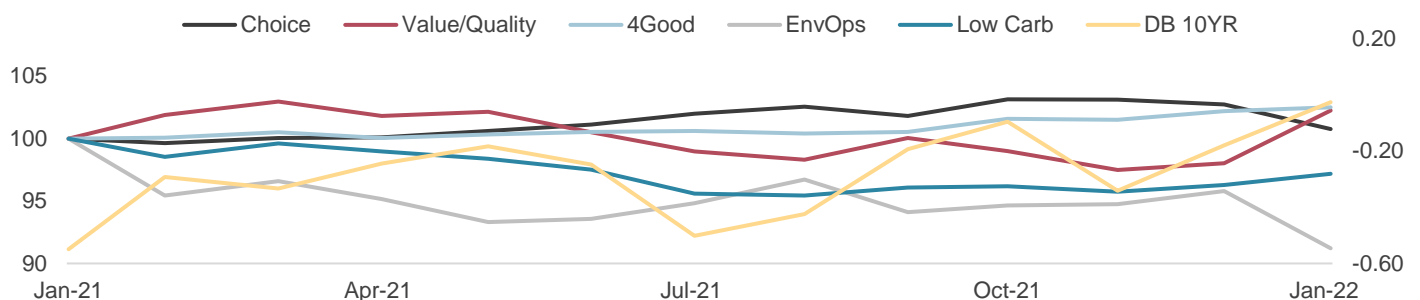


Chart 5: European Indexes relative performance vs Value/Quality (TR, LC %) and 10-year German bond yield (%)



Source: FTSE Russell/Refinitiv. All data as of January 31, 2022. Past performance is no guarantee of future results. This report should not be considered “research” for the purposes of MIFID II. Please see the end for important legal disclosures. Results in this report are for research / illustrative purposes and do not represent the official performance of the indexes.

Japan Index Comparisons – as of January 31, 2022

Over the past three months, SI index returns in Japan roughly matched the sharp declines in the market overall, as FTSE Japan fell 4.8% for the period and ranked among the worst performing equity markets. EO's underweight in Financials and overweight in Technology – as well as the green-technology focus within Industrials – hurt performance. The underweight in Health Care added the most value. Active industry exposures of ESG Low Carbon Target and FTSE4Good are small, resulting in performances closely aligned with those of the benchmark and a low tracking error (Chart 2).

Chart 1: Active Performance (LC %)

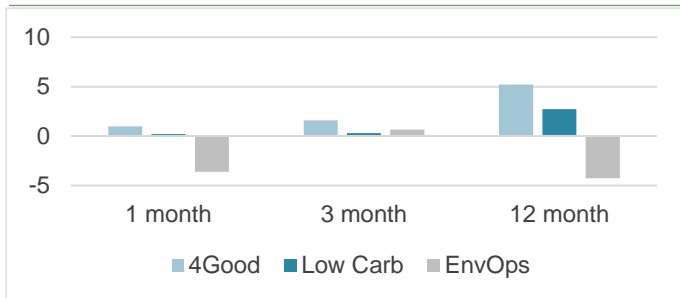


Chart 2: Index tracking error (%)

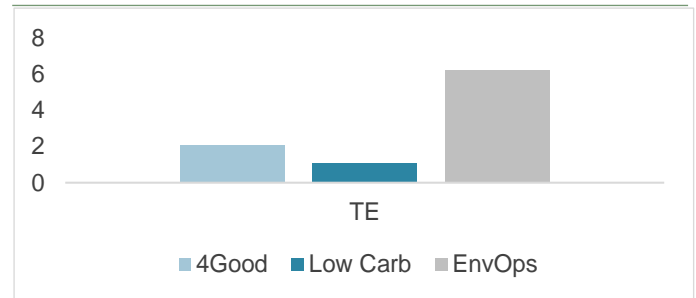


Chart 3: Active Industry weights (%)

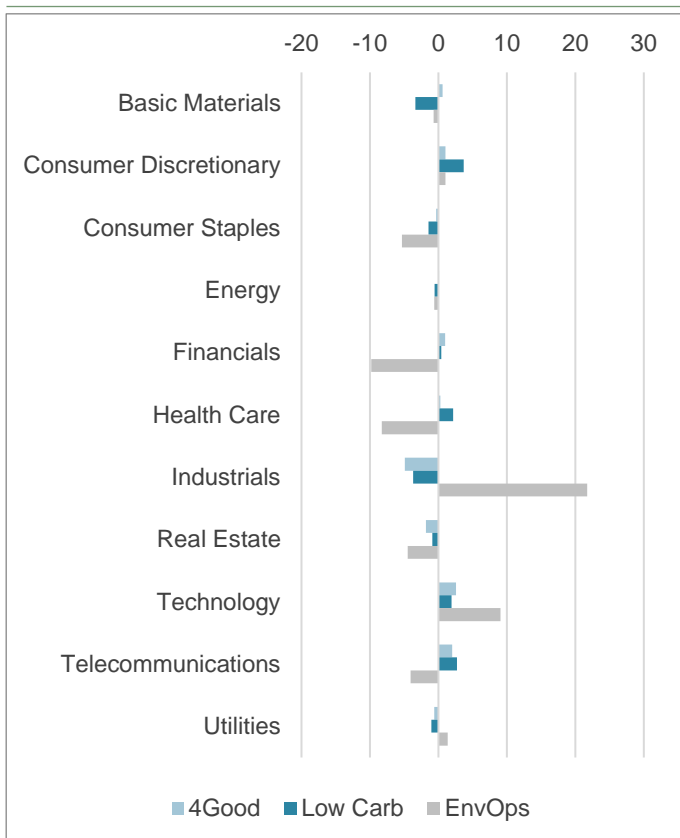


Chart 4: Industry allocation effect - 3M (LC %)

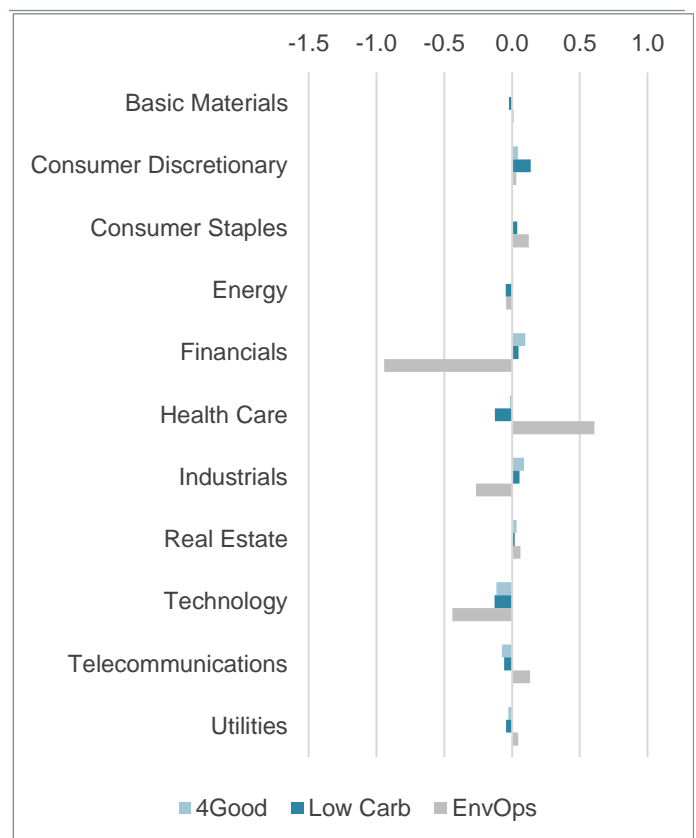
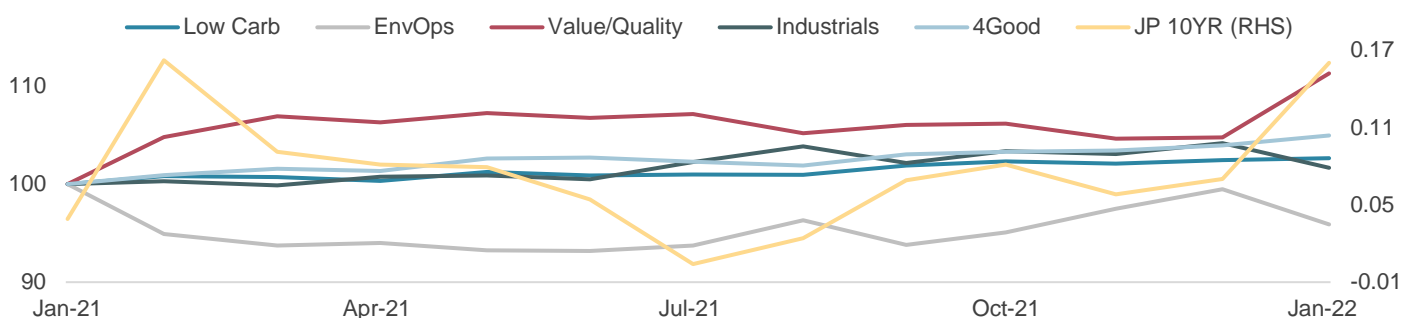


Chart 5: Japan Indexes relative performance vs Value/Quality (TR, LC %) and 10-year Japan bond yield (%)



Source: FTSE Russell/Refinitiv. All data as of January 31, 2022. Past performance is no guarantee of future results. This report should not be considered "research" for the purposes of MIFID II. Please see the end for important legal disclosures. Results in this report are for research / illustrative purposes and do not represent the official performance of the indexes.

Asia Pacific Index Comparisons – as of January 31, 2022

Over the past three months, the SI indexes in Asia Pacific have fared better than the broad market, which was down over the same period. EO's underweight in Financials detracted, but this was offset by strong contributions from Technology and Health Care. Active industry weights for the rest of the SI indexes are small, resulting in small contributions to performance. Global Choice's tracking error (5.2) is well above that in the other regions, however with a beta close to 1 and being highly diversified (holding 88% of benchmark stocks and less than 20% in the top 10 weights (Chart 2), performance is in line with the benchmark.

Chart 1: Active Performance (LC %)

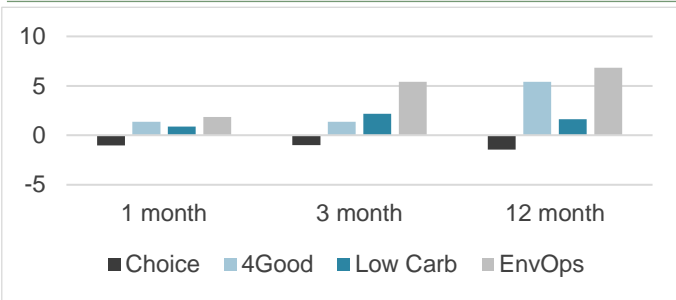


Chart 2: Index concentration

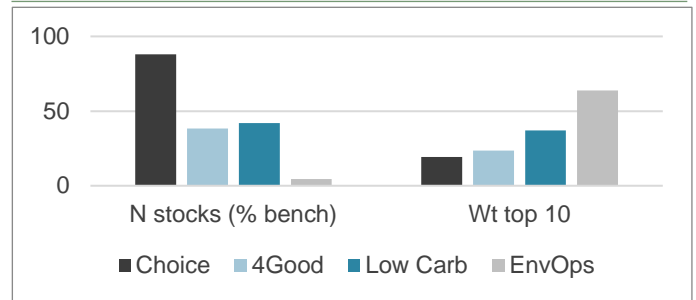


Chart 3: Active Industry weights (%)

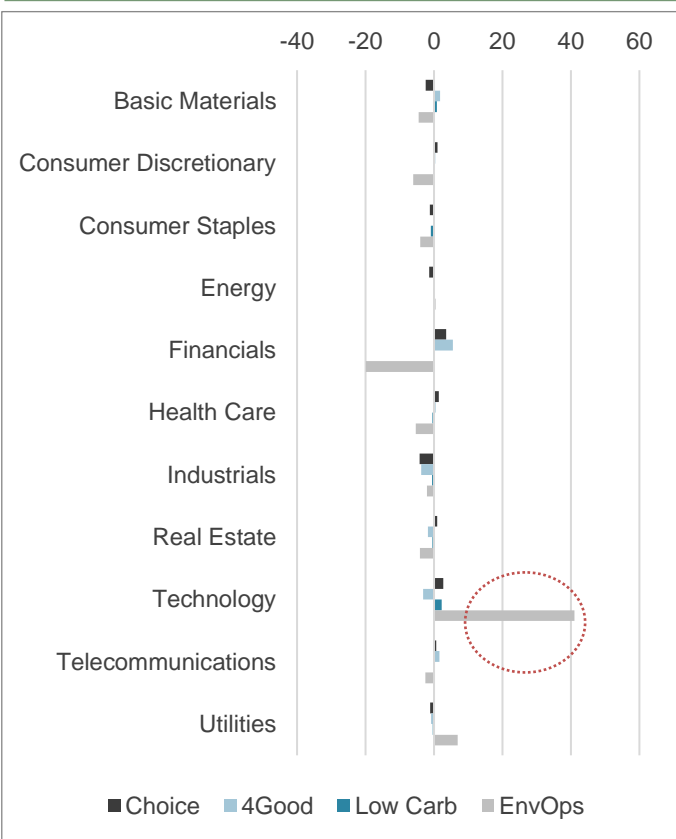


Chart 4: Industry allocation effect - 3M (LC %)

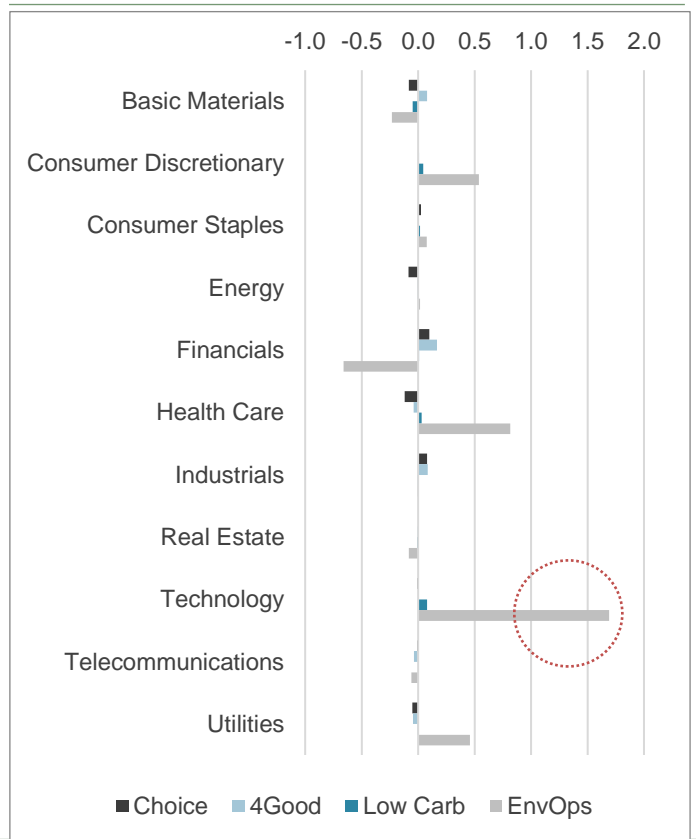
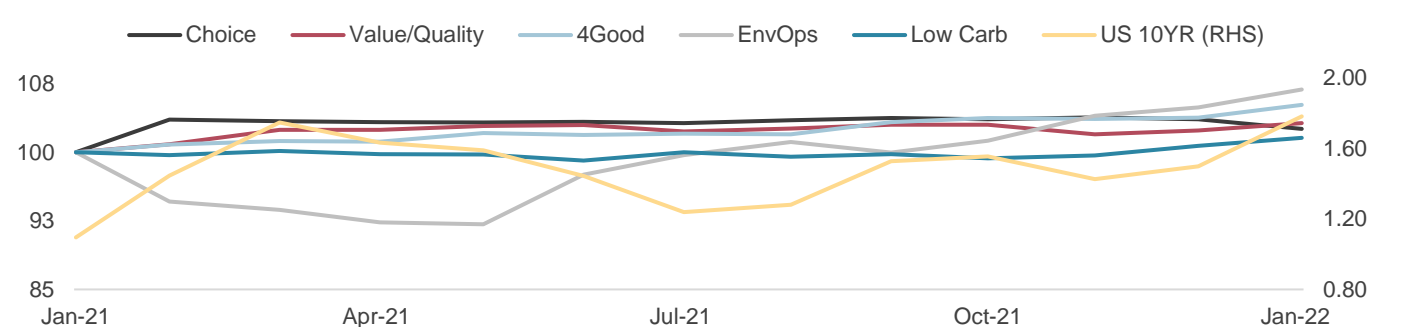


Chart 5: Asia Pacific Indexes relative performance vs Value/Quality (TR, LC %) and 10-year US bond yield (%)



Source: FTSE Russell/Refinitiv. All data as of January 31, 2022. Past performance is no guarantee of future results. This report should not be considered "research" for the purposes of MIFID II. Please see the end for important legal disclosures. Results in this report are for research / illustrative purposes and do not represent the official performance of the indexes.

Emerging Index Comparisons – as of January 31, 2022

EM FTSE4Good has a higher tracking error (5.3%) than other regions (see page 3), underpinning its 16.3% gain for the past 12 months. All strategies are overweight Financials and Technology, with small positive contributions. Underweights in Energy modestly deducted from FTSE4Good and ESG Low Carbon Target returns, while the underweight in Consumer Discretionary added the most upside to both indexes. As China accounts for more than one-third of the benchmark, we featured Chinese bond yields in Chart 5. As shown, there is no clear relationship between bond yields or the Value/Growth rotation and SI index performance.

Chart 1: Active Performance (LC %)

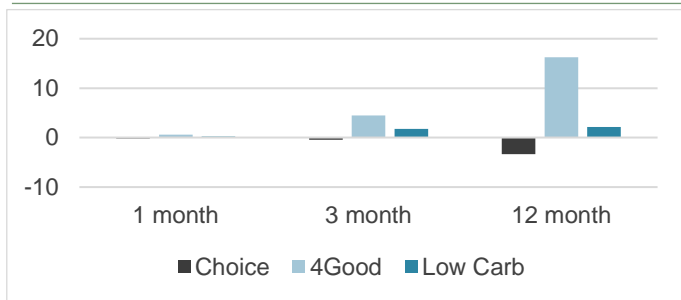


Chart 2: Index tracking error (%)

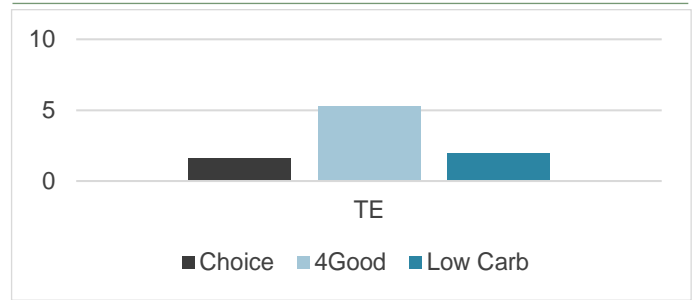


Chart 3: Active Industry weights (%)

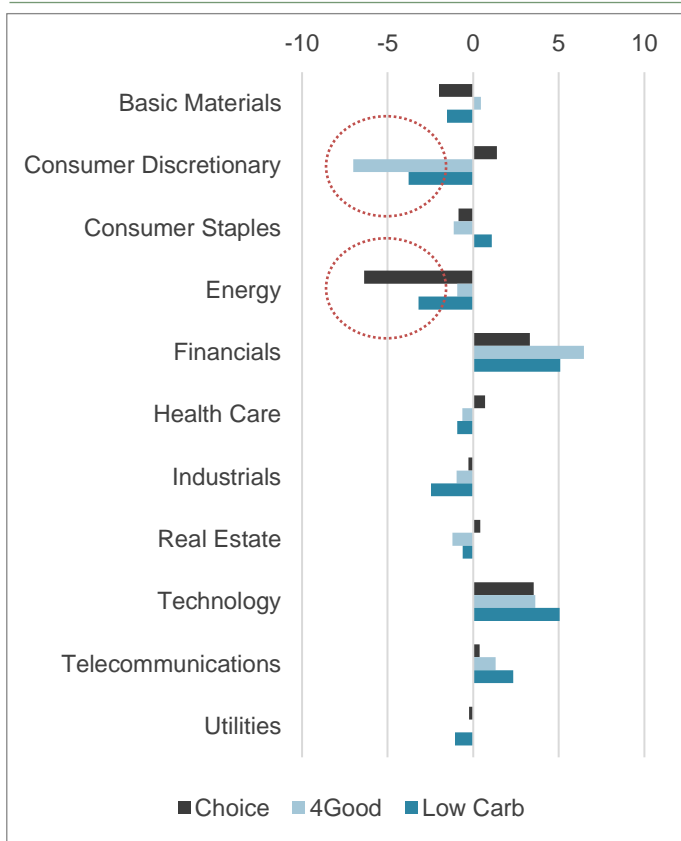


Chart 4: Industry allocation effect - 3M (LC %)

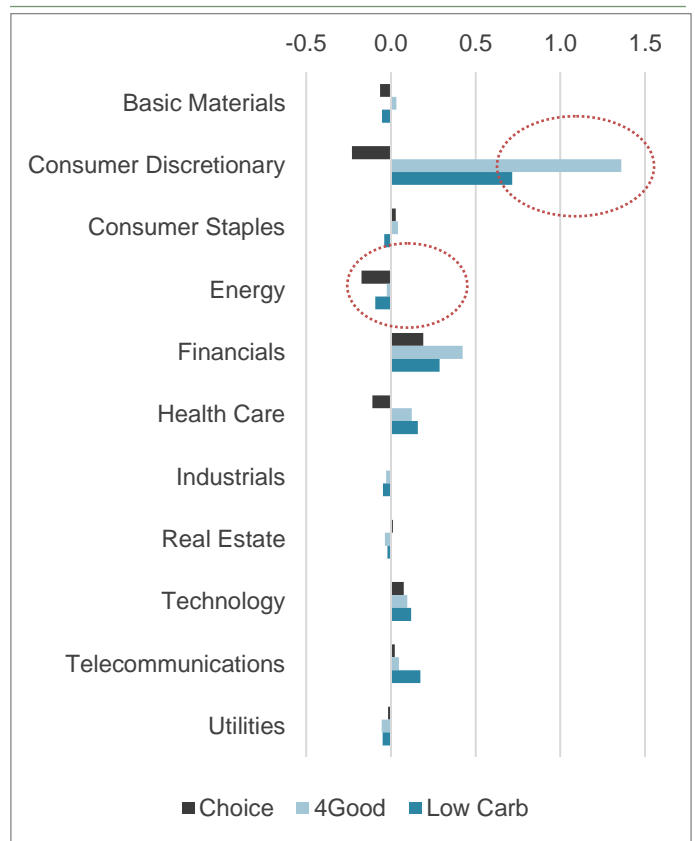
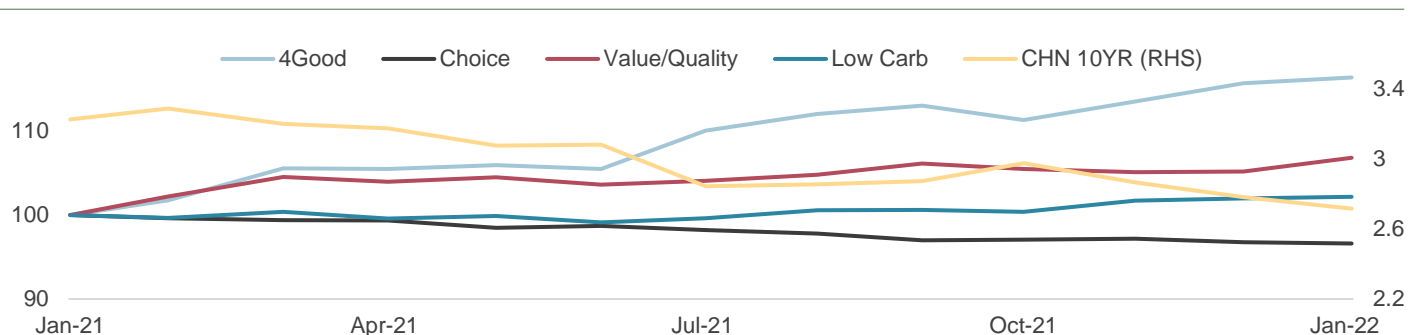


Chart 5: Emerging Indexes relative performance vs Value/Quality (TR, LC %) and 10-year China bond yield (%)



Source: FTSE Russell/Refinitiv. All data as of January 31, 2022. Past performance is no guarantee of future results. This report should not be considered "research" for the purposes of MIFID II. Please see the end for important legal disclosures. Results in this report are for research / illustrative purposes and do not represent the official performance of the indexes.

Macroeconomic Backdrop

Key Observations

FTSE Environmental Opportunities indexes offer strong exposure to the broad green economy (Chart 1), while avoiding the excessive volatility of Renewable and Alternative Energy stocks with their idiosyncratic regulatory and “green” concentration risks. The blending in of the lower betas of the Water Technology and Waste & Pollution Control Technology stocks helps mitigate these risks. Energy Efficiency, a more cyclical, high-beta play, is the largest component of the EO Indexes.

In the UK (Chart 2), a more hawkish stance of the BOE sent UK yields higher and ignited a sharp rally in Financials. Environmental Opportunities, being underweight the sector, badly lagged the broad market and its peer group in the region.

Green energy-focused EO strategies have faced major headwinds from supply-driven surges in global oil prices. In Europe (Chart 3), the negative correlation between swings in oil prices and EO returns has been particularly strong, while the FTSE4Good and ESG Low Carbon Target continued their uptrends. In the UK (Chart 4) the impact of rising oil prices has been even harsher in recent months, in particular for EO with a more modest impact on FTSE4Good and ESG Low Carbon Target.

Chart 1: FTSE Environmental Opportunities provides diversified exposure to the green economy.

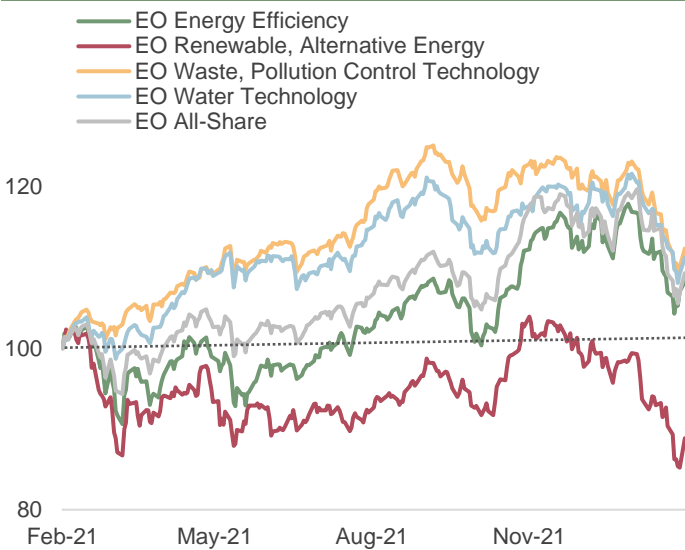


Chart 2: Yield-curve steepening spurred a Financials rebound, posing a headwind for UK EO but not other SI strategies.

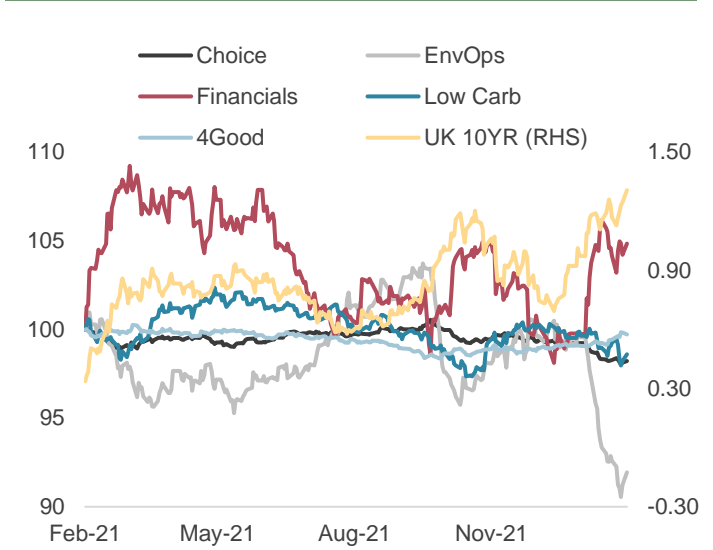


Chart 3: Surging oil prices took a particularly harsh toll on the green revenue-focused EO index in Europe.

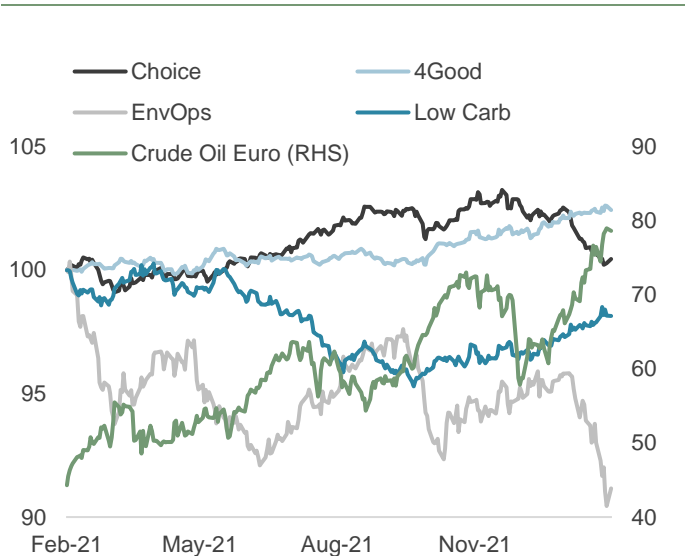
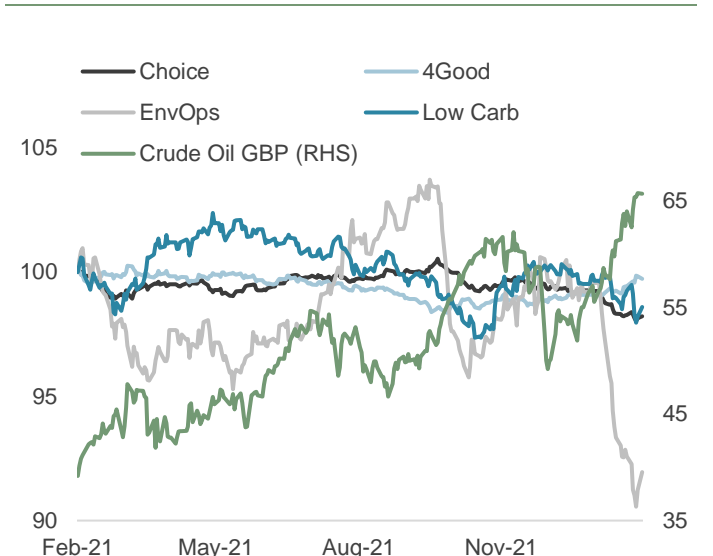


Chart 4: The negative correlation between EO returns and swings in oil prices is stronger in the UK than in other regions.



Source: FTSE Russell/Refinitiv. All data as of January 31, 2022. Past performance is no guarantee of future results. This report should not be considered “research” for the purposes of MIFID II. Please see the end for important legal disclosures. Results in this report are for research / illustrative purposes and do not represent the official performance of the indexes.

Appendix 1: SI Index Coverage and Benchmarks – as of January 31, 2022

REGION	SI FAMILY	FTSE Russell Index	FTSE Russell Benchmark	Regional Coverage		Market Cap Coverage	
				DM	EM	Large + Mid Cap	Large + Mid + Small Cap
US	Global Choice	FTSE USA All Cap Choice	FTSE Global Equity USA All Cap	✓			✓
	FTSE4Good	FTSE4Good US	FTSE USA	✓		✓	
	Environmental Ops	FTSE Environmental Opportunities USA	FTSE Global Equity USA All Cap	✓			✓
	ESG Low Carbon Target	FTSE USA ESG Low Carbon Target Exposure	FTSE USA	✓		✓	
UK	Global Choice	FTSE UK ex Controversies ex CW	FTSE UK	✓		✓	
	FTSE4Good	FTSE4Good UK	FTSE All-Share	✓			✓
	Environmental Ops	FTSE Environmental Opportunities UK	FTSE All-Share	✓			✓
	ESG Low Carbon Target	FTSE UK ESG Low Carbon Target Exposure	FTSE UK	✓		✓	
Europe	Global Choice	FTSE Developed Europe All Cap Choice	FTSE Developed Europe All Cap	✓			✓
	FTSE4Good	FTSE4Good Europe	FTSE Developed Europe	✓		✓	
	Environmental Ops	FTSE Environmental Opportunities Europe	FTSE Developed Europe All Cap	✓			✓
	ESG Low Carbon Target	FTSE Developed Europe ESG Low Carbon Target	FTSE Developed Europe	✓		✓	
Japan	FTSE4Good	FTSE4Good Japan	FTSE Japan	✓		✓	
	Environmental Ops	FTSE Environmental Opportunities Japan	FTSE Global Equity Series Japan All Cap	✓			✓
	ESG Low Carbon Target	FTSE Japan ESG Low Carbon Target Exposure	FTSE Japan	✓		✓	
APAC	Global Choice	FTSE Developed Asia Pacific All Cap Choice	FTSE Developed Asia Pacific All Cap	✓			✓
	FTSE4Good	FTSE4Good Developed Asia Pacific	FTSE Developed Asia Pacific	✓		✓	
	Environmental Ops	FTSE Environmental Opportunities Asia-Pacific Ex Japan	FTSE Asia Pacific All Cap ex Japan	✓	✓		✓
	ESG Low Carbon Target	FTSE Asia ex Japan ESG Low Carbon Target Exposure	FTSE Asia Pacific ex Japan	✓	✓	✓	
EM	Global Choice	FTSE Emerging All Cap Choice	FTSE Emerging All Cap		✓		✓
	FTSE4Good	FTSE4Good Emerging	FTSE Emerging		✓	✓	
	ESG Low Carbon Target	FTSE Emerging ESG Low Carbon Target Exposure	FTSE Emerging		✓	✓	
Global	Global Choice	FTSE Developed All Cap Choice	FTSE Developed All-Cap	✓			✓
	FTSE4Good	FTSE4Good Developed	FTSE Developed	✓		✓	
	Environmental Ops	FTSE Environmental Opportunities All-Share	FTSE Global All Cap	✓	✓		✓
	ESG Low Carbon Target	FTSE Developed ESG Low Carbon Target Exposure	FTSE Developed	✓		✓	

*The indexes in bold are used as representative benchmarks on page 4.

Appendix 2: Reference Guide

Report calculations

- Unless noted otherwise, all performance calculations are in local terms.
- Page 4: Regional benchmark performance are for representative benchmarks of the region and not the official benchmark for all listed SI indexes. Appendix 1 shows the full list of SI indexes covered in this report with their official benchmarks which are used in the calculations throughout the report.
- Tracking error and Beta are calculated from 5-years of monthly returns. All other calculations on page 3 are 12-month averages.
- Index climate exposures are calculated as the index weighted average. Benchmark climate aggregates are absolute climate exposures. The percent deviations of index exposures from benchmark exposures are labelled “uplift” for ESG and Green Revenues and “reduction” for carbon.
- Contributions to climate “uplift” or “reduction” are the share of total index percent deviation such that the sum over industries equals the total index percent deviation.
- Three-month industry allocation effect is based on a Brinson attribution.

Sustainable Investment data inputs

- Carbon emissions: estimated annual CO2 equivalent GHG emissions (Scope 1 and 2) in metric tons scaled by annual sales (in USD) (metric tons/\$m).
- Green Revenues: the ratio of green revenues as classified by the FTSE Green Revenues Classification System to total revenues.
- FTSE Russell’s ESG Data Model ratings are objective measures of ESG exposure and performance in multiple dimensions.
- An introduction to the FTSE ESG Ratings can be found in the following guide:
[Guide to FTSE Sustainable Investment Data used in FTSE Russell Indexes.pdf](#)

Naming convention

FTSE Russell Sustainable Indexes are abbreviated in the report as follows

Official Name	Report Abbreviation
FTSE Global Choice	Choice
FTSE4Good	4Good
FTSE Environmental Opportunities	Env Ops or EO
FTSE ESG Low Carbon Target Exposure	Low Carb

Appendix 3: Glossary Products and Methodology - extended offering

INDEX SERIES	INVESTMENT SOLUTION	METHODOLOGY
Screened	Filter out controversial business areas	Market-Cap Weighted
FTSE Global Choice	The FTSE Global Choice Index Series is designed to help investors align their portfolios with their individual values by selecting companies based on the impact of their conduct and products on society and the environment.	Market-cap weighted series and can include negative screens in three product categories and two conduct categories. Individual indexes within the series may only apply a subset of the screening categories.
Thresholds	Apply Minimum Inclusion standards	Market-Cap Weighted
FTSE4Good	The FTSE4Good Index Series is designed to measure the performance of companies demonstrating strong Environmental, Social and Governance (ESG) practices.	Companies in the investment universe are given an ESG rating ranging from 0 to 5, with 5 being the highest. A minimum score is applied for inclusion and stocks fall out of the index if their score falls below a threshold. In addition a minimum Climate Change Score is applied. An exclusion list covers sectors like Tobacco, Controversial weapons, Coal and Investment Trusts.
FTSE Environmental Opportunities	The FTSE EO Index Series measure the performance of global companies that have significant involvement in environmental business activities, including renewable and alternative energy, energy efficiency, water technology and waste and pollution control.	To be included in the index, companies are required to have at least 20% of their business derived from environmental products and services, including renewable and alternative energy, energy management and efficiency, water infrastructure and technology, and waste and pollution control.
Target Exposure	Target climate change objectives	Non Market-Cap Weighted
FTSE ESG Low Carbon Target	The FTSE ESG Low Carbon Indexes target a percentage reduction in index level carbon emissions and a significant improvement in the aggregate ESG Rating.	FTSE Russell's Target Exposure methodology is applied to target an uplift of 20% in the ESG score, a 50% reduction in operational carbon emissions intensity and a 50% reduction in fossil fuel reserves intensity, remaining country neutral and limiting the maximum deviation from the ICB industry weights of the underlying index.
FTSE SDG-Aligned	The FTSE SDG Aligned Indexes adjust constituent weights to create alignment with United Nations Sustainable Development Goals (SDGs)	FTSE Russell's Tilt methodology is applied to overweight stocks to SDG-aligned ESG theme scores and the global green economy. Climate related aspects of the SDG's are further captured tilting away from company exposure to fossil fuels and operational carbon emissions.
FTSE Global Climate	The FTSE Global Climate Index Series is designed to reflect the performance of indexes incorporating Climate Change considerations. The index incorporates both the risks and the opportunities associated with climate change and the transition to a green economy.	FTSE Global Climate constituent weights are determined by adjusting the market capitalisation weight for three aspects of climate change: (1) Fossil Fuel Reserves (2) Operational Carbon Emissions (3) Green Revenues.
FTSE Smart Sustainability	The FTSE Smart Sustainability Index Series is designed to reflect the performance of stocks representing a specific set of factor characteristics, climate change considerations and or ESG practices.	FTSE Russell's Target Exposure and FTSE Russell's Tilt methodology are applied to achieve the sustainability and factor exposure profile sought.

Appendix 3: Glossary Products and Methodology

INDEX SERIES	INVESTMENT SOLUTION	METHODOLOGY
EU Taxonomy	Target climate change objectives	Non Market-Cap Weighted
FTSE EU Climate Benchmarks	<p>The FTSE EU Climate Benchmarks series are set to meet Paris aligned (PAB) objectives and Climate Transition (CTB) objectives and exceed the minimum requirements of the EU Climate Benchmark's Regulation.</p>	<p>The FTSE Russell's Target Exposure methodology is applied to target:</p> <p>50% reduction in carbon emissions (PAB), 30% (CTB) and an annual decarbonization targets (7% average annual carbon emissions reduction relative to the index base year) to reach 'net zero' over 10 year.</p> <p>An increased exposure to companies with Green Revenues and high climate governance.</p> <p>Exclusions of pure play (>50% revenues) oil sands, thermal coal extraction and thermal coal power generation companies.</p> <p>Limits on weights of companies in the Banking sector</p>
FTSE TPI Climate Transition	<p>The FTSE TPI Climate Transition Index Series capture the risks and opportunities arising from the climate transition while also adjusting exposure to companies based on their TCFD-aligned climate governance and commitments to " 2DC/Below 2DC pathways".</p> <p>The Index Series combines FTSE Russell's expertise in climate data and sustainable investment index design with the Transition Pathway Initiative's (TPI) analysis of how the world's largest and most carbon exposed / intensive public companies are managing the climate transition.</p>	<p>FTSE Russell's Tilt methodology is applied to reweight constituent weights based on five key climate considerations:</p> <p>Fossil fuel reserves: Underweight companies with fossil fuel reserves.</p> <p>Carbon emissions: Over/underweight companies based on their GHG emission within sector.</p> <p>Green revenues: Overweight companies engaged in the transition to a green economy.</p> <p>Management quality: Over/underweight companies based on their climate governance score.</p> <p>Carbon performance: Over/underweight companies according to their carbon performance (2DC/below 2DC) assessment.</p>

Appendix 4: Sustainable Indexes benchmarked to ETF's

Illustrative selection of index-linked products benchmarked to FTSE Russell sustainable investment indexes

INDEX NAME	METHODOLOGY	MANAGER
FTSE Asia Pacific ex Japan ESG Low Carbon Select Net Tax Index	FTSE Target Exposure methodology	HSBC
FTSE Developed ESG Low Carbon Select Net Tax Index	FTSE Target Exposure methodology	HSBC
FTSE Developed Europe ESG Low Carbon Select Net Tax Index	FTSE Target Exposure methodology	HSBC
FTSE Emerging ESG Low Carbon Select Net Tax Index	FTSE Target Exposure methodology	HSBC
FTSE Japan ESG Low Carbon Select Net Tax Index	FTSE Target Exposure methodology	HSBC
FTSE USA ESG Low Carbon Select Net Tax Index	FTSE Target Exposure methodology	HSBC
FTSE UK ESG Low Carbon Select Index	FTSE Target Exposure methodology	HSBC
FTSE Developed ex Australia Choice Index	FTSE Global Choice Index Series	Vanguard
FTSE Global All Cap Choice Index	FTSE Global Choice Index Series	Vanguard
FTSE Global All Cap ex US Choice Index	FTSE Global Choice Index Series	Vanguard
FTSE US All Cap Choice Index	FTSE Global Choice Index Series	Vanguard
FTSE All-Share ex Investment Trusts ESG Climate Select Index	FTSE Target Exposure methodology	Invesco

Source: FTSE Russell/Refinitiv. Please see the end for important legal disclosures.

Receive all research reports

Global Investment Research reports offer investors timely capital-market analysis and insights across asset classes, regions, currencies, industries and styles for better investment decision-making. Subscribers are notified by email when each report is published.

Subscribe now: [Market Maps Registration](#)

To learn more, visit ftserussell.com; email info@ftserussell.com or call your regional Client Service Team office:

EMEA +44 (0) 20 7866 1810

North America +1 877 503 6437

Asia Pacific

Hong Kong +852 2164 3333

Tokyo +81 3 4563 6346

Sydney +61 (0) 2 8823 3521

© 2022 London Stock Exchange Group plc and its applicable group undertakings (the "LSE Group"). The LSE Group includes (1) FTSE International Limited ("FTSE"), (2) Frank Russell Company ("Russell"), (3) FTSE Global Debt Capital Markets Inc. and FTSE Global Debt Capital Markets Limited (together, "FTSE Canada"), (4) FTSE Fixed Income Europe Limited ("FTSE FI Europe"), (5) FTSE Fixed Income LLC ("FTSE FI"), (6) The Yield Book Inc ("YB") and (7) Beyond Ratings S.A.S. ("BR"). All rights reserved.

FTSE Russell® is a trading name of FTSE, Russell, FTSE Canada, FTSE FI, FTSE FI Europe, YB and BR. "FTSE®", "Russell®", "FTSE Russell®", "FTSE4Good®", "ICB®", "The Yield Book®", "Beyond Ratings®" and all other trademarks and service marks used herein (whether registered or unregistered) are trademarks and/or service marks owned or licensed by the applicable member of the LSE Group or their respective licensors and are owned, or used under licence, by FTSE, Russell, FTSE Canada, FTSE FI, FTSE FI Europe, YB or BR. FTSE International Limited is authorised and regulated by the Financial Conduct Authority as a benchmark administrator.

All information is provided for information purposes only. All information and data contained in this publication is obtained by the LSE Group, from sources believed by it to be accurate and reliable. Because of the possibility of human and mechanical error as well as other factors, however, such information and data is provided "as is" without warranty of any kind. No member of the LSE Group nor their respective directors, officers, employees, partners or licensors make any claim, prediction, warranty or representation whatsoever, expressly or impliedly, either as to the accuracy, timeliness, completeness, merchantability of any information or of results to be obtained from the use of FTSE Russell products, including but not limited to indexes, data and analytics, or the fitness or suitability of the FTSE Russell products for any particular purpose to which they might be put. Any representation of historical data accessible through FTSE Russell products is provided for information purposes only and is not a reliable indicator of future performance.

No responsibility or liability can be accepted by any member of the LSE Group nor their respective directors, officers, employees, partners or licensors for (a) any loss or damage in whole or in part caused by, resulting from, or relating to any error (negligent or otherwise) or other circumstance involved in procuring, collecting, compiling, interpreting, analysing, editing, transcribing, transmitting, communicating or delivering any such information or data or from use of this document or links to this document or (b) any direct, indirect, special, consequential or incidental damages whatsoever, even if any member of the LSE Group is advised in advance of the possibility of such damages, resulting from the use of, or inability to use, such information.

No member of the LSE Group nor their respective directors, officers, employees, partners or licensors provide investment advice and nothing in this document should be taken as constituting financial or investment advice. No member of the LSE Group nor their respective directors, officers, employees, partners or licensors make any representation regarding the advisability of investing in any asset or whether such investment creates any legal or compliance risks for the investor. A decision to invest in any such asset should not be made in reliance on any information herein. Indexes cannot be invested in directly. Inclusion of an asset in an index is not a recommendation to buy, sell or hold that asset nor confirmation that any particular investor may lawfully buy, sell or hold the asset or an index containing the asset. The general information contained in this publication should not be acted upon without obtaining specific legal, tax, and investment advice from a licensed professional.

The information contained in this report should not be considered "research" as defined in recital 28 of the Commission Delegated Directive (EU) 2017/593 of 7 April 2016 supplementing Directive 2014/65/EU of the European Parliament and of the Council ("MiFID II") and is provided for no fee.

Past performance is no guarantee of future results. Charts and graphs are provided for illustrative purposes only. Index returns shown may not represent the results of the actual trading of investable assets. Certain returns shown may reflect back-tested performance. All performance presented prior to the index inception date is back-tested performance. Back-tested performance is not actual performance, but is hypothetical. The back-test calculations are based on the same methodology that was in effect when the index was officially launched. However, back-tested data may reflect the application of the index methodology with the benefit of hindsight, and the historic calculations of an index may change from month to month based on revisions to the underlying economic data used in the calculation of the index.

This document may contain forward-looking assessments. These are based upon a number of assumptions concerning future conditions that ultimately may prove to be inaccurate. Such forward-looking assessments are subject to risks and uncertainties and may be affected by various factors that may cause actual results to differ materially. No member of the LSE Group nor their licensors assume any duty to and do not undertake to update forward-looking assessments.

No part of this information may be reproduced, stored in a retrieval system or transmitted in any form or by any means, electronic, mechanical, photocopying, recording or otherwise, without prior written permission of the applicable member of the LSE Group. Use and distribution of the LSE Group data requires a licence from FTSE, Russell, FTSE Canada, FTSE FI, FTSE FI Europe, YB, BR and/or their respective licensors.