Sustainable Investment Insights

QUARTERLY REPORT | **APRIL 2024**

Geography beats SI strategy in a mixed Q1

Despite the continued rally in global equity markets, SI index performance was mixed in Q1. Geography was the biggest influence on performance, more than the type of SI strategy, with Japanese SI indices seeing a strong outperformance, while US SI indices have underperformed. ESG indices outperformed climate indices, a reversal of the trend seen in 2022-23, when climate indices outperformed in up markets.

Highlights

ESG vs Climate

FTSE4Good was the strongest global outperformer in Q1 (+0.4%), while PAB saw the largest global underperformance (-1.2%). This was part of a general underperformance of Climate vs ESG. This is unusual as the more growth focused, lower yielding climate indices have typically outperformed in up market quarters.

Japan vs US

SI outperformance was highly variable depending on the region, even within the same SI strategies. The US and Japanese equity markets both performed very strongly in Q1, however all Japanese SI indices strongly outperformed in Q1, while all, but one, US SI indices strongly underperformed. To a lesser degree, EM SI indices also performed better than Developed market SI indices in Q1.

Tech vs Energy

The continued strong performance of the Tech sector has been one of the most positive drivers for SI indices, which are all overweight Tech. However, selection in Tech has mostly been negative for global SI indices, although it has been positive in some regions. In contrast, the Energy sector, where all global SI indices are underweight, had a limited negative impact, despite the rising oil price. Weakness in the EV market also negatively impacted the Consumer Discretionary industry in climate-focused indices.

SI Challenges

Sustainable investment came under continued pressure in Q1 as global temperatures set new record highs. Over-capacity in the renewable energy and EV markets led to rapidly falling prices and equity market underperformance. SI fund flows have seen continued pressure in Q1, particularly in SI equities.
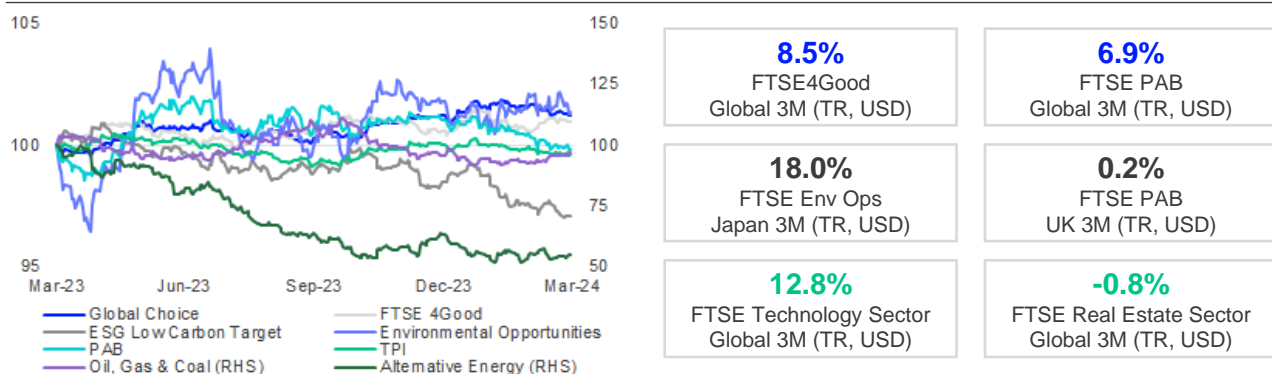
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Chart 1. 12-month relative performance Global SI indices, FTSE Oil Gas & Coal and FTSE Alternative Energy (TR, USD,%).

8.5% FTSE4Good Global 3M (TR, USD)	**6.9%** FTSE PAB Global 3M (TR, USD)
18.0% FTSE Env Ops Japan 3M (TR, USD)	**0.2%** FTSE PAB UK 3M (TR, USD)
12.8% FTSE Technology Sector Global 3M (TR, USD)	**-0.8%** FTSE Real Estate Sector Global 3M (TR, USD)

Note: Low Carbon covers developed markets.

Source: FTSE Russell / LSEG. Data as of March 31, 2024.

Results in this report are for research / illustrative purposes and do not represent the official performance of the indices.

Index performance in this report is now in USD, unless otherwise noted

Risk and Climate Characteristics – as of March 31, 2024

Key Observations

Sustainable investing encompasses a range of strategies with different investment outcomes. In this section, we summarise the key risk and climate characteristics of the indices covered in this report. See next page for climate characteristic scores.

Global Choice divests from fossil fuels and other negative SI activities through product category screens. They obtain significant carbon intensity reductions (-42% to -58%) and underweights to Energy (-6% to -2%), except in the UK. Market-cap weighting the remaining stocks results in a risk profile close to the benchmark, global betas of around 1, and a low tracking error (1.7%). The UK is the most diversified, holding 98% of benchmark stocks, while Europe & US are the least diversified, holding 82% of benchmark stocks

FTSE4Good's best-in-class ESG strategy results in significant ESG score uplifts (22% to 3%). The global tracking error is low (1.8%). Europe has the lowest ESG uplift (3%), but the highest absolute ESG score. By contrast, EM has the highest ESG uplift (22%), with a high tracking error (6.5%) but a 0.9 beta.

Environmental Opportunities (EO) selects companies with significant green revenues (>20%), resulting in high active green revenues (absolute increase of 45% to 28%). However, the focus on Industrials, Utilities & Technology leads to higher carbon intensity in most regions (66% to -11%). The indices are highly concentrated (7% to 14% of benchmark) and have higher tracking errors (6% to 10%).

ESG Low Carbon Target targets carbon reduction and ESG uplifts. It achieves significant carbon intensity reduction (-51% to -33%) and ESG score uplift (19% to 11%). Tracking errors are moderate (2.2% to 2.9%) and betas close to 1, except in the UK (6.4% and 0.9).

Paris Aligned Benchmark (PAB) has multiple SI targets. It reduces carbon intensity (-67% to -48%), increases TPI MQ score (11% to 6%), increases green revenues (absolute increase of 10% to 7%) and reduces Energy industry weighting (absolute reduction of -12% to -4%). Tracking error is slightly higher than some other SI indices (2.3% to 5.8%) and the indices are more concentrated (58% to 29% of benchmark).

TPI Climate Transition (TPI) targets multiple climate related uplifts. It achieves strong reduction in carbon intensity (-55% to -32%), significant increase in TPI MQ score (28% to 12%), while the global tracking error is relatively modest at 1.6%. EM has the highest tracking error at 3.8%, but also has the highest TPI MQ uplift of 28%.

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

	FTSE Russell SI Index	US	UK	Europe	Japan	APAC	Emerging	Developed	Global
Tracking Error	Global Choice	2.0%	1.7%	2.3%		1.3%	1.6%	1.9%	1.7%
	FTSE4Good	2.4%	1.9%	2.2%	9.5%	2.5%	6.5%	1.7%	1.8%
	Environmental Ops	8.8%	9.2%	6.8%	6.6%	10.0%			6.1%
	ESG Low Carbon Target	2.8%	6.4%	2.9%	2.5%	2.5%	2.5%	2.2%	
	Paris Aligned		5.8%				3.3%	2.3%	2.5%
	Transition Pathway	1.9%			2.5%		3.8%	1.6%	1.6%
Beta	Global Choice	1.0	1.0	1.0		1.0	1.0	1.0	1.0
	FTSE4Good	1.0	1.0	1.0	0.8	1.0	0.9	1.0	1.0
	Environmental Ops	1.1	1.0	1.1	1.1	1.0			1.1
	ESG Low Carbon Target	1.0	0.9	1.0	1.0	1.0	1.0	1.0	
	Paris Aligned		1.0				1.0	1.0	1.0
	Transition Pathway	1.0			1.0		1.0	1.0	1.0
Number of stocks as % of benchmark	Global Choice	82.8%	97.5%	82.4%		87.8%	82.0%	84.7%	83.5%
	FTSE4Good	45.4%	37.6%	70.9%	47.9%	46.3%	27.4%	52.2%	39.8%
	Environmental Ops	9.0%	7.5%	14.1%	10.2%	9.5%			8.4%
	ESG Low Carbon Target	74.3%	57.3%	50.0%	56.7%	36.1%	41.3%	41.2%	
	Paris Aligned		57.5%				49.4%	44.1%	29.0%
	Transition Pathway	58.7%			73.6%		43.6%	52.4%	35.4%
Weight in Top 10 relative to benchmark	Global Choice	120.2%	100.9%	129.3%		115.0%	100.5%	124.7%	124.9%
	FTSE4Good	151.8%	123.6%	120.3%	133.9%	122.4%	126.6%	136.5%	140.1%
	Environmental Ops	265.4%	146.7%	253.5%	340.5%	306.6%			314.8%
	ESG Low Carbon Target	167.3%	146.6%	179.8%	195.6%	169.8%	136.3%	180.1%	
	Paris Aligned		100.0%				120.2%	165.8%	172.7%
	Transition Pathway	127.7%			158.9%		135.5%	139.2%	132.7%

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

Climate	FTSE Russell SI Index	US	UK	Europe	Japan	APAC	Emerging	Developed	Global
Active E score	Global Choice	2.7%	0.0%	-3.9%		-1.7%	-2.4%	0.9%	0.7%
	FTSE4Good	17.6%	10.0%	4.1%	12.2%	11.2%	26.3%	14.3%	15.5%
	Environmental Ops	28.8%	-18.0%	0.0%	13.7%	26.2%			23.0%
	ESG Low Carbon Target	25.4%	18.6%	24.2%	20.7%	23.6%	22.0%	26.9%	
	Paris Aligned		-0.6%				8.5%	5.8%	7.3%
	Transition Pathway	11.6%			11.0%		21.7%	11.7%	11.0%
Active S score	Global Choice	3.3%	-1.0%	-1.4%		-0.8%	0.2%	1.8%	1.7%
	FTSE4Good	12.9%	9.0%	3.1%	13.0%	11.0%	27.2%	11.1%	12.5%
	Environmental Ops	18.0%	-12.3%	-5.3%	-0.1%	26.4%			14.0%
	ESG Low Carbon Target	19.3%	11.9%	13.0%	19.8%	20.3%	22.1%	18.7%	
	Paris Aligned		0.3%				9.1%	3.2%	5.4%
	Transition Pathway	6.4%			6.9%		17.3%	6.3%	6.6%
Active G score	Global Choice	0.3%	-0.6%	-1.6%		-1.6%	-0.2%	-0.5%	-0.4%
	FTSE4Good	5.1%	7.4%	1.7%	9.3%	9.0%	14.9%	5.6%	6.5%
	Environmental Ops	12.1%	-6.0%	-2.0%	-0.8%	12.9%			8.5%
	ESG Low Carbon Target	10.6%	2.8%	5.1%	13.8%	10.4%	11.4%	10.2%	
	Paris Aligned		-1.5%				6.9%	-0.5%	1.0%
	Transition Pathway	0.9%			4.6%		10.8%	1.5%	2.1%
Active ESG score	Global Choice	2.0%	-0.7%	-2.4%		-1.3%	-0.5%	0.7%	0.6%
	FTSE4Good	12.4%	8.8%	3.0%	11.6%	10.5%	21.7%	10.7%	11.7%
	Environmental Ops	18.3%	-11.6%	-2.2%	4.2%	20.1%			14.0%
	ESG Low Carbon Target	18.8%	10.7%	13.6%	18.1%	17.7%	17.8%	18.8%	
	Paris Aligned		-1.0%				7.9%	2.0%	3.8%
	Transition Pathway	6.3%			7.5%		15.9%	6.5%	6.4%
Carbon Reduction	Global Choice	-58.1%	6.5%	-46.9%		-45.4%	-41.8%	-55.0%	-52.4%
	FTSE4Good	-36.3%	5.9%	-0.4%	1.5%	-8.4%	7.0%	-24.2%	-20.0%
	Environmental Ops	22.2%	-11.0%	65.5%	13.6%	53.8%			33.1%
	ESG Low Carbon Target	-50.8%	-33.3%	-49.1%	-47.9%	-42.1%	-37.0%	-49.8%	
	Paris Aligned		-47.5%				-66.8%	-62.1%	-62.0%
	Transition Pathway	-45.5%			-31.9%		-35.3%	-55.0%	-46.6%
Active Green Revenues	Global Choice	0.11	0.30	-1.30		0.06	0.53	-0.03	0.02
	FTSE4Good	-0.14	-0.14	0.05	-0.31	-0.29	2.47	-0.10	0.12
	Environmental Ops	27.80	45.48	31.14	31.76	35.42			30.57
	ESG Low Carbon Target	-0.60	0.37	3.18	-0.75	1.61	1.67	-0.30	
	Paris Aligned		9.75				6.93	6.66	6.68
	Transition Pathway	-0.72			4.03		4.74	0.91	1.87
Active TPI Management Quality Score	Global Choice	-0.5%	0.8%	-4.0%		-2.3%	-4.0%	-1.6%	-1.7%
	FTSE4Good	12.1%	7.2%	2.9%	8.8%	9.0%	23.8%	10.2%	11.5%
	Environmental Ops	13.1%	-11.8%	0.5%	12.7%	23.8%			12.6%
	ESG Low Carbon Target	15.2%	4.6%	10.3%	14.3%	19.6%	17.9%	15.6%	
	Paris Aligned		5.1%				10.8%	5.8%	6.5%
	Transition Pathway	11.9%			12.4%		27.7%	12.0%	12.1%

Note: All calculations are 12-month averages.
*TPI MQ is the TPI Management Quality score. Carbon reductions are normalised by revenues, except for the PAB benchmarks, where European law requires normalisation by EVIC. ESG Low Carbon Target index series target the minimum of a standard deviation of market capitalisation averaged index ESG score and a 20% uplift.

Macroeconomic Backdrop – Q1 2024

Q1 2024 was a mixed quarter across markets. The equity market continued its strong, upward performance, with the US and Japan outperforming. Despite continuing to be led by Tech, the equity rally broadened out, both in terms of regions and industries, but with cyclical/growth focused industries performing best. Strong economic performance in the US kept the rally on track, supported by robust corporate results, particularly Nvidia, which supported the continued AI rally.

Besides equities, other financial markets were less strong. Sticky inflation, weaker economic growth in the UK, Europe and China, and more cautious central banks led yields to rise over the quarter, as investors trimmed their expectations on the speed and size of potential interest rate cuts in 2024. This negatively impacted fixed income performance, especially for higher duration assets, as well as equity industries directly impacted by rates, such as real estate.

The oil price crept up over the quarter, from $77 (brent) to $87, given expectations of increased demand growth leading to a tighter market in H2 2024 and lingering concerns around supply disruption from unrest in the Middle East.

Investors continued to buy into the "risk-on" rally, which started in November 2023, with capital flows into equities and bonds (however also hedging with continued flows into money markets). The flows were particularly focused in risk markets such as North American equities, Tech, high yield and corporate bonds.

For further in-depth analysis of asset classes see Asset Allocation Insights - March 2024 | LSEG

Chart 1: FTSE All World Q3 Industry Performance – Tech remained the best performing industry.
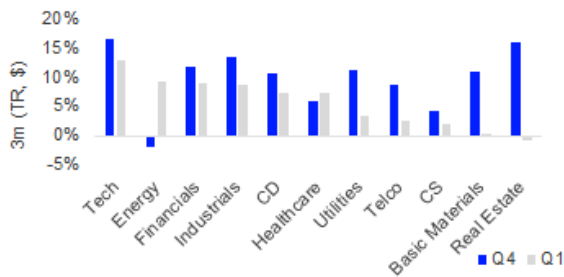
Chart 2: Russell 1000 Growth vs Value – growth outperformed value in early Q1, then started to underperform.
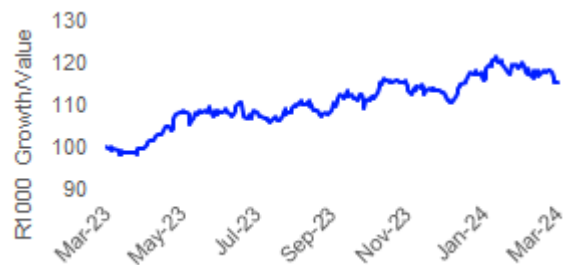
Chart 3: US Govt Bond Yields – yields rose and were volatile over Q1.

Chart 4: Regional Inflation – inflation became more stubborn in Q1 2024.
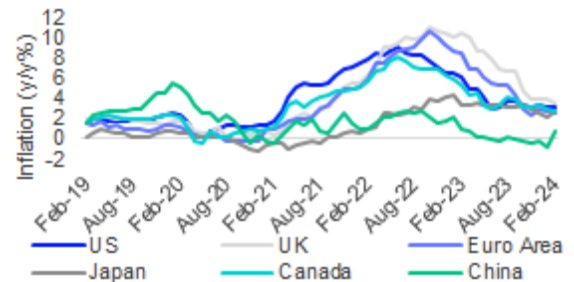
Chart 5: Brent Oil Price – the oil price rose over stronger demand and supply concerns.

Chart 6: Global Bond, Equity & Money Market Fund Flows – equity and bond recovery continues.
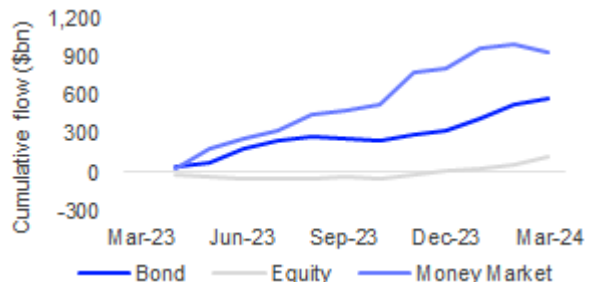
SI Backdrop – Q1 2024

Sustainable investing came under pressure in Q1. Environmentally, global temperatures rose rapidly, with March 2024 showing 1.68 degrees above pre-industrial times[1]. On the investment side, several large asset managers left SI initiatives and some green legislation came under pressure in the European parliament, although ultimately passed. However, new disclosure rules were announced by the SEC, and China announced plans for climate disclosure rules for large companies.

Green economy performance continued to be driven by Energy Efficiency, where robust economic growth combined with inflation-driven cost cutting led to developed economies seeing continued improvement in energy efficiency. However, the renewable energy and electric vehicle (EV) sectors continued to be under pressure in Q1. Having seen robust growth, even if slower than expected, both sectors are facing significant over-capacity, and falling renewables, EV and battery metal prices. Alternative Energy was the worst performing sector in the FTSE All World over the last 12 months (but with strong est. 3-5yr EPS growth, given the low base).

SI fund flows have not benefited from higher flows seen in the broader market since Q3. SI equities have been particularly weak, while SI fixed income has seen continued positive fund flow. As asset owners continue to roll out SI policies across their whole portfolios, fixed income is still playing catch up versus the more developed SI equities. However, there are multiple SI bond index solutions available for both sovereigns and credit.

Chart 1: Env Ops Green Sectors relative performance – weakness in renewable energy.
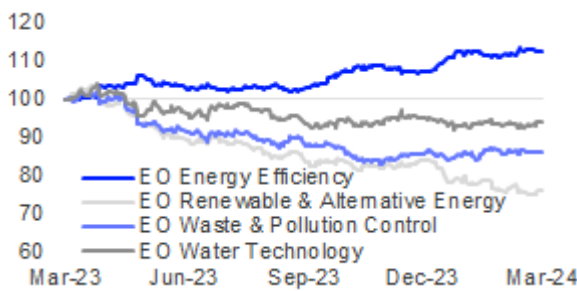
Chart 2: Battery metal prices – prices collapsed in 2023 on concerns of slower EV roll-out and new supply.
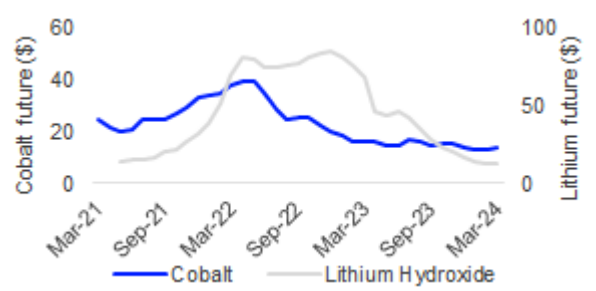
Chart 3: FTSE All World Sector performance vs est. EPS 3-5yr growth – alternative energy is an outlier among sectors.
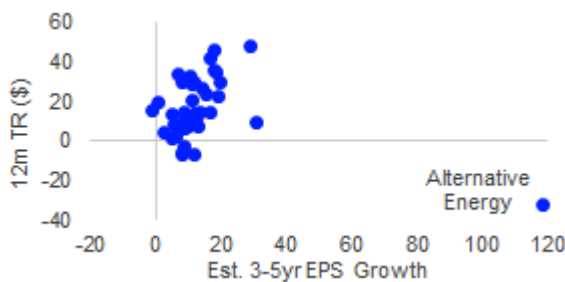
Chart 4: Sustainable Investment Bond & Equity Fund Flow – recent SI fund flow behind market flow.
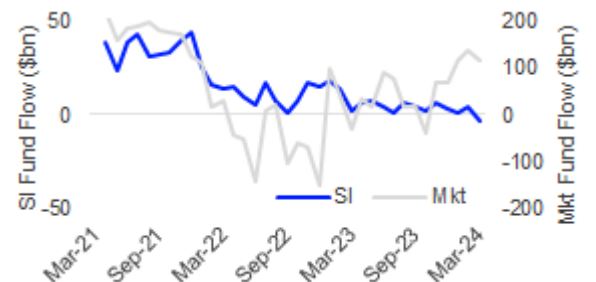
Chart 5: SI corporate fixed income performance – low dispersion between SI indices and the broader market.

Chart 6: SI sovereign fixed income performance – wide dispersion of performance; EM was the strongest in 2023.
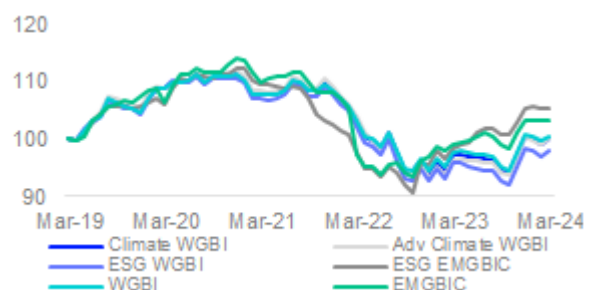
Source: FTSE Russell/LSEG. All data as of March 31, 2024. Past performance is no guarantee of future results. This report should not be considered "research" for the purposes of MIFID II. Please see the end for important legal disclosures. Results in this report are for research / illustrative purposes and do not represent the official performance of the indices.
1. ERA5 Copernicus Data

Absolute Returns – 3M & 12M (TR, USD %) as of March 31, 2024

Q1 was marked by a mixed macro environment as equities continued to rise, but a strong US economy and increasingly sticky inflation reduced expected 2024 rate cuts and sent yields higher. In a continuation of 2023, Japan and the US were the best performing regions on both 3 and 12 months. The US surprised with the strength and resilience of its economy, while growth and inflation returned in Japan, with the Japanese equity market surpassing its previous high for the first time in decades. SI index performance was driven by regional focus, topped by Japanese and US-focused indices.

Regional 3M Absolute Returns* (TR, USD %): Japan and the US were the best performing regions.

Region	3M Return
Japan	10.6
US	10.3
Developed	8.8
Global	8.1
Dev APac	5.9
Europe	5.3
UK	3.6
Emerging	2.4
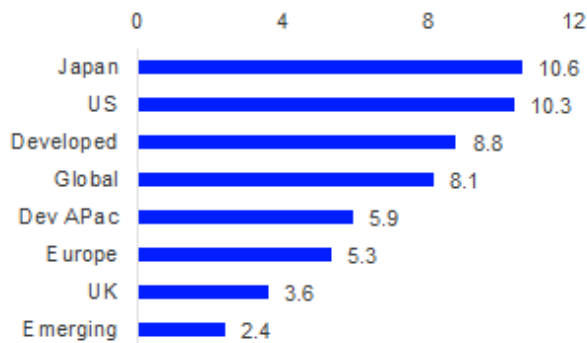
Regional 12M Absolute Returns* (TR, USD %): Similarly to Q1, the US and Japan were the best performing regions over 12M, with much lower gains seen in Europe, UK and EM.

| Region	12M Return
US	30.1
Developed	25.4
Japan	25.0
Global	23.6
Dev APac	17.3
Europe	15.2
UK	12.4
Emerging	8.5
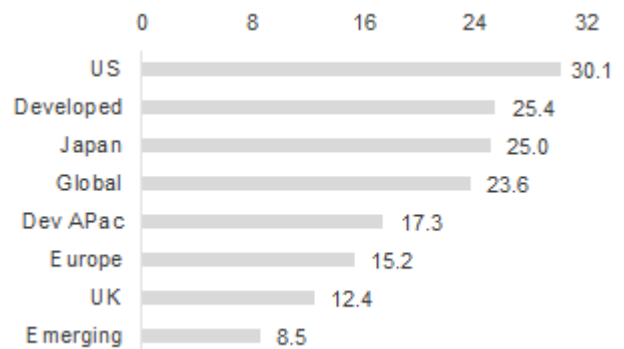
SI Index 3M Absolute Returns (TR, USD %): Japanese SI indices performed best, while PAB indices were the weakest.

Index	3M Return
Japan EnvOps	18.0
Japan TPI	15.2
Japan 4Good	13.0
Japan Low Carb	12.7
APac EnvOps	12.1
US 4Good	11.0
USA Choice	9.9
Dev 4Good	8.9
US TPI	8.9
Global 4Good	8.5
Dev Choice	8.5
US Low Carb	8.4
Global Choice	7.9
Developed TPI	7.8
Global TPI	7.7
APac 4Good	7.5
Global EnvOps	7.4
Dev Low Carb	7.2
Global PAB	6.9
Dev PAB	6.7
USA EnvOps	6.7
APac Choice	5.5
UK Low Carb	5.3
Euro Choice	5.2
EM 4Good	4.9
Euro 4Good	4.8
UK Choice	4.2
EM TPI	3.9
Eur Low Carb	3.9
EM Low Carb	3.3
Euro EnvOps	2.9
UK EnvOps	2.6
UK 4Good	2.1
APac Low Carb	2.1
EM Choice	1.9
EM PAB	1.2
UK PAB	0.2

SI Index 12M Absolute Returns (TR, USD %): US & Japanese indices were strong, while EM and UK were weak.

Index	12M Return
Japan EnvOps	36.2
Japan TPI	32.4
US 4Good	31.8
USA Choice	31.5
Japan 4Good	29.7
Japan Low Carb	27.9
US TPI	27.9
USA EnvOps	27.3
Dev Choice	26.5
Dev 4Good	25.4
Global EnvOps	24.8
Global 4Good	24.8
Global Choice	24.6
US Low Carb	24.5
Dev PAB	24.0
Global PAB	23.4
Developed TPI	23.3
Global TPI	23.1
Dev Low Carb	21.7
APac EnvOps	21.2
APac 4Good	19.7
EM 4Good	17.8
APac Choice	16.2
Euro Choice	15.4
Euro 4Good	14.9
UK EnvOps	13.6
Euro EnvOps	13.4
Eur Low Carb	12.9
UK Choice	11.8
EM TPI	10.7
UK 4Good	9.4
EM Choice	8.8
UK Low Carb	8.6
UK PAB	7.4
EM Low Carb	7.0
EM PAB	6.3
APac Low Carb	5.2

*The Broad regional indices above are: The FTSE USA, FTSE UK, FTSE Developed Europe, FTSE Japan, FTSE Developed Asia-Pacific and FTSE Emerging Markets. Benchmarks for the listed SI indices may vary. Appendix 1 shows the appropriate benchmark and market-cap coverage for the SI indices covered in this report.
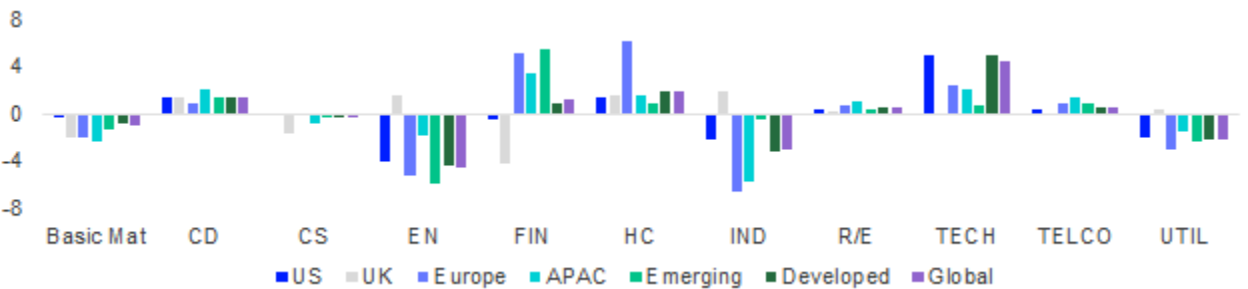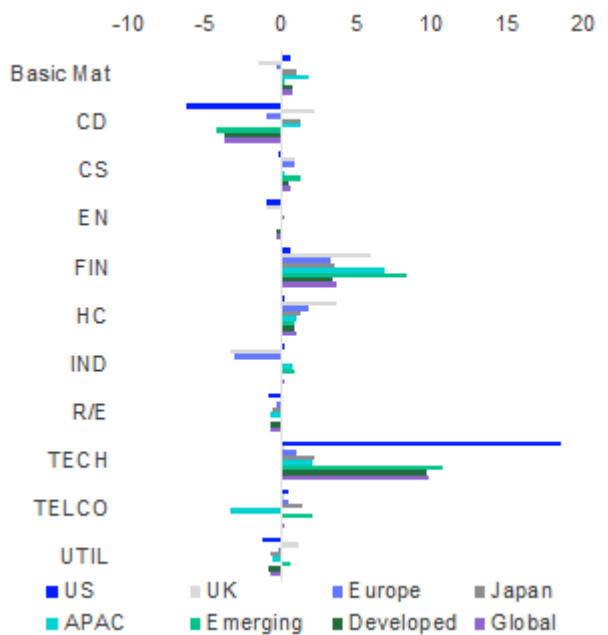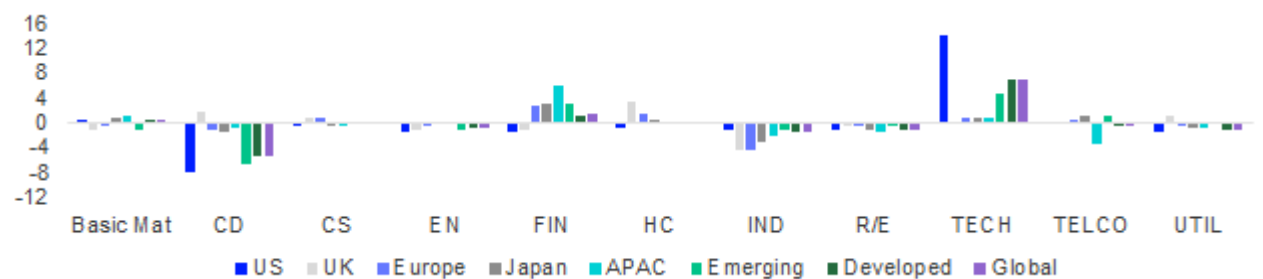
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SI Index Valuation – March 31, 2024

Strong equity market performance, combined with weak economic growth in some regions, such as Europe and China, have led P/E valuations to increase over Q1 for both SI indices and the broader market. All of the SI strategies are currently more expensive than the market, however, PAB has seen an increasing valuation, whilst Env Ops, which used to trade at a significant premium, has been falling. Other SI indices are trading at similar levels,, within 6% of the market. In price to book terms, Env Ops and PAB are higher than other SI indices, which are slightly ahead of the market. Most SI indices, except FTSE4Good, have lower dividend yields than the market, with Env Ops the lowest. Valuations were rising across all markets in Q1. The US is the most expensive market, although the SI strategies show limited premium to the US market, while Emerging Markets and UK are the cheapest.

Global Markets – 12-month forward factor P/E ratios
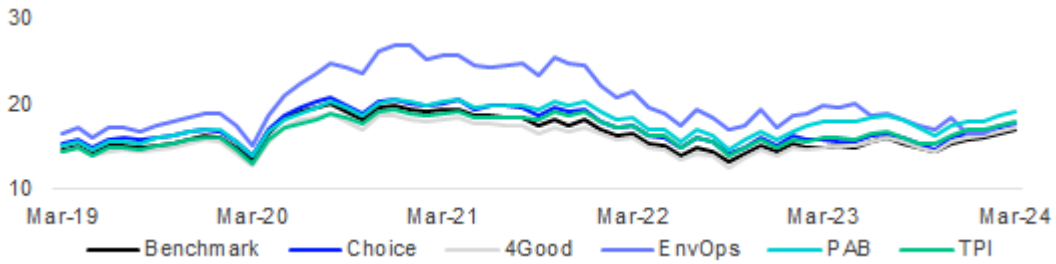
Global Markets – 12-month forward factor Price to Book ratios
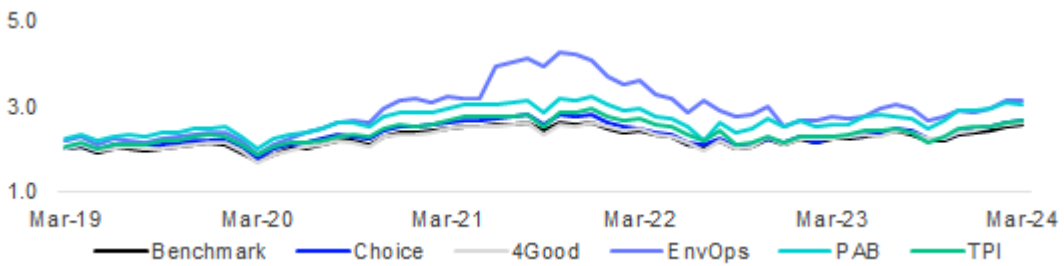
Global Markets – Dividend Yield
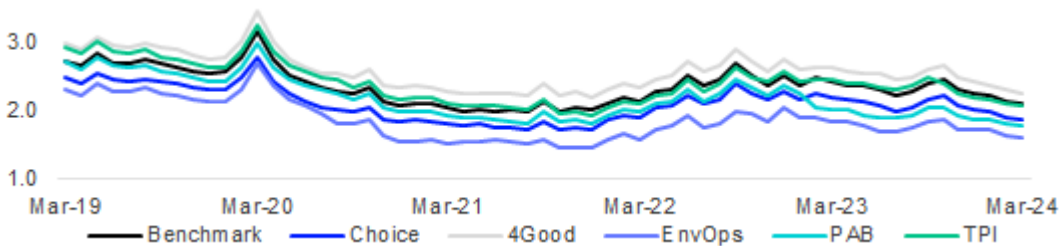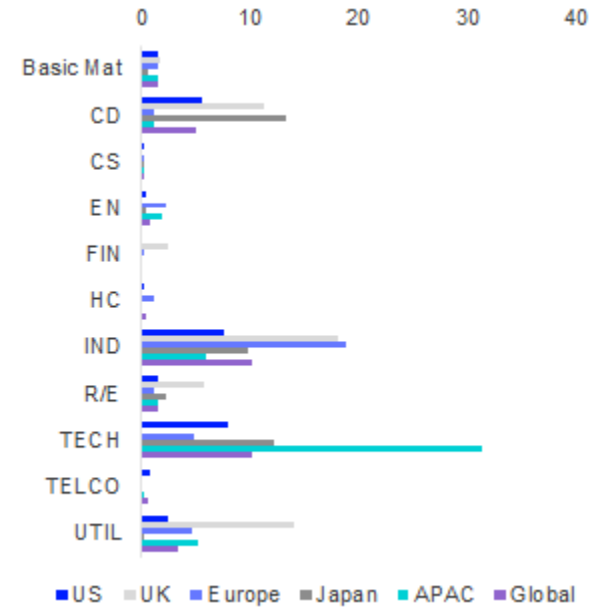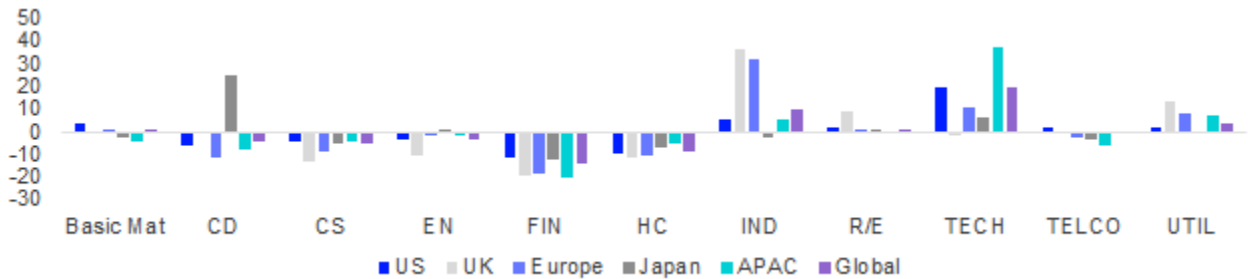

12-month forward P/E vs history
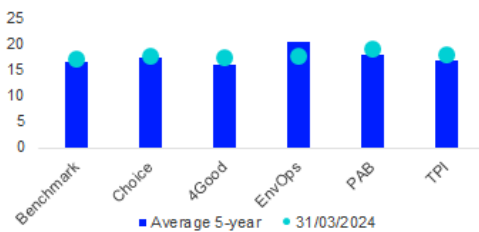
12-month forward P/E premium vs history
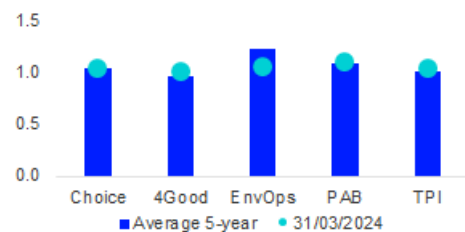
Source: FTSE Russell/LSEG. All data as of March 31, 2024. Past performance is no guarantee of future results. This report should not be considered "research" for the purposes of MIFID II. Please see the end for important legal disclosures. Results in this report are for research / illustrative purposes and do not represent the official performance of the indices.

FTSE Global Choice indices – Q1 2024

The performance of Global Choice was in line with the market at the global level in Q1, however geographical performance was mixed, with UK and Europe outperforming, and EM and APAC underperforming. The majority of underperformance came from selection in Industrials. Outperformance came from overweight allocation in Tech and underweight in Utilities and Basic Materials. Europe's outperformance came from an underweight allocation in Utilities and overweight in Financials, offset by negative allocation and selection in Industrials. In addition to exclusions, Global Choice indices are effective at reducing carbon intensity across all regions, except in the UK, through underweights in Energy, Utilities and Basic Materials.

Chart 1: Active Performance (TR, USD %)
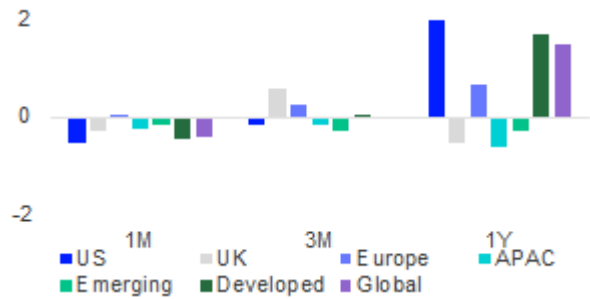
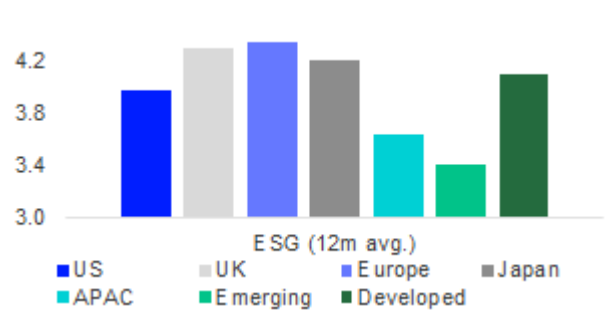Chart 2: Global Choice carbon emissions / revenues
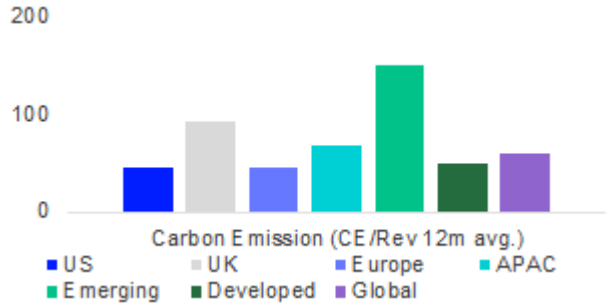
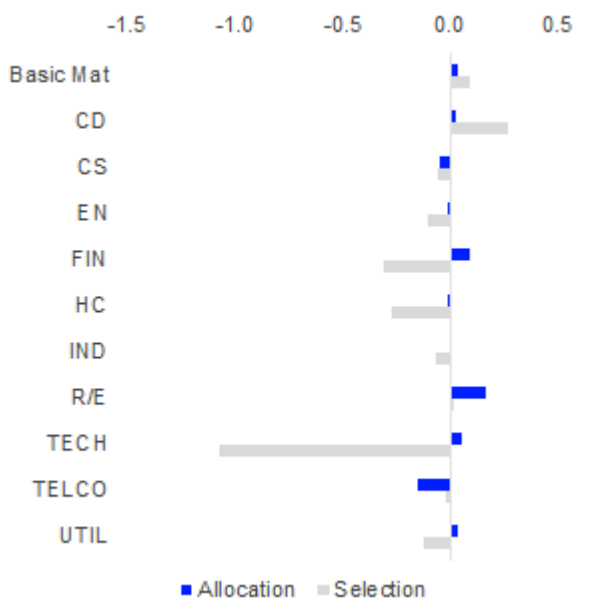Chart 3: 3M Attribution of global index (TR, USD %)
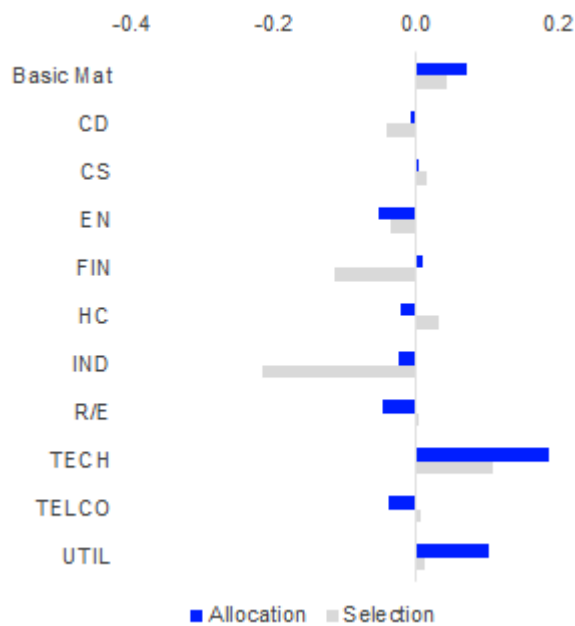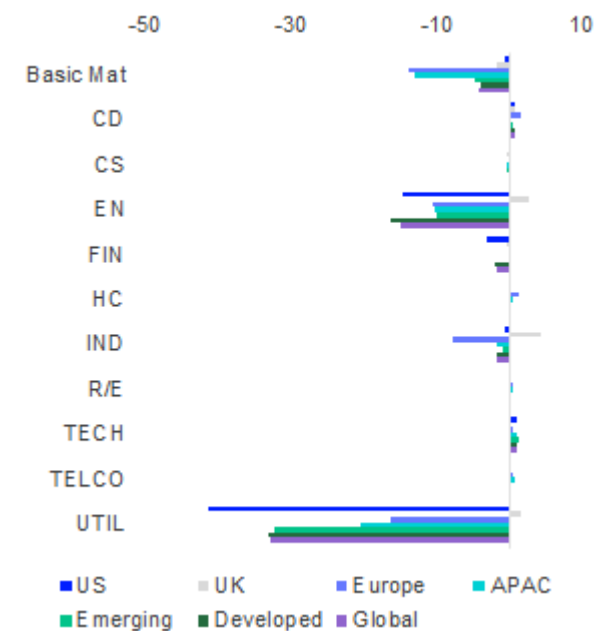
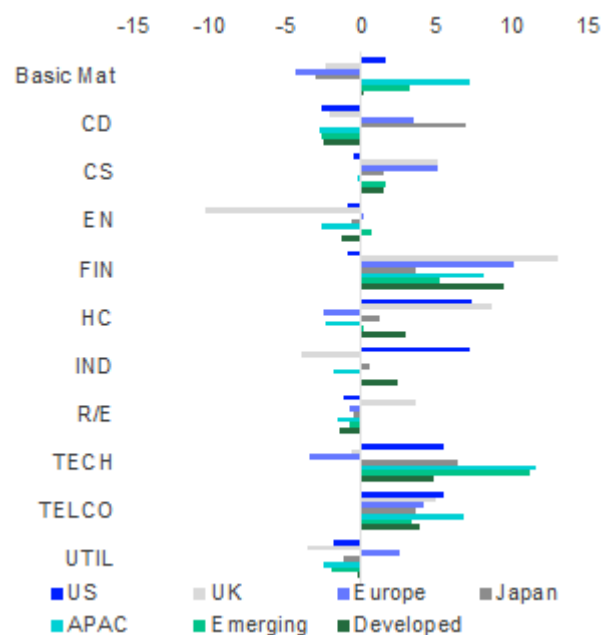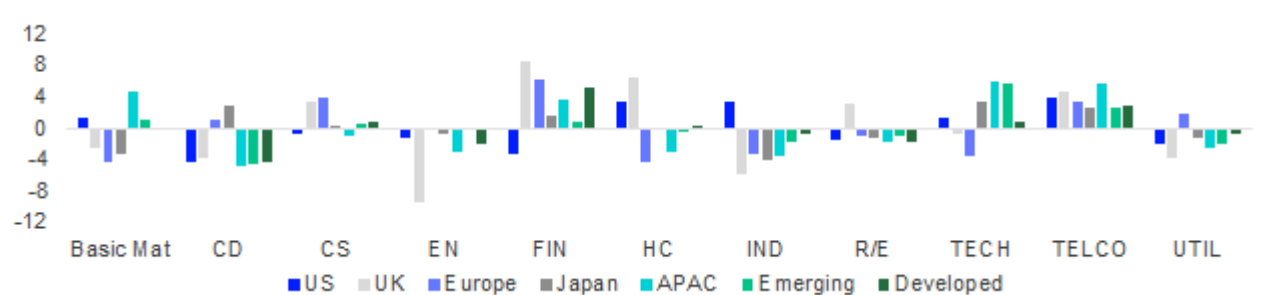
Chart 4: Contribution to carbon reduction (%)

Chart 5: Active industry weights (%)

Source: FTSE Russell/LSEG. All data as of March 31, 2024. 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 indices.

FTSE4Good indices – Q1 2024

FTSE4Good was the strongest outperformer at the global level in Q1. Japan and EM saw the highest outperformance, while Europe and the UK underperformed. The majority of outperformance came from allocation in Tech and selection in Healthcare. Underperformance came from selection effects in Industrials and Financials. Japanese outperformance came from selection in Industrials, Consumer Discretionary and Real Estate. In EM, outperformance came from selection in Tech. UK, European and Japanese indices have the highest ESG scores, while EM has the lowest. The majority of ESG uplift came from overweights in Tech and Financials, and underweights in Consumer Discretionary.

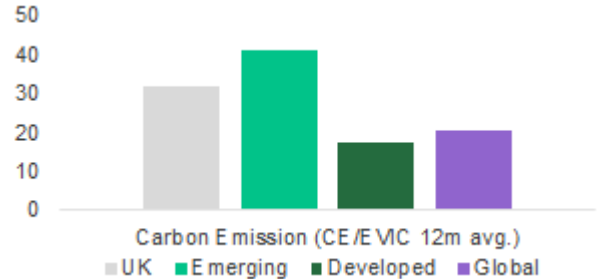Chart 1: Active Performance (TR, USD %)
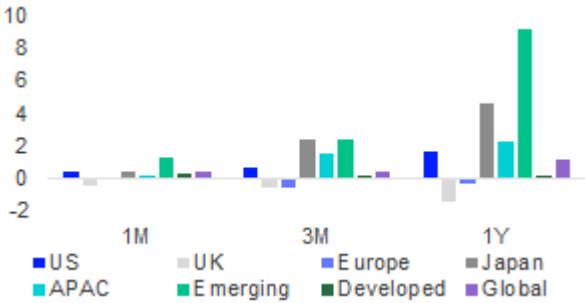
Chart 2: FTSE4Good ESG scores
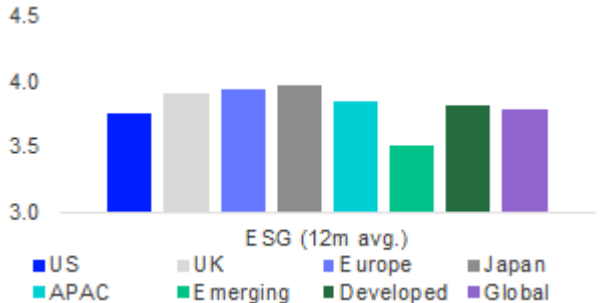
Chart 3: 3M Attribution of global index (TR, USD %)
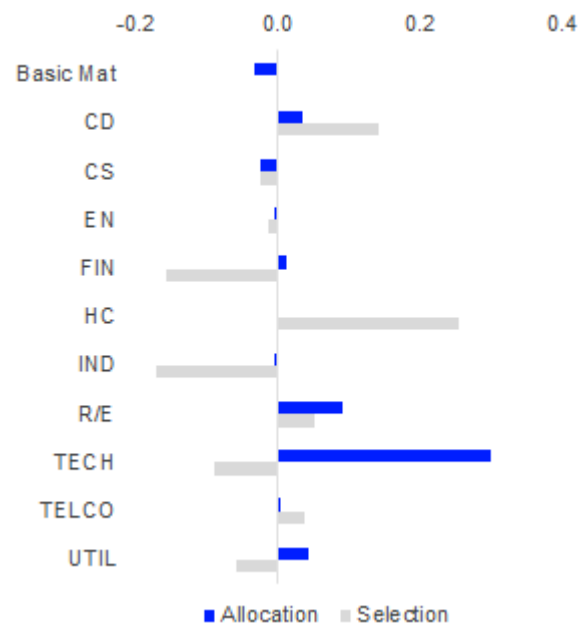
Chart 4: Contribution to ESG uplift (%)

Chart 5: Active industry weights (%)

FTSE Environmental Opportunities (EO) indices – Q1 2024

EO indices underperformed at the global level in Q1, however geographical performance was mixed, with the US and Europe strongly underperforming, and Japan and APAC strongly outperforming. The majority of underperformance came from selection in Consumer Discretionary. Outperformance came from allocation in Tech and selection in Industrials and Basic Materials. US underperformance came from selection in Consumer Discretionary. Outperformance in APAC came from selection in Tech, while the outperformance in Japan came from selection in Consumer Discretionary and Tech. EO indices are heavily overweight Industrials, Technology and Utilities (& Consumer Discretionary in Japan).

Chart 1: Active Performance (TR, USD %)
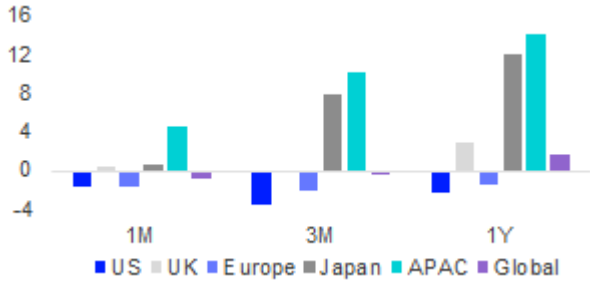
Chart 2: Environmental Ops Green Revenues scores
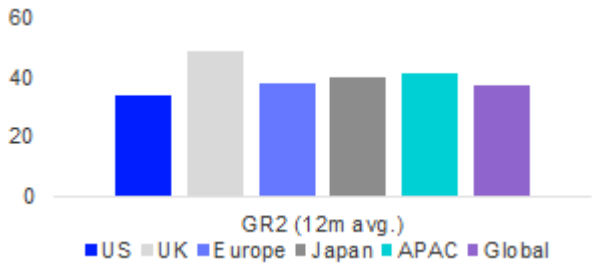
Chart 3: 3M Attribution of global index (TR, USD %)
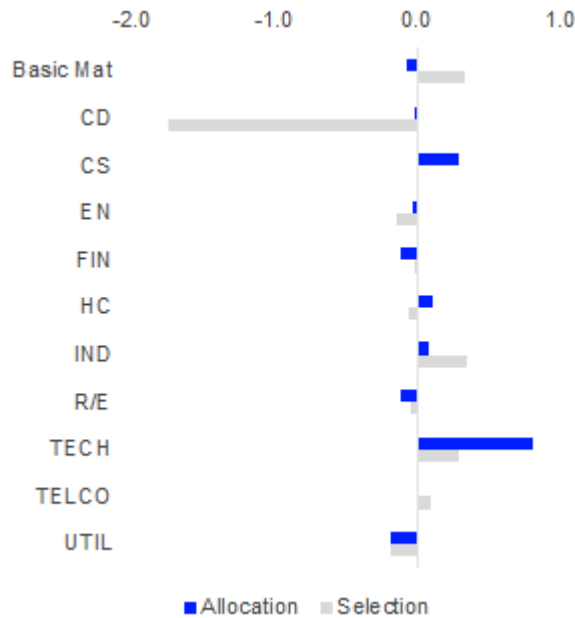
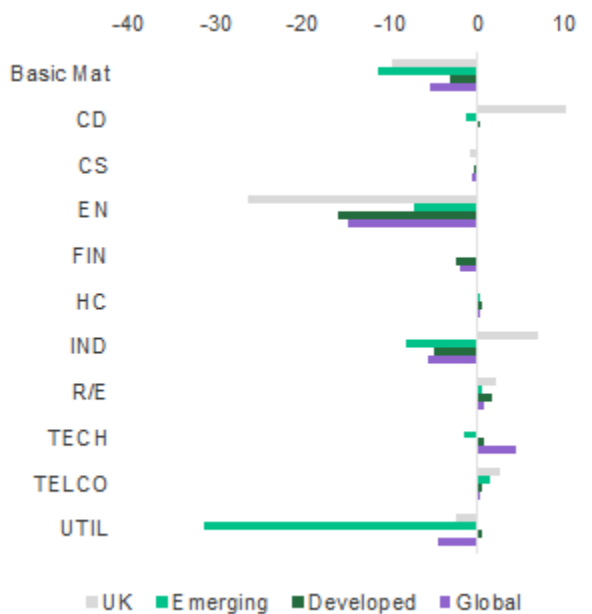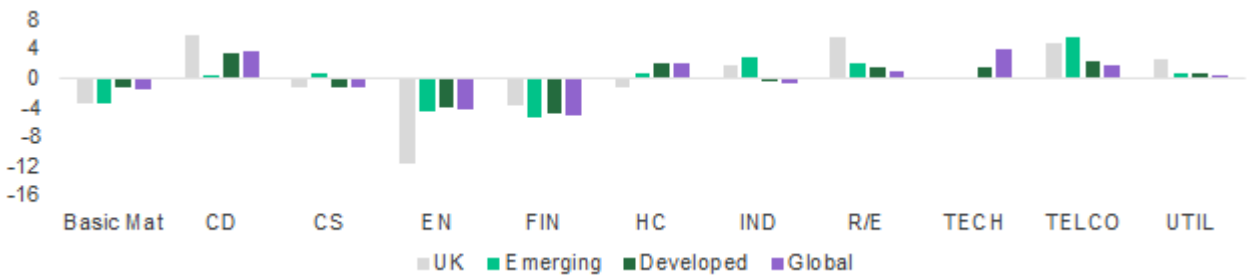Chart 4: Contribution to Green Revenues uplift (%)

Chart 5: Active industry weights (%)

Source: FTSE Russell/LSEG. All data as of March 31, 2024. 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 indices.

FTSE ESG Low Carbon Target Exposure indices – Q1 2024

FTSE ESG Low Carbon underperformed at the developed level in Q1, however geographical performance was mixed with US and Europe underperforming, and Japan and EM outperforming. The majority of underperformance came from selection in Tech. Outperformance came from an underweight allocation in Real Estate, and selection in Consumer Discretionary. US underperformance came from selection in Tech. Outperformance in Japan came selection in Consumer Discretionary, Industrials, Real Estate and Healthcare. ESG Low Carbon generates both lower carbon intensities and higher ESG scores from multiple industries, particularly Financials, Tech and Telecoms.

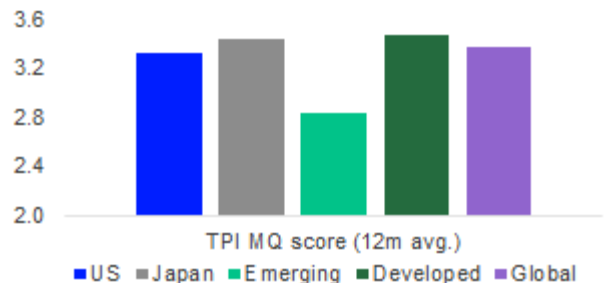Chart 1: Active Performance (TR, USD %)
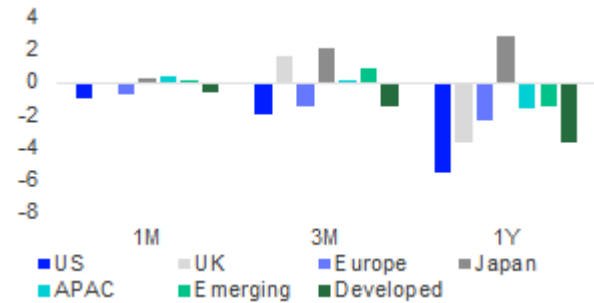
Chart 2: ESG Low Carbon ESG scores
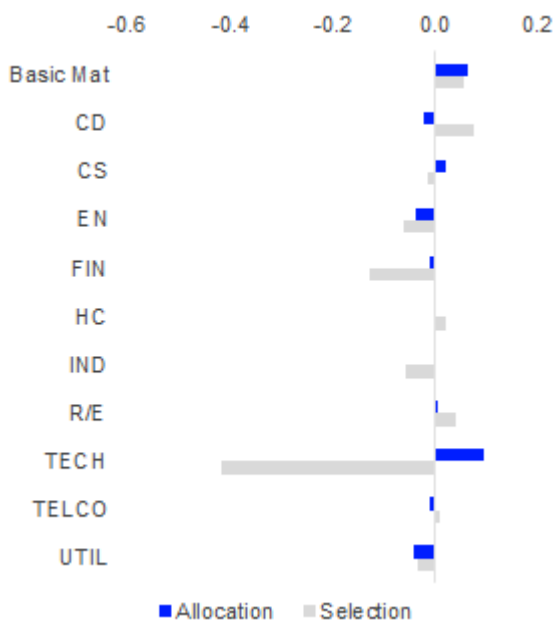

Chart 3: 3M Attribution of global index (TR, USD %)
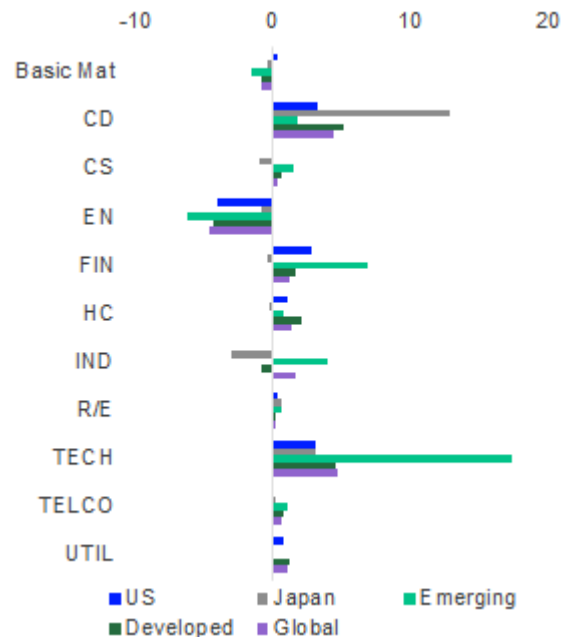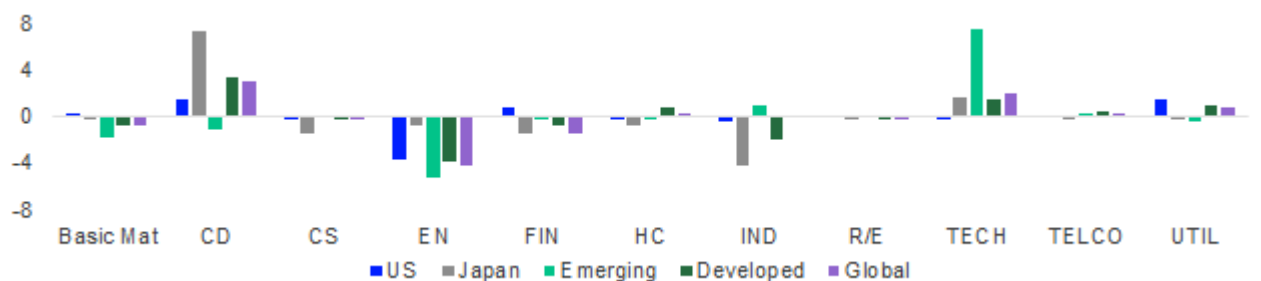

Chart 4: Contribution to ESG uplift (%)

Chart 5: Active industry weights (%)

Source: FTSE Russell/LSEG. All data as of March 31, 2024. 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 indices.

FTSE EU Paris-Aligned Benchmark (PAB) indices – Q1 2024

Paris-Aligned Benchmark saw the worst underperformance at the global level in Q1. All geographies saw underperformance, with the UK seeing the highest level, and EM the lowest level. The majority of underperformance came from selection in Consumer Discretionary and Technology. Outperformance came from allocation in Tech and Basic Materials. UK underperformance came from selection in Consumer Staples, Consumer Discretionary and Industrials. Underperformance in EM was driven by negative selection in Consumer Discretionary and Tech. The carbon reduction in PAB comes primarily from underweights in Energy and Basic Materials, and a tilting towards lower carbon Utilities.

Chart 1: Active Performance (TR, USD %)
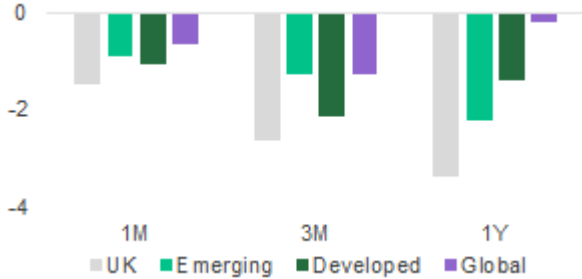
Chart 2: PAB Carbon Emissions / EVIC

Chart 3: 3M Attribution of global index (TR, USD %)
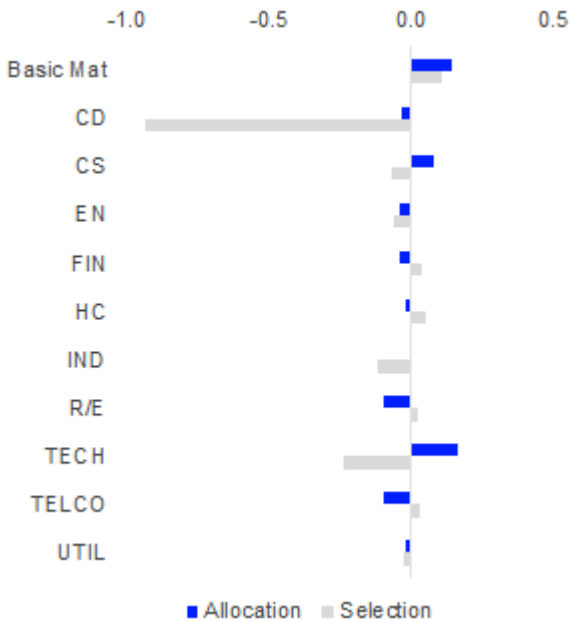
Chart 4: Contribution to Carbon Reduction (%)

Chart 5: Active industry weights (%)

Source: FTSE Russell/LSEG. All data as of March 31, 2024. 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 indices.

FTSE TPI Climate Transition indices – Q1 2024

TPI indices underperformed at the global level in Q1, however geographical performance was mixed, with the US underperforming, and Japan and EM outperforming. The majority of underperformance came from negative selection in Tech. Outperformance came from allocation in Tech. Underperformance in the US came from negative selection in Tech and Healthcare, partially offset by positive selection in Consumer Discretionary. Outperformance in Japan was driven by selection in Consumer Discretionary, and in EM, by selection in Tech. TPI MQ scores are similar across developed markets, while EM is materially lower. Uplift came from a wide range of industries, offset by the underweight in Energy.

Chart 1: Active Performance (TR, USD %)
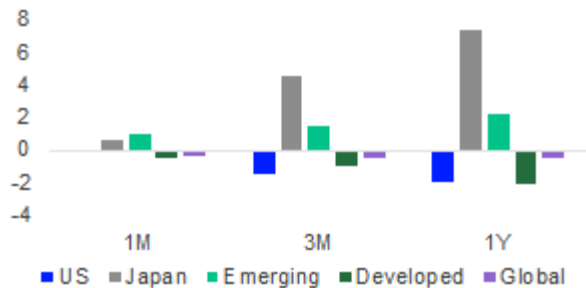
Chart 2: TPI Index TPI Management Quality scores

Chart 3: 3M Attribution of global index (TR, USD %)

Chart 4: Contribution to TPI Management Quality uplift (%)

Chart 5: Active industry weights (%)

Source: FTSE Russell/LSEG. All data as of March 31, 2024. 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 indices.

Global Index Comparisons – Q1 2024

Global SI indices were mixed in Q1. The biggest outperformer was FTSE4Good, driven by an overweight allocation in Tech and positive selection in Healthcare. The biggest underperformer was PAB, driven by negative selection in Consumer Discretionary and Tech. Choice was in line, while Env Ops and TPI underperformed. TPI and Choice are trading at close to their 5-year relative P/E premium, while PAB and FTSE4Good are slightly higher and Env Ops is lower. During Q1, premia remained largely unchanged. FTSE4Good is the cheapest strategy, whereas PAB remains the most expensive.

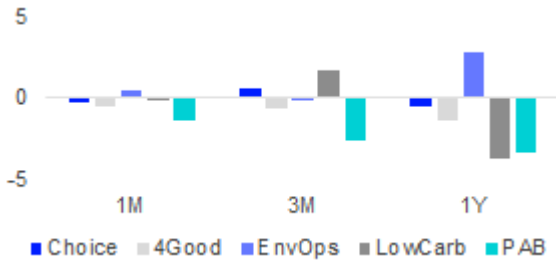Chart 1: Active Performance (TR, USD %)
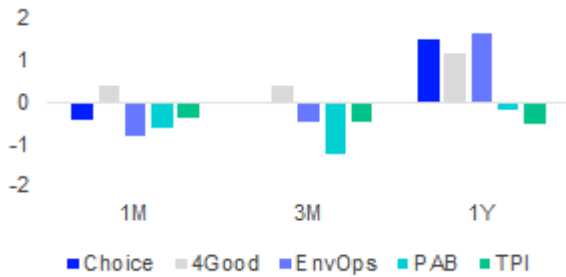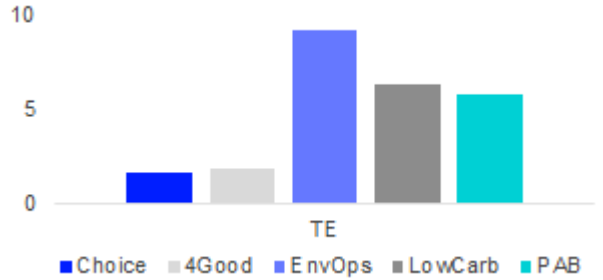

Chart 2: Index tracking error (%)
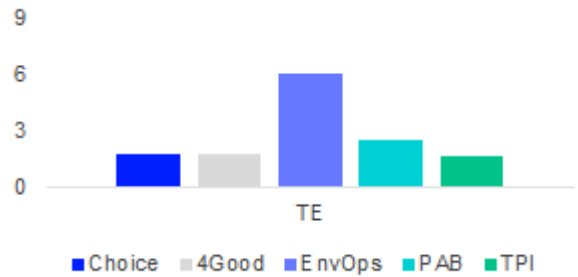
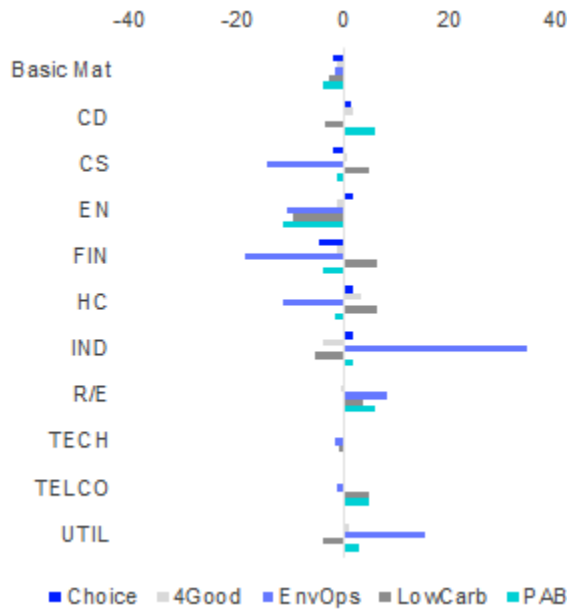Chart 3: Industry active weight (3M ave %)
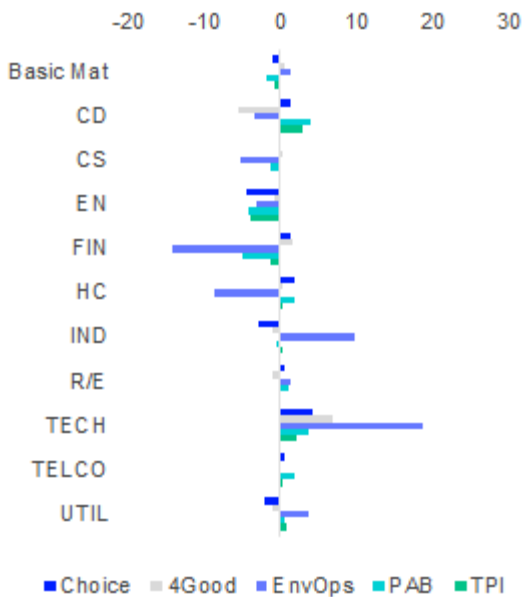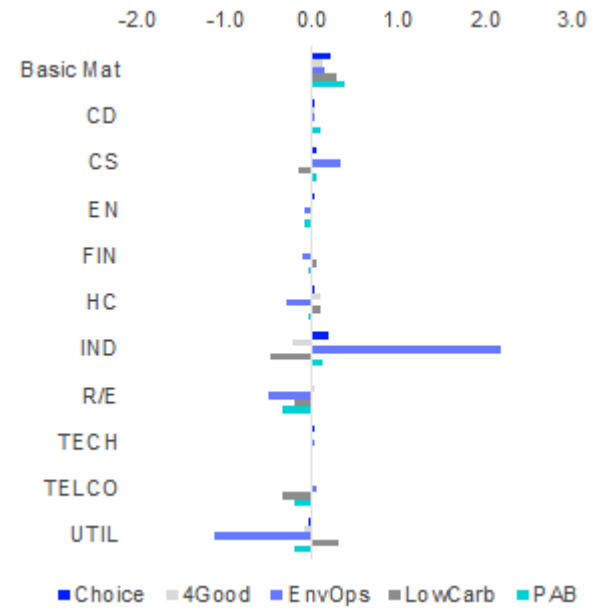

Chart 4: 3M industry allocation effect (%)
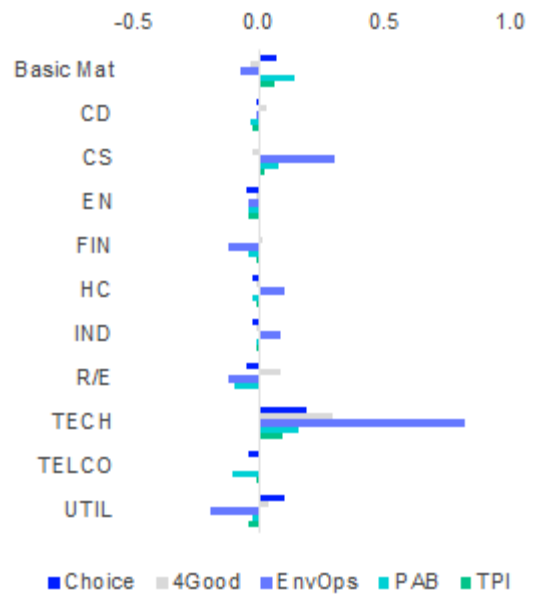
Chart 5: Global indices Relative Valuation: Latest 12-month Forward P/E relative to 5-year average
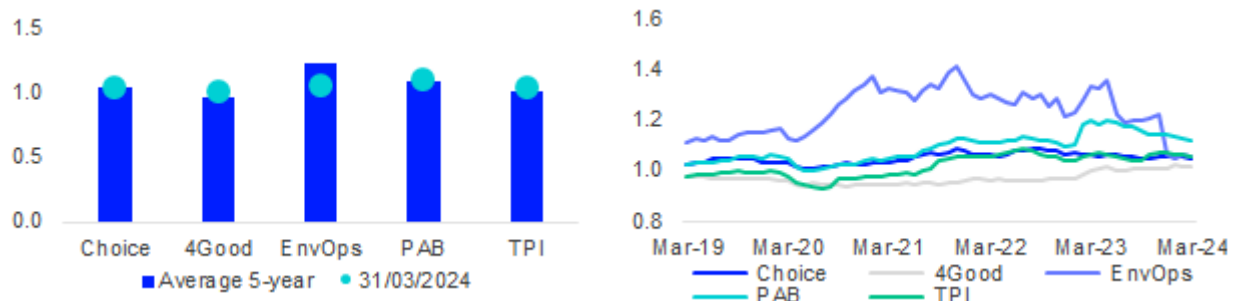
Source: FTSE Russell/LSEG. All data as of March 31, 2024. Past performance is no guarantee of future results. This report should not be considered "research" for the purposes of MIFID II. Please see the end for important legal disclosures. Results in this report are for research / illustrative purposes and do not represent the official performance of the indices.

US Index Comparisons – Q1 2024

US SI indices predominantly underperformed in Q1. The only outperformer was FTSE4Good, driven by an overweight allocation in Tech and positive selection in Healthcare, partially offset by negative selection in Tech. The biggest underperformer was Env Ops, driven by negative selection in Consumer Discretionary and Tech, partially offset by overweight allocation in Tech, and positive selection in Industrials. Choice , Low Carbon and TPI all underperformed. Low Carbon and TPI trade at a slight discount to the market, while FTSE4Good is in line. Choice is at a slight premium, and Env Ops is at a greater, but falling premium.

Chart 1: Active Performance (TR, USD %)
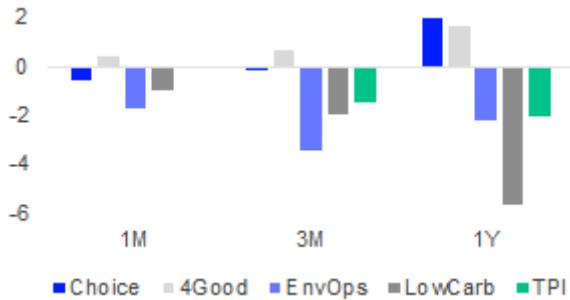
Chart 2: Index tracking error (%)
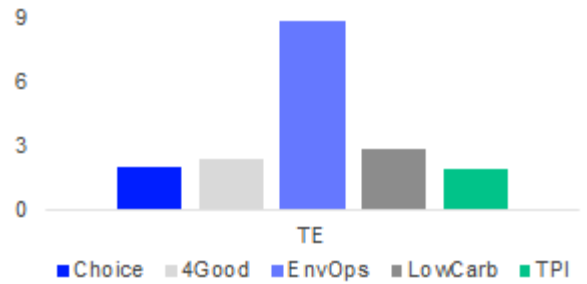
Chart 3: Industry active weight (3M ave %)
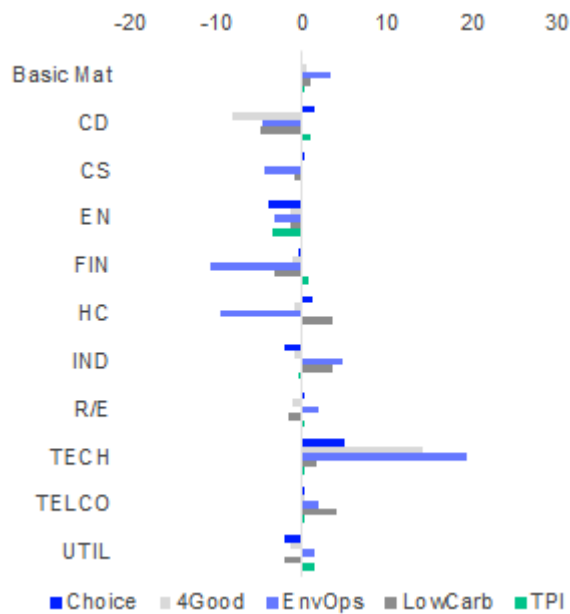
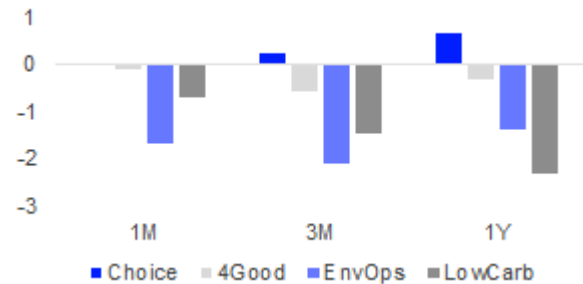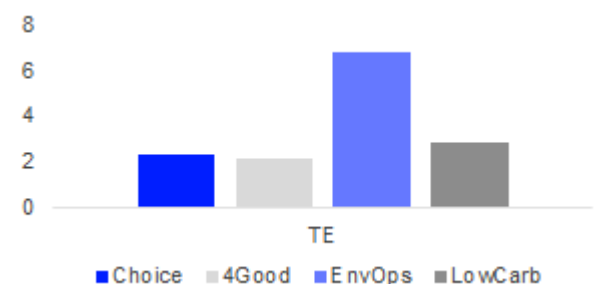Chart 4: 3m industry allocation effect (%)
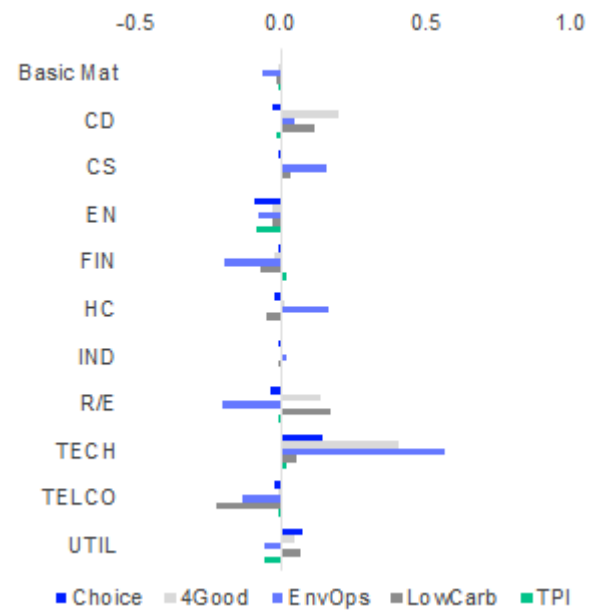
Chart 5: US indices Relative Valuation: Latest 12-month Forward P/E relative to 5-year average
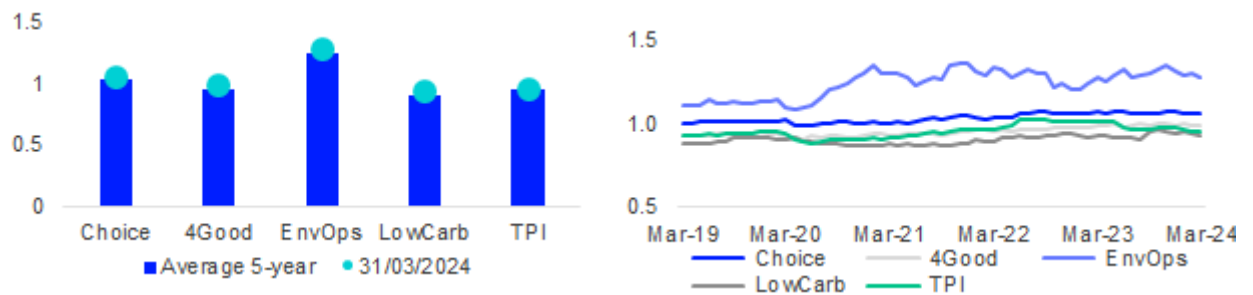
UK Index Comparisons – Q1 2024

UK SI indices were mixed in Q1. Low Carbon was the biggest outperformer, driven by positive selection in Financials and Healthcare, partially offset by negative selection in Consumer Staples and Consumer Discretionary. PAB was the biggest underperformer, driven by negative selection in Consumer Staples and Consumer Discretionary, partially offset by positive selection in Healthcare and Basic Materials and underweight allocation in Basic Materials. In the UK, Choice and FTSE4Good trade in line with their 5-year P/E premium, while PAB is above and Env Ops and Low Carbon are below. Premia have been largely flat in Q1.

Chart 1: Active Performance (TR, USD %)

Chart 2: Index tracking error (%)
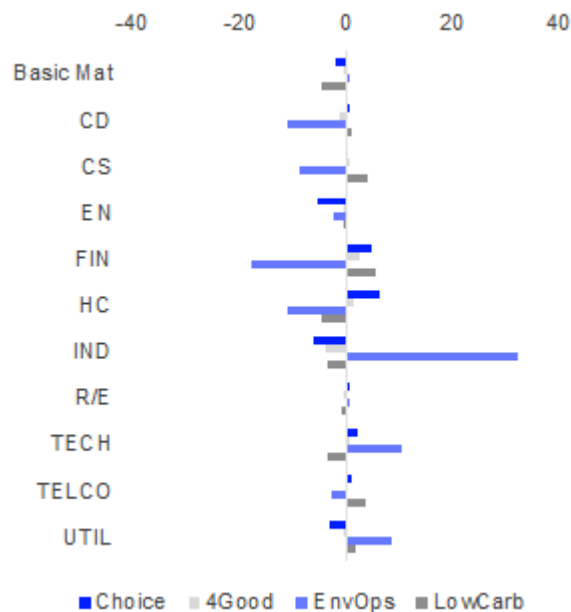

Chart 3: Industry active weight (3M ave %)

Chart 4: 3M industry allocation effect (%)

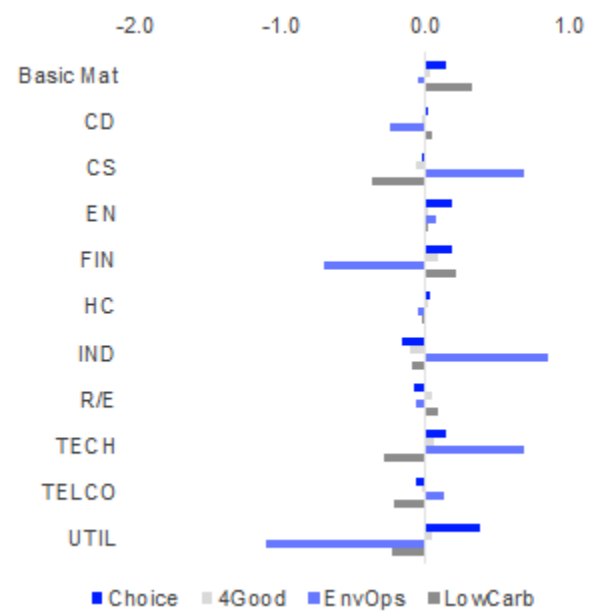Chart 5: UK indices Relative Valuation: Latest 12-month Forward P/E relative to 5-year average
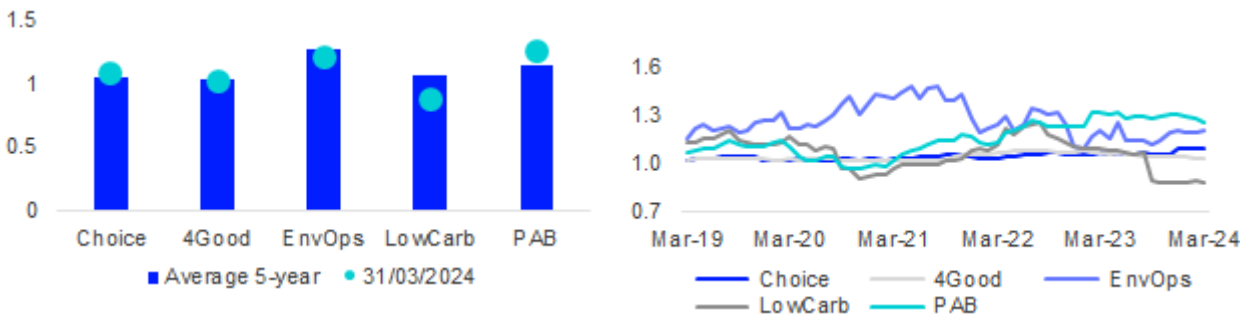
Source: FTSE Russell/LSEG. All data as of March 31, 2024. Past performance is no guarantee of future results. This report should not be considered "research" for the purposes of MIFID II. Please see the end for important legal disclosures. Results in this report are for research / illustrative purposes and do not represent the official performance of the indices.

Europe Index Comparisons – Q1 2024

European SI indices predominantly underperformed in Q1. Choice was the only outperformer, driven by underweight allocation in Utilities, partially offset by negative selection in Industrials. Env Ops was the biggest underperformer, driven by overweight allocation in Utilities and negative selection in Industrials and Healthcare. Low Carbon and FTSE4Good also underperformed. European SI index relative valuations are in line with their 5-year averages, with Env Ops having recently seen rising premia.

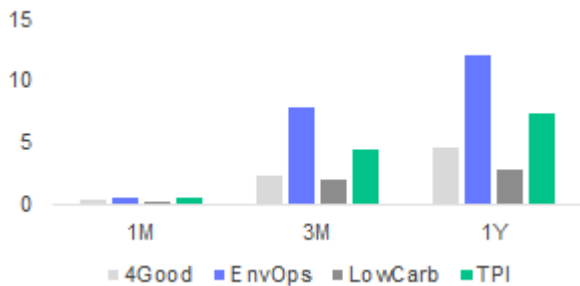Chart 1: Active Performance (TR, USD %)

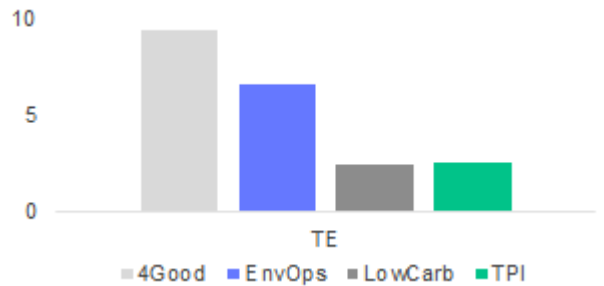Chart 2: Index tracking error (%)

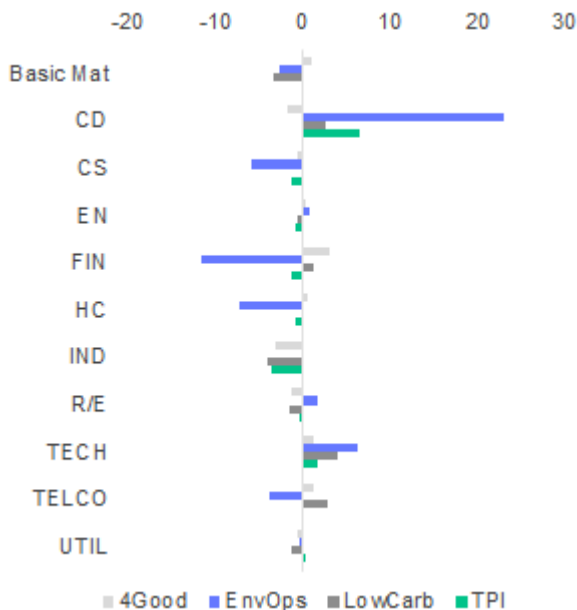

Chart 3: Industry active weight (3M ave %)

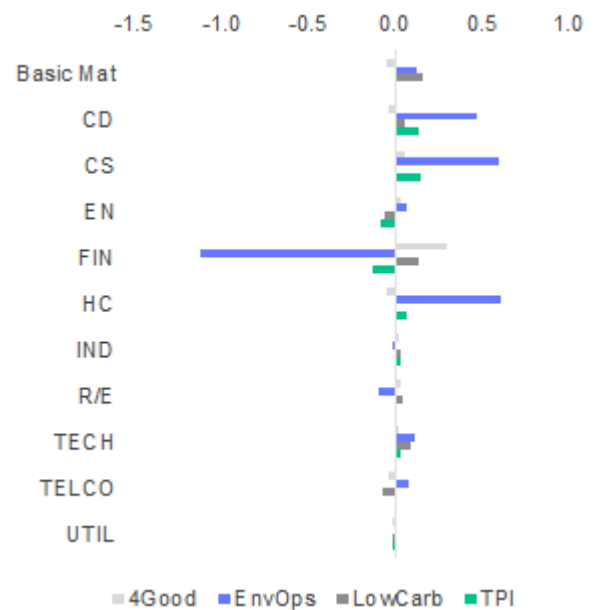Chart 4: 3M industry allocation effect (%)

Chart 5: European indices Relative Valuation: Latest 12-month Forward P/E relative to 5-year average
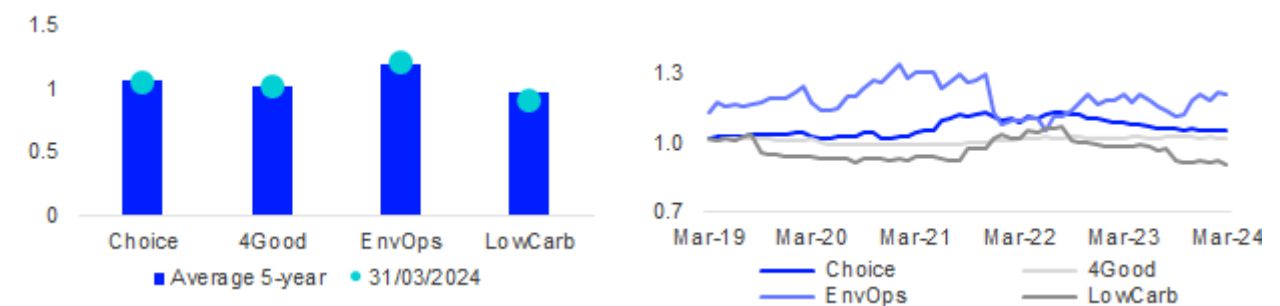
Source: FTSE Russell/LSEG. All data as of March 31, 2024. Past performance is no guarantee of future results. This report should not be considered "research" for the purposes of MIFID II. Please see the end for important legal disclosures. Results in this report are for research / illustrative purposes and do not represent the official performance of the indices.

Japan Index Comparisons – Q1 2024

Japanese SI indices strongly outperformed in Q1. Env Ops was the strongest outperformer, driven by positive allocation in Consumer Discretionary and Tech, partially offset by negative selection in Industrials and underweight allocation in Financials. Low Carbon saw the lowest outperformance, driven by positive selection in Consumer Discretionary and Industrials, partially offset by negative selection in Tech. TPI and FTSE4Good also strongly outperformed. FTSE4Good, LowCarb and TPI have a P/E premium in line with their 5-year average, while that of Env Ops is below its 5-year average, due to new inclusions in 2023.
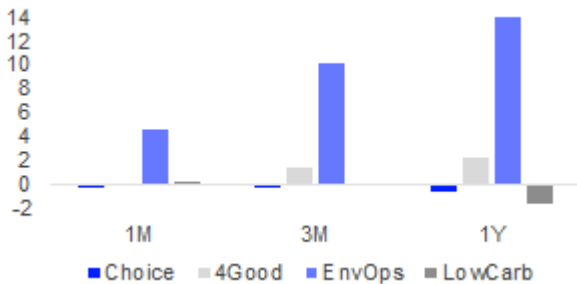
Chart 1: Active Performance (TR, USD %)

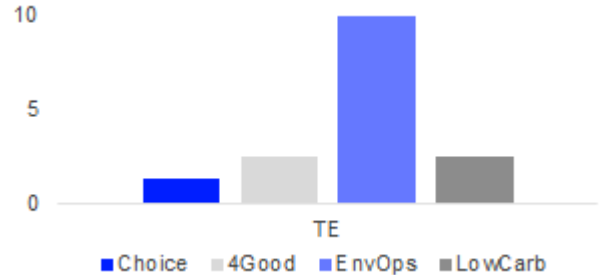Chart 2: Index tracking error (%)

Chart 3: Industry active weight (3M ave %)

Chart 4: 3M industry allocation effect (%)

Chart 5: Japanese indices Relative Valuation: Latest 12-month Forward P/E relative to 5-year average
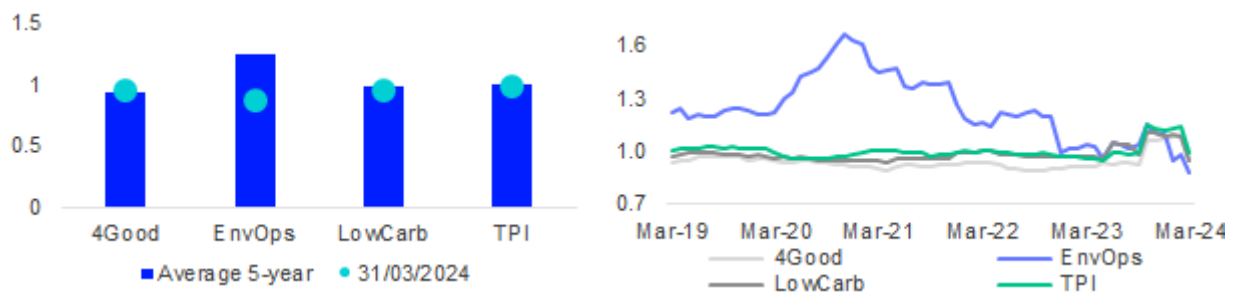
Asia Pacific Index Comparisons – Q1 2024

APAC SI indices predominately outperformed in Q1. Env Ops was the strongest outperformer, driven by its overweight allocation and positive selection in Tech. Choice was the only underperformer, driven by negative selection in Industrials, offset by underweight allocation and positive selection in Basic Materials. FTSE4Good outperformed, while Low Carbon was slightly ahead of the market. FTSE4Good has seen a significant rise in P/E premium in recent quarters, putting it ahead of its 5-year average, while other SI strategies are in line with their historical averages.

Chart 1: Active Performance (TR, USD %)

Chart 2: Index tracking error (%)

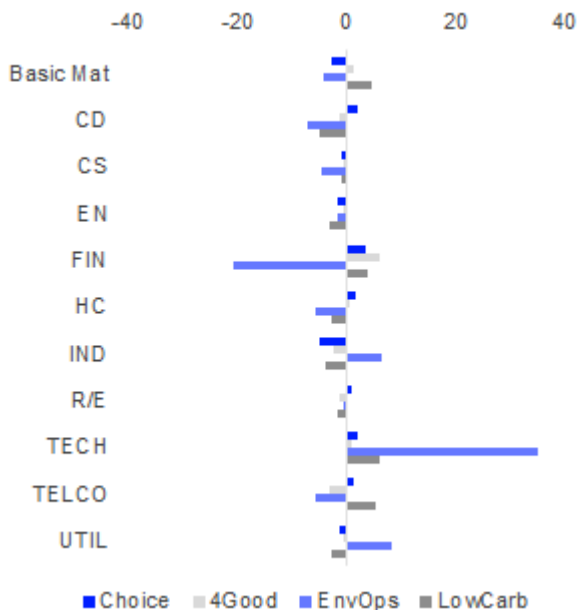Chart 3: Industry active weight (3M ave %)
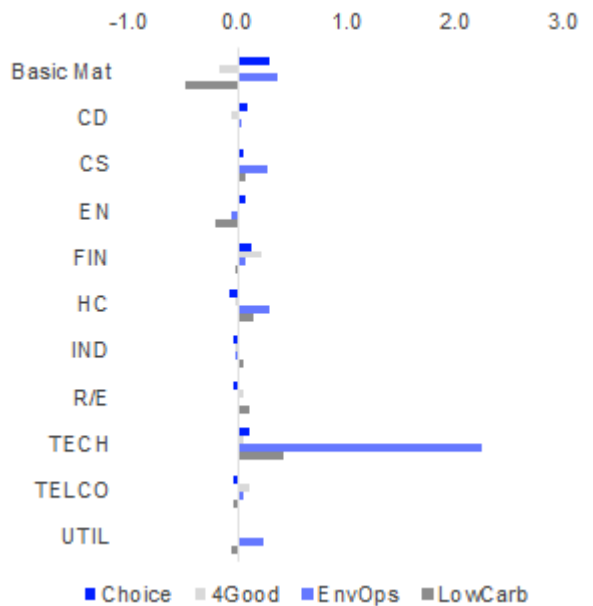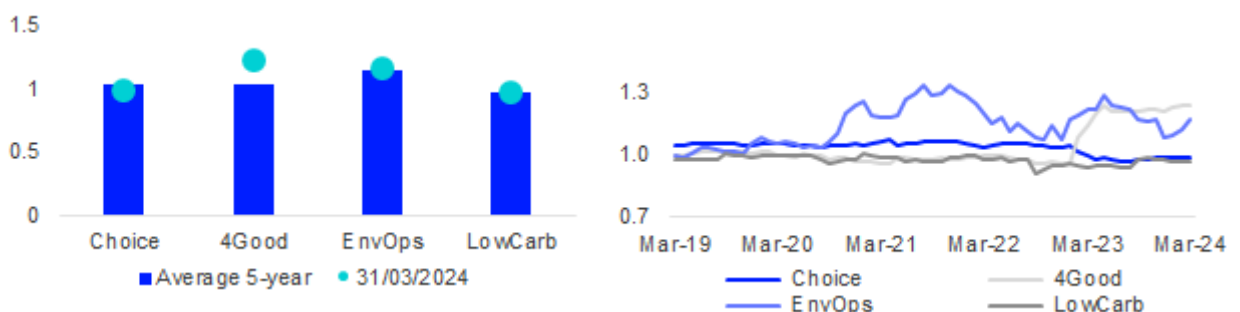

Chart 4: 3M industry allocation effect (%)

Chart 5: APAC indices Relative Valuation: Latest 12-month Forward P/E relative to 5-year average

Source: FTSE Russell/LSEG. All data as of March 31, 2024. 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 indices.

Emerging Markets Index Comparisons – Q1 2024

EM SI strategies were mixed in Q1. FTSE4Good was the strongest outperformer, driven by overweight allocation and positive selection in Tech. PAB was the biggest underperformer, driven by negative selection in Tech and Consumer Discretionary, and underweight allocation in Energy, partially offset by positive selection in Telecoms. FTSE4Good has a much higher tracking error in EM than in other regions, due to a much larger proportion of index constituents being excluded due to low ESG scores. SI valuation premia are relatively modest in EM, with PAB and FTSE4Good being the highest, and above its historical average.

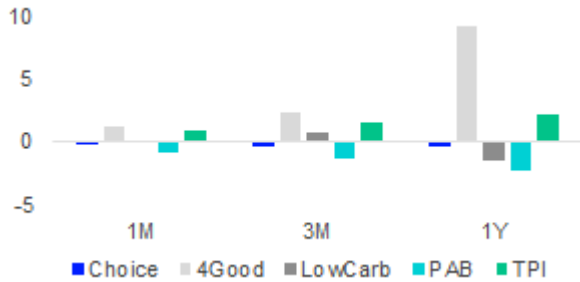Chart 1: Active Performance (TR, USD %)

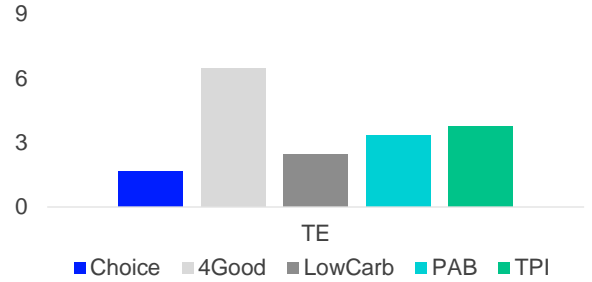

Chart 2: Index tracking error (%)
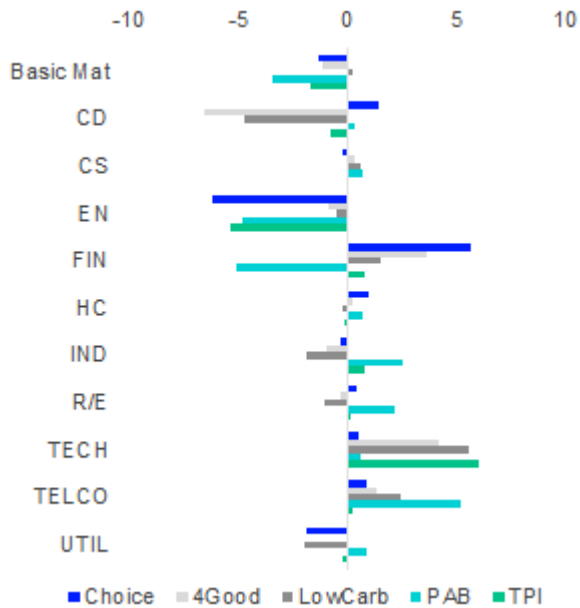

Chart 3: Industry active weight (3M ave %)

Chart 4: 3M industry allocation effect (%)

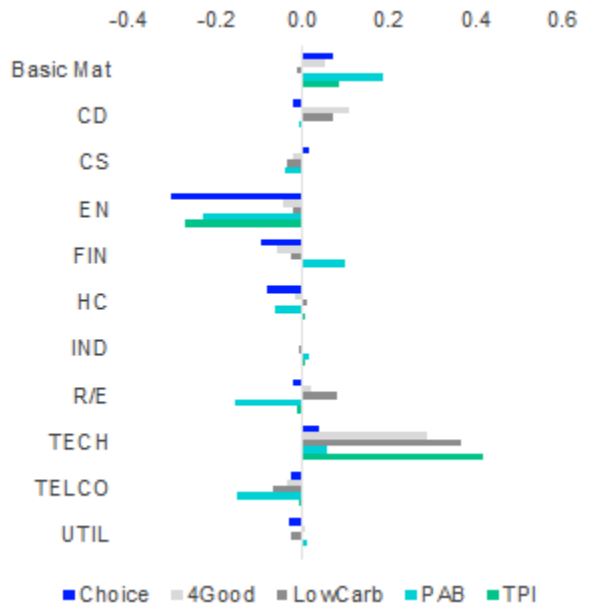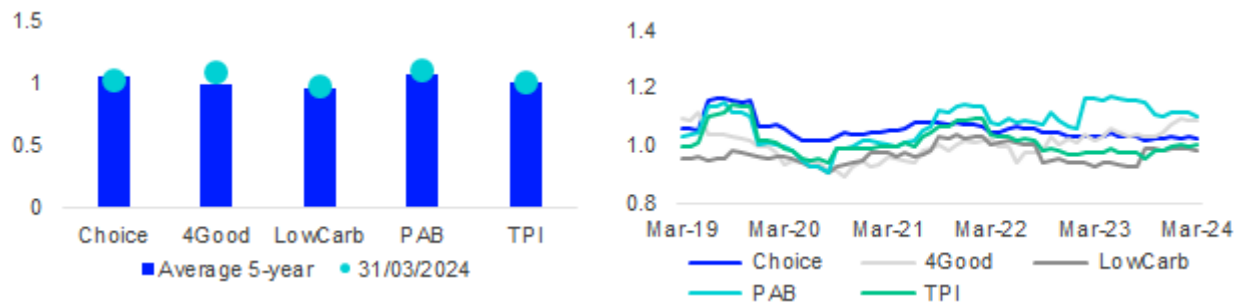Chart 5: EM indices Relative Valuation: Latest 12-month Forward P/E relative to 5-year average

Developed Markets Index Comparisons – Q1 2024

Developed SI indices predominantly underperformed in Q1. FTSE4Good was the biggest outperformer, only slightly ahead of the index, driven by overweight allocation in Tech and positive selection in Healthcare, partially offset by negative selection in Tech and Industrials. PAB was the biggest underperformer, driven by negative selection in Consumer Discretionary and Tech. Tracking errors for all of the five Developed SI indices are relatively similar, ~2%. Valuation premia have been relatively stable, in line to slightly above history, except for PAB, which has the largest premium to market.

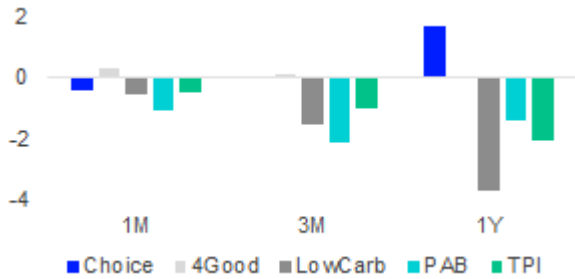Chart 1: Active Performance (TR, USD %)
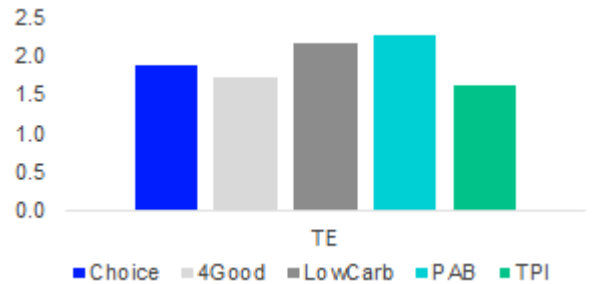

Chart 2: Index tracking error (%)

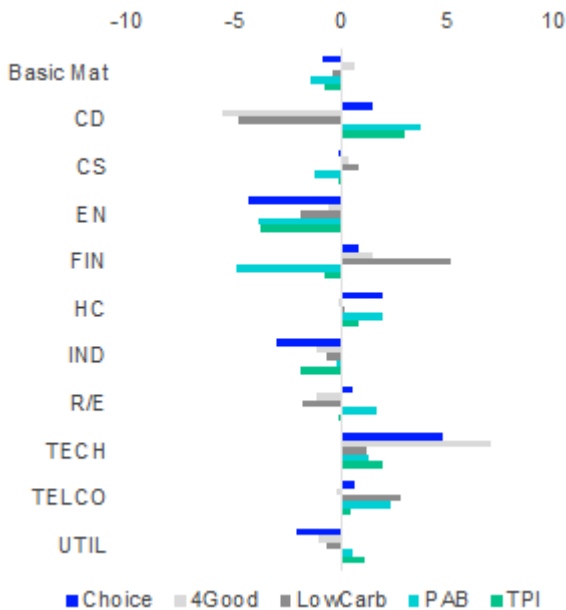Chart 3: Industry active weight (3M ave %)
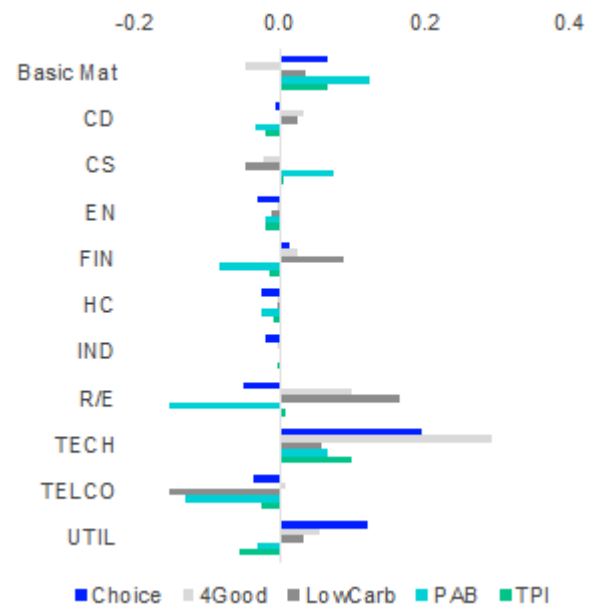

Chart 4: 3M industry allocation effect (%)

Chart 5: Developed indices Relative Valuation: Latest 12-month Forward P/E relative to 5-year average
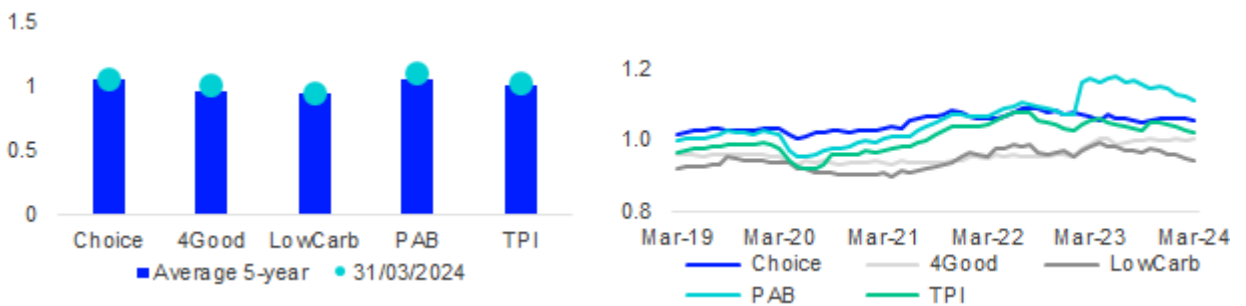
Source: FTSE Russell/LSEG. All data as of March 31, 2024. Past performance is no guarantee of future results. This report should not be considered "research" for the purposes of MIFID II. Please see the end for important legal disclosures. Results in this report are for research / illustrative purposes and do not represent the official performance of the indices.

Appendix 1: SI Index Coverage and Benchmarks

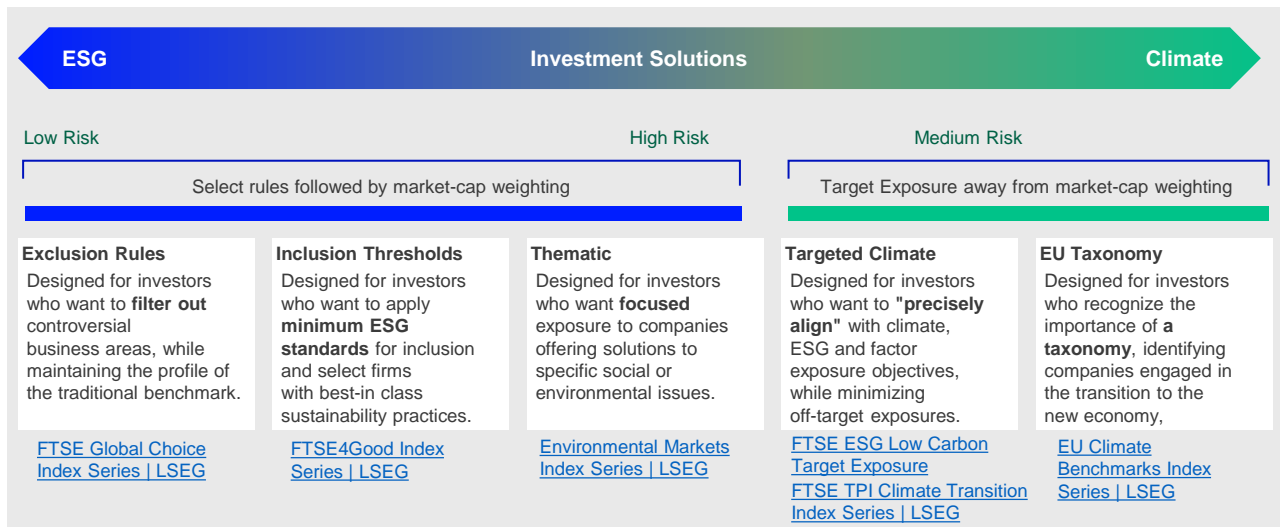At FTSE Russell, sustainable investing includes a range of index strategies that aim to provide purpose-driven outcomes aligned with investors' sustainable investment policies. Investors seeking close alignment with the benchmark can choose to apply screens to exclude companies with undesirable features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

ESG	**Investment Solutions**		**Climate**	
Low Risk		High Risk	Medium Risk	
Select rules followed by market-cap weighting			Target Exposure away from market-cap weighting	
Exclusion Rules	**Inclusion Thresholds**	**Thematic**	**Targeted Climate**	**EU Taxonomy**
Designed for investors who want to **filter out** controversial business areas, while maintaining the profile of the traditional benchmark.	Designed for investors who want to apply **minimum ESG standards** for inclusion and select firms with best-in class sustainability practices.	Designed for investors who want **focused** exposure to companies offering solutions to specific social or environmental issues.	Designed for investors who want to **"precisely align"** with climate, ESG and factor exposure objectives, while minimizing off-target exposures.	Designed for investors who recognize the importance of **a taxonomy**, identifying companies engaged in the transition to the new economy,
FTSE Global Choice Index Series | LSEG	FTSE4Good Index Series | LSEG	Environmental Markets Index Series | LSEG	FTSE ESG Low Carbon Target Exposure FTSE TPI Climate Transition Index Series | LSEG	EU Climate Benchmarks Index Series | LSEG

Market-Cap Weighted indices*

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

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

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

Target Exposure indices*

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

FTSE EU Climate Transition Benchmarks (CTB) target a 30% reduction in carbon emissions, 100% uplift in Green Revenues (70% in Japan) and high climate governance as measured by the Transition Pathway Initiative (TPI).

FTSE Paris Aligned Benchmarks (PAB) target a 50% reduction in carbon emissions, 100% uplift in Green Revenues and high climate governance.

FTSE TPI Climate Transition over/underweights companies based on fossil fuel reserves, carbon emissions, green revenues, TPI management quality and TPI carbon performance.

*Please refer to FTSE | The Right Index for Your Sustainable Investment Objectives (lseg.com) l for the full range of FTSE Russell sustainable investment products

** ESG uplift target is the minimum of a standard deviation of market capitalization averaged index ESG score and a 20% uplift.

Appendix 1: SI Index Coverage and Benchmarks

Region	SI FAMILY	FTSE Russell Index	FTSE Russell Benchmark	Regional Coverage DM	Regional Coverage EM	Market Cap Coverage Large + Mid Cap	Market Cap Coverage 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**	✓		✓	
	TPI Climate Transition	Russell 1000 TPI Climate Transition	Russell 1000	✓		✓	
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**	✓		✓	
	Climate Transition	FTS Climate Transition Benchmark	FTSE All-Share ex Investment Trusts	✓			✓
	Paris Aligned	FTSE Paris Aligned Benchmark	FTSE All-Share ex Investment Trusts	✓			✓
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**	✓		✓	
	Climate Transition	FTSE Japan Climate Transition Benchmark	FTSE JPX Japan 500	✓		✓	
	TPI Climate Transition	FTSE Japan TPI Climate Transition	**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	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	✓		✓	
	TPI Climate Transition	FTSE Developed TPI Climate Transition ex Coal ex	FTSE Developed	✓		✓	

*The indices in bold are used as representative benchmarks on page 6

Source: FTSE Russell/LSEG. This report should not be considered "research" for the purposes of MIFID II. Please see the end for important legal disclosures.

Appendix 1: Glossary Products and Methodology

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 indices 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 score 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 measures 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 indices target a percentage reduction in index level carbon emissions and a significant improvement in the aggregate ESG score.	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 indices 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 indices 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 2: Reference Guide

Report calculations

- Unless noted otherwise, all performance calculations are in US dollar currency terms.
- Tracking error and Beta are calculated from 5-years of daily returns. All other calculations on pages 2 & 3 are 12-month averages.
- Page 6: Regional benchmark performance are for representative benchmarks of the region and not the official benchmark for all listed SI indices. Appendix 1 shows the full list of SI indices covered in this report with their official benchmarks, which are used in the calculations throughout the report.
- 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. For Green Revenues it is the absolute increase in weighted average green revenues.
- Three-month industry allocation & stock selection effect is based on a Brinson attribution.

Sustainable Investment data inputs

- Carbon emissions: estimated annual CO_2 equivalent GHG emissions (Scope 1 and 2) in metric tons scaled by annual sales (in USD) (metric tons/$m), with the exception of EU Regulated Climate Benchmarks which use CO_2 equivalent GHG emissions (Scope 1 and 2) scaled by enterprise value including cash (EVIC).
- 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 scores are objective measures of ESG exposure and performance in multiple dimensions.
- TPI Management Quality Data from the Transition Pathway Initiative.
- An introduction to the FTSE ESG scores can be found in the following guide: ESG Metrics Methodology and Calculation (lseg.com).

Naming convention

FTSE Russell Sustainable indices 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
FTSE Paris-Aligned Benchmark	PAB
FTSE Climate Transition Benchmark	CTB
FTSE TPI Climate Transition	TPI

ABOUT FTSE RUSSELL

FTSE Russell is a leading global provider of index and benchmark solutions, spanning diverse asset classes and investment objectives. As a trusted investment partner we help investors make better-informed investment decisions, manage risk, and seize opportunities. Market participants look to us for our expertise in developing and managing global index solutions across asset classes. Asset owners, asset managers, ETF providers and investment banks choose FTSE Russell solutions to benchmark their investment performance and create investment funds, ETFs, structured products, and index-based derivatives. Our clients use our solutions for asset allocation, investment strategy analysis and risk management, and value us for our robust governance process and operational integrity.

For over 35 years we have been at the forefront of driving change for the investor, always innovating to shape the next generation of benchmarks and investment solutions that open up new opportunities for the global investment community.

CONTACT US

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