Sustainable Investment Insights

QUARTERLY REPORT | **APRIL 2025**

SI challenged by volatile markets in Q1

Global market rotation led to the broad underperformance of SI equity indices in Q1. Tech overweight, Energy underweight and Aerospace & Defence underweight were all headwinds. SI fixed income saw a better performance, with positive returns, as falling yields supported markets, and broadly inline relative performance. The exception was the Green bonds market, hit by rising yields in the overweight European market. The SI market remains challenging in 2025, with fund outflows in Q1. SI investors remain focused on the direction of government support as climate physical risks grow.

Highlights

SI equity indices underperformed in Q1

The equity market rotation in Q1, particularly in March, led to the underperformance of most SI equity indices. It saw a reversal of numerous performance drivers from Q4, with the outperformance of Energy and underperformance of Tech causing particular headwinds. The underweight in Aerospace & Defence in most SI indices was also a headwind, particularly in Europe. One outperformer in Q1 was Developed Low Carbon, which benefitted from an underweight in Tech and overweight in Financials.

Alternatives market strong

Infrastructure performed strongly, driven by expected increase in fiscal spending, however green infrastructure was behind the market due to an overweight in Railroads.

Corporates performed well despite spread widening. European & US yields diverge

SI fixed income performance was largely defined by European vs. US active weights. Falling US real yields rewarded higher US weights. As a result, Green bonds, which are underweight the US vs Europe, underperformed. SI Sovereign returns were broadly positive, except for Advanced Climate WGBI, while SI Corporates were positive across the board as spread widening was largely offset by lower benchmark yields.

SI markets see continued pressure

Q1 was a challenging period for the SI market, with growing global economic and geopolitical uncertainty on top of SI policy cross-currents all impacting sustainable investors. Flows in SI funds turned negative in Q1, particularly in March, led by weakness in Europe, equities and active funds. Underperformance of global SI equity funds has been a headwind, though negative flows have so far been limited. The SI market is closely watching the potential impact of government support, corporate disclosure and trade policies, as well as the growing impact of climate physical risks.

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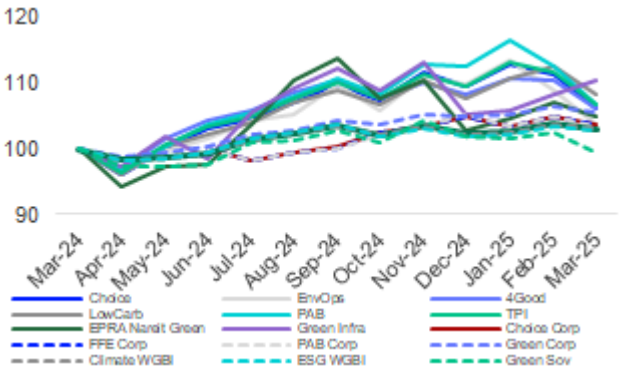
AUTHOR

Lee Clement
Director, Applied Sustainable Investment Research
Lee.Clements@lseg.com

Henry Morrison-Jones
Manager, Global Investment Research
Henry.Morrison-Jones@lseg.com

Chart 1. 12-month absolute performance of global SI equity, fixed income and alternatives indices, (TR, USD,%).



0.8% FTSE LowCarb Dev 3M (TR, USD)	**-5.6%** FTSE EnvOps Global 3M (TR, USD)
4.9% FTSE Green Infra Global 3M (TR, USD)	**-2.3%** FTSE Green Sov Global 3M (TR, USD)
8.7% FTSE All World Energy Global 3M (TR, USD)	**-11.1%** FTSE All World Tech Global 3M (TR, USD)

Note: Low Carbon & EPRA Nareit Green covers developed markets. Source: FTSE Russell / LSEG. Data as of March 31, 2025.

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

SI Equity Risk and Climate Characteristics – Q1 2025

Key Observations

Sustainable investing encompasses a range of strategies with different investment outcomes. In this section, we summarise the main 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 (-47% to -56%) and underweights to Energy (-4.9% to -1.4%), 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 (1.8%). The UK is the most diversified, holding 96% of benchmark stocks, while Europe & the US are the least diversified, holding 82% of benchmark stocks

FTSE4Good's best-in-class ESG strategy results in significant ESG score uplifts (18% to 3%). The global tracking error is low (1.9%). Europe has the lowest ESG uplift (3%), but the highest absolute ESG score. By contrast, EM has the highest ESG uplift (18%), with a high tracking error (6.6%) but a 0.8 beta.

Environmental Opportunities (EO) selects companies with significant green revenues (>20%), resulting in high active green revenues (absolute increase of 45% to 33%). However, the focus on Industrials, Utilities & Technology leads to higher carbon intensity in most regions (134% to 5%). The indices are highly concentrated (8% to 16% of benchmark) and have higher tracking errors (6% to 9%).

ESG Low Carbon Target targets carbon reduction and ESG uplifts. It achieves significant carbon intensity reduction (-53% to -40%) and ESG score uplift (19% to 12%). Tracking errors are moderate (2.3% to 2.9%) and betas close to 1, except in the UK (6.1% and 0.9).

Paris Aligned Benchmark (PAB) has multiple SI targets. It reduces carbon intensity (-68% to -66%), increases TPI MQ score (9% to 3%), increases green revenues (absolute increase of 9% to 5%) and reduces Energy industry weighting (absolute reduction of -10% to -3%). Tracking error is slightly higher than some other SI indices (2.6% to 5.6%) and the indices are more concentrated (73% to 30% of benchmark).

TPI Climate Transition (TPI) targets multiple climate related uplifts. It achieves strong reduction in carbon intensity (-51% to -30%), significant increase in TPI MQ score (23% to 9%), while the global tracking error is relatively modest at 1.5%. EM has the highest tracking error at 4.1%, but also has the highest TPI MQ uplift of 23%.

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.

ik	FTSE Russell SI Index	US	UK	Europe	Japan	APAC	Emerging	Developed	Global
Tracking Error	Global Choice	2.1%	1.5%	2.2%		1.3%	1.7%	1.9%	1.8%
	FTSE4Good	2.6%	1.7%	2.2%	10.1%	2.1%	6.6%	1.9%	1.9%
	Environmental Ops	7.8%	9.3%	7.2%	6.1%	8.2%			5.7%
	ESG Low Carbon Target	2.9%	6.1%	2.8%	2.4%	2.8%	2.6%	2.3%	
	Paris Aligned		5.6%				3.3%	2.6%	2.7%
	Transition Pathway	1.9%			2.1%		4.1%	1.7%	1.5%
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	0.8	1.0	1.0
	Environmental Ops	1.1	1.0	1.1	1.1	1.0			1.1
	ESG Low Carbon Target	0.9	0.9	1.0	1.0	1.0	1.0	0.9	
	Paris Aligned		1.0				1.0	1.0	1.1
	Transition Pathway	1.0			1.0		1.0	1.0	1.0
Number of stocks as % of benchmark	Global Choice	81.9%	96.1%	82.1%		86.9%	84.7%	83.9%	84.3%
	FTSE4Good	47.8%	39.4%	73.1%	52.0%	51.1%	31.7%	55.5%	43.1%
	Environmental Ops	9.6%	8.0%	15.6%	11.8%	8.2%			9.6%
	ESG Low Carbon Target	74.5%	70.5%	47.0%	48.3%	22.4%	32.7%	39.2%	
	Paris Aligned		73.2%				44.0%	48.8%	30.4%
	Transition Pathway	60.5%			81.5%		40.5%	51.9%	34.5%
Weight in Top 10 relative to benchmark	Global Choice	119.6%	102.6%	131.5%		115.0%	104.6%	123.9%	124.1%
	FTSE4Good	143.1%	126.1%	118.8%	131.8%	125.5%	121.9%	130.1%	133.8%
	Environmental Ops	168.1%	150.6%	265.6%	232.4%	164.7%			209.7%
	ESG Low Carbon Target	146.2%	144.8%	165.7%	207.0%	169.6%	124.3%	152.0%	
	Paris Aligned		98.3%				110.7%	138.1%	150.9%
	Transition Pathway	120.4%			142.6%		140.2%	132.5%	126.3%

Source: FTSE Russell/LSEG. All data as of March 31, 2025. 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.

Risk and Climate Characteristics – Q1 2025

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.

nate	FTSE Russell SI Index	US	UK	Europe	Japan	APAC	Emerging	Developed	Global
Active E score	Global Choice	2.0%	0.2%	-3.0%		-1.4%	-2.3%	0.5%	0.3%
	FTSE4Good	12.2%	9.8%	3.6%	9.5%	9.5%	20.6%	11.1%	12.0%
	Environmental Ops	0.5%	-7.9%	2.0%	1.5%	10.0%			4.0%
	ESG Low Carbon Target	27.5%	20.5%	23.2%	22.2%	26.6%	22.7%	27.8%	
	Paris Aligned		2.4%				8.5%	4.8%	5.7%
	Transition Pathway	8.3%			10.6%		20.1%	12.4%	9.9%
Active S score	Global Choice	2.9%	-1.6%	-0.8%		-0.2%	0.7%	1.7%	1.7%
	FTSE4Good	12.7%	9.1%	2.8%	10.6%	8.9%	20.5%	11.1%	11.9%
	Environmental Ops	5.2%	-2.5%	-3.4%	-7.6%	9.8%			8.6%
	ESG Low Carbon Target	18.2%	12.8%	13.5%	19.3%	20.4%	22.0%	18.3%	
	Paris Aligned		1.4%				9.7%	2.9%	4.8%
	Transition Pathway	6.3%			5.9%		16.6%	6.2%	6.0%
Active G score	Global Choice	0.6%	-0.9%	-1.1%		-1.1%	-0.1%	-0.1%	-0.1%
	FTSE4Good	4.8%	7.0%	1.5%	8.0%	7.9%	12.2%	5.3%	5.9%
	Environmental Ops	5.4%	2.2%	-2.7%	-6.0%	0.9%			6.1%
	ESG Low Carbon Target	9.3%	4.5%	5.9%	14.9%	11.9%	13.1%	9.4%	
	Paris Aligned		-0.5%				7.5%	0.0%	1.4%
	Transition Pathway	0.7%			4.2%		10.9%	0.9%	1.7%
Active ESG score	Global Choice	1.9%	-0.9%	-1.5%		-0.8%	-0.3%	0.8%	0.7%
	FTSE4Good	9.6%	8.7%	2.7%	9.2%	8.8%	17.5%	9.0%	9.8%
	Environmental Ops	3.2%	-2.9%	-1.4%	-3.5%	5.8%			5.9%
	ESG Low Carbon Target	17.9%	12.2%	13.9%	18.8%	19.0%	18.7%	18.1%	
	Paris Aligned		1.0%				8.3%	2.5%	3.9%
	Transition Pathway	4.9%			6.9%		15.2%	6.3%	5.6%
Carbon Reduction	Global Choice	-55.8%	8.7%	-51.7%		-46.6%	-49.7%	-54.6%	-53.6%
	FTSE4Good	-42.9%	8.4%	2.5%	-1.4%	-12.9%	13.4%	-27.9%	-20.3%
	Environmental Ops	81.8%	5.1%	31.6%	33.3%	133.6%			60.2%
	ESG Low Carbon Target	-52.7%	-43.4%	-49.1%	-50.2%	-42.8%	-40.3%	-52.2%	
	Paris Aligned		-46.5%				-65.6%	-59.0%	-57.9%
	Transition Pathway	-47.1%			-30.3%		-48.0%	-50.7%	-39.6%
Active Green Revenues	Global Choice	0.12	0.42	-1.81		-0.19	0.99	-0.08	0.02
	FTSE4Good	-0.20	-0.17	0.06	-1.29	-0.80	4.07	-0.26	0.09
	Environmental Ops	37.52	44.59	33.10	39.97	39.46			39.63
	ESG Low Carbon Target	-1.47	0.00	1.69	-1.52	2.66	2.06	-1.25	
	Paris Aligned		5.21				9.28	7.49	8.12
	Transition Pathway	1.49			3.43		9.31	1.93	2.96
Active TPI Management Quality Score	Global Choice	0.5%	2.9%	-3.2%		-0.8%	-3.3%	-0.3%	-0.4%
	FTSE4Good	8.9%	4.9%	1.6%	5.5%	4.8%	18.2%	7.2%	8.2%
	Environmental Ops	4.9%	-1.1%	-0.2%	1.9%	6.0%			7.8%
	ESG Low Carbon Target	11.5%	0.2%	6.7%	16.4%	19.0%	18.2%	12.2%	
	Paris Aligned		3.1%				9.0%	5.8%	7.0%
	Transition Pathway	9.0%			12.1%		23.4%	11.8%	10.1%

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.

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Macroeconomic Backdrop – Q1 2025

US equity exceptionalism was challenged in Q1 as the outlook for growth and risk assets turned cautious to begin the year. Softer labor and consumer sentiment data alongside additional uncertainty on the back of changes in US trade policy caused the US to underperform the rest-of-world, with a weaker dollar being more supportive of USD-based performance of other developed market equity indices. Industry performance also saw a reversal from the usual tech-dominated leadership. Energy and Financials performed well, as did other more defensive industries such as Consumer Staples, Utilities and Telecoms.

Although the IMF forecasts GDP growth to remain resilient for the US and to improve for Europe, the UK and Japan in 2025, recent trade policy uncertainty has weighed on the growth outlook. Despite making significant progress towards target levels, inflation also continues to remain a key concern for many central banks. The mixed economic growth and inflation picture has complicated central bank action and led to divergence. During Q1, the Fed held the Fed funds rate steady, while the ECB and BoC cut twice. The BoE cut in February but held the bank rate steady in March. Japan continued its policy normalization by raising the policy rate once in January, but it took a wait-and-see approach in March.

Global fund flows continued their positive trend in Q1, however money market flows appeared to moderate slightly in March.

For further in-depth analysis of asset classes see [Asset Allocation Insights - March 2025 | LSEG]

Chart 1: Select FTSE Equity Indices (TR %, USD) – Developed Europe ex UK led in Q1, helped by an overweight in Financials as well as EUR strengthening vs. USD

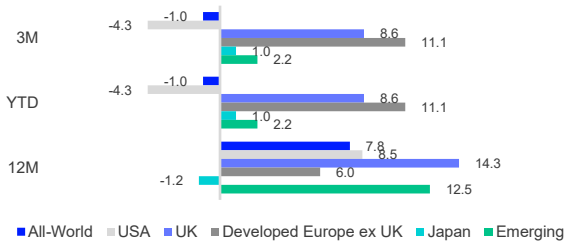


Chart 2: FTSE All World 3M Industry Returns (TR %, USD) – Energy and Consumer Staples led industry performance in Q1, while Consumer Discretionary and Technology lagged.

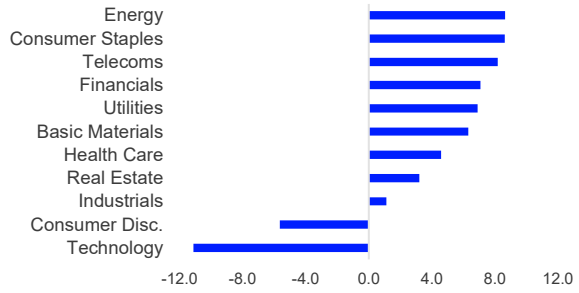


Chart 3: Historical GDP and forecasts across regions (%) – non-US DM economies are expected to see GDP growth increase in 2025 & 2026, while US growth is forecast to fall.

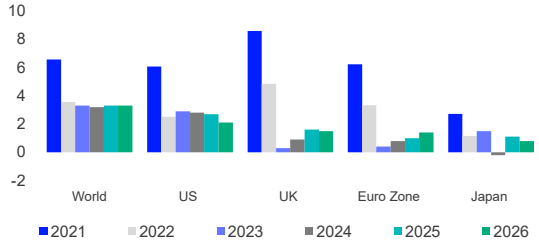


Chart 4: Changes in Global Economic Policy Uncertainty vs. Stock/Bond Valuation – policy uncertainty has increased, which has historically favored bonds over equities.

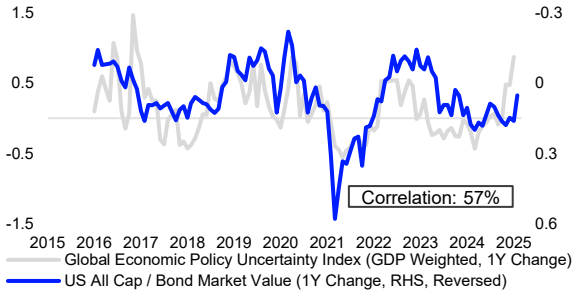


Chart 5: Central Bank Policy Rates – rates remained on hold for the Fed in Q1. The BoE, ECB and BoC all cut policy rates during the quarter, while the BoJ hiked in January.

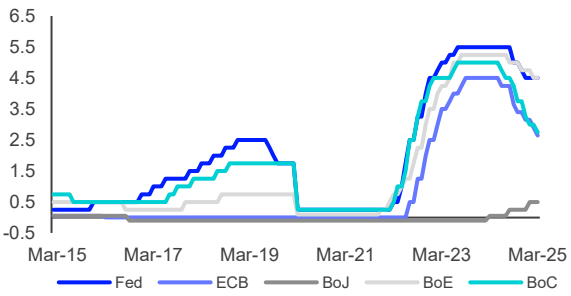
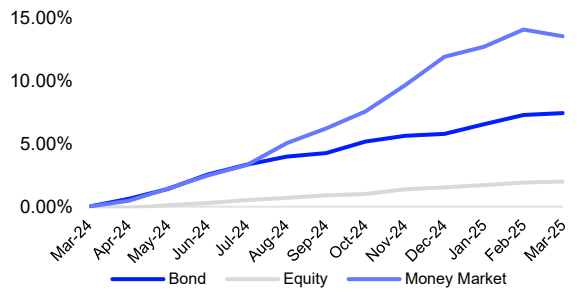


Chart 6: Global Bond, Equity & Money Market Cumulative Fund Flows (% of total net assets) – Money Market flows moderated slightly in Q1. Bond & Equity flows were steady.



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SI Backdrop – Q1 2024

Green economy underperformance in Q1 was led by falling Energy Efficiency stocks, the largest sub-sector, driven by the sell-off in Tech, while other sub-sectors including Renewables traded sideways.

Physical climate risk impacts are increasing with growing global temperatures and extreme weather events. 2024 set new records in temperature levels and cost the US economy an estimated $182bn in weather and climate disasters, which have grown significantly over the last 40 years. It is estimated that weather, in particular high temperatures, drove 15% of energy demand growth and 50% of CO2 emissions growth in 2024.

As the market worries about growth, and both governments and corporates focus on improving productivity and efficiency, it is important to remember the role of efficiency, in particular energy efficiency, in tackling environmental issues. Despite GDP growing globally, the electricity demand intensity has remained flat, and energy and CO2 intensity has fallen (i.e., the economy has become more energy efficient). Improving energy efficiency is a key focus of climate policy, with a target to double the rate of energy efficiency improvement by 2030. However, the rate of improvement has fallen in recent years.

Exposure to Aerospace & Defence is an evolving headwind for SI. The sector is performing strongly, notably in Europe, as countries raise defence spending, but most SI indices and global SI funds are significantly underweight the sector.

Chart 1: Env Ops Green Sectors Performance – In Q1, Energy Efficiency underperformed, due to Tech exposure, while returns in other sectors went sideways.

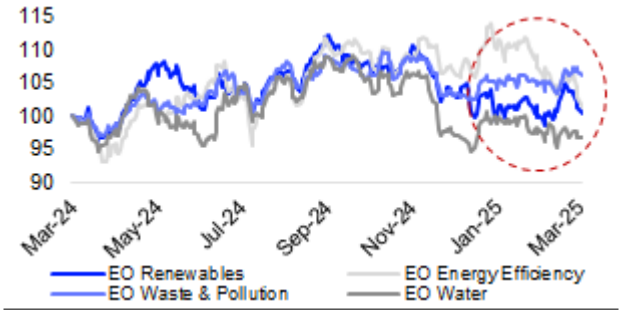


Chart 2: Estimated cost of US weather and climate disasters[1] (US$bn period average per year, CPI adj)[1] – increasing cost of weather-related disasters.

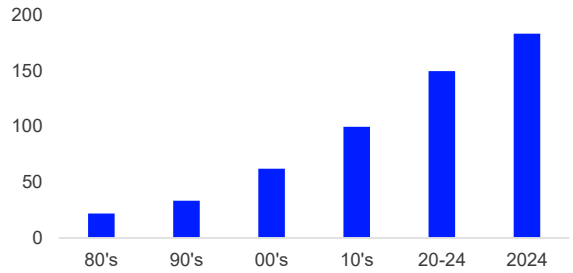


Chart 3: Weather contribution to 2024 energy demand growth[2] – weather estimated to drive 15% of energy demand growth and ~50% of emissions growth.

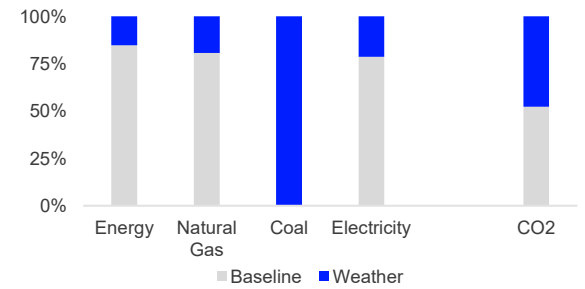


Chart 4: Energy, electricity and CO2 intensity per GDP (indexed)[2] – energy and emissions intensity have fallen over the last 10 years, despite stable electricity intensity.

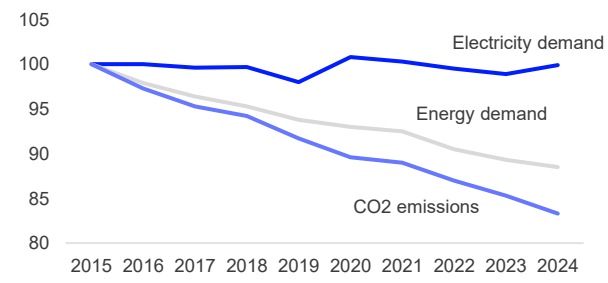


Chart 5: Average annual rate of global energy intensity improvement[2] – the rate of improvement in energy efficiency has slowed over the years.

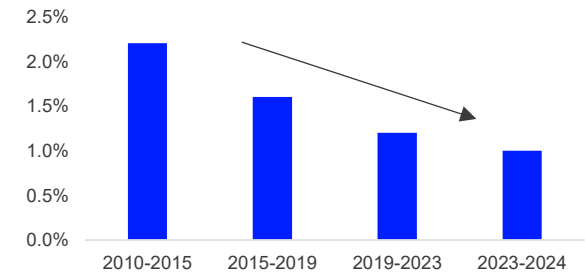
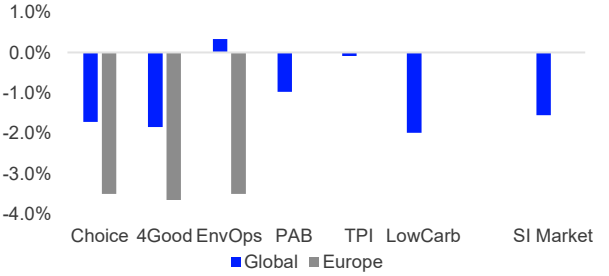


Chart 6: Aerospace & Defence active weight vs FTSE All World – most global equity indices and the broader SI market are significantly underweight Aerospace & Defence.



1. NOAA Billion-Dollar Weather and Climate Disasters | National Centers for Environmental Information (NCEI); 2. Global Energy Review 2025 – Analysis – IEA;

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SI Market Development – Q1 2025

Q1 was a challenging period for the sustainable investment market; the growth to value rotation, underperformance of Tech and outperformance of Energy were all headwinds for SI performance. This comes amid growing global economic and geopolitical uncertainty and on top of SI policy cross-currents all impacting sustainable investors.

These challenges did not lead to investors removing material amounts of capital from SI funds in 2024 however. Fund flows remained low, but positive, despite not participating in the rising flows of the broader market since late 2023. However, in Q1 2025, early indications are that flows have started to turn negative, especially in March. Outflows also briefly occurred in early 2024, before reversing. As a result, the evolution of SI flows in 2025 warrants close attention. The main driver of the negative flows is the emergence of outflows in Europe, which had previously been positive, and continued weakness in equity flows, and in flows to active SI funds. The overall global SI fund market remained ~$3 trillion in assets at the end of 2024.

One potential reason for the weakness in SI flows may be performance. SI indices saw multiple headwinds in Q1 and analysis of the broader market of SI global equity indices shows underperformance over 3M and 12M, particularly from active SI funds.

The SI market is closely watching the impact of potential weaker fiscal government support for sustainability and climate, policies support for corporate disclosure, while also driving simplification[4], and potential impact of trade policies.

Chart 1: SI bond & equity fund flows[1] – SI fund flow did not participate in the market recovery in late 2023. Flows have been negative in February and March.

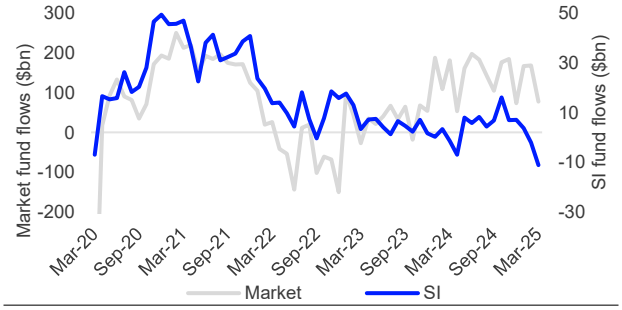


Chart 2: SI fund flow by region[1] – SI flows have been negative in North America since 2022, but positive in Europe, though European flows turned negative in March.

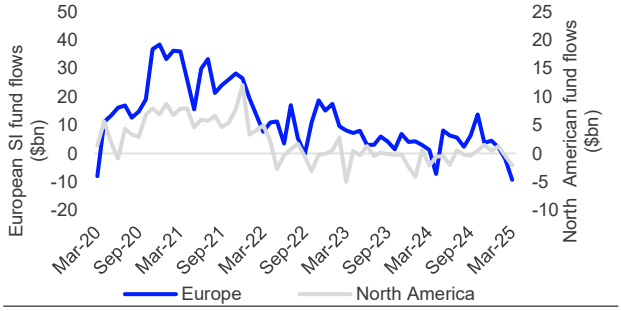


Chart 3: SI fund flow by asset class[1] – SI equity flows have been weaker than SI bond flows since late 2023 and turned negative in Q1.

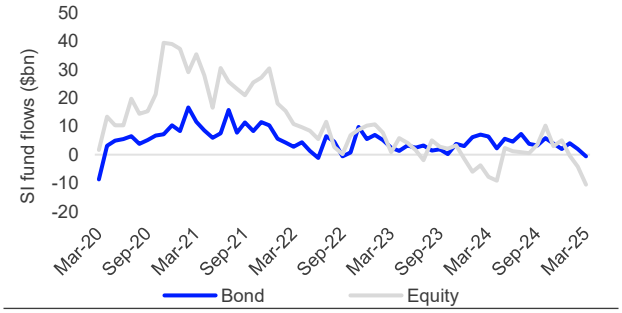


Chart 4: Weighted average performance of SI global equity market[2] vs FTSE All World – SI equity indices have underperformed the market, particularly active SI funds.

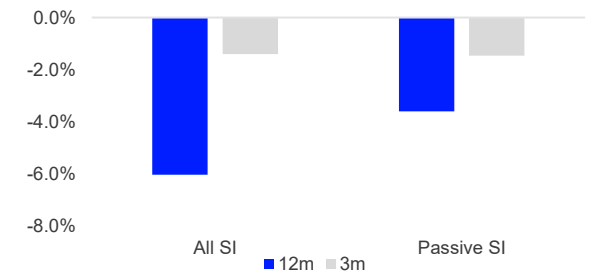


Chart 5: Clean energy government support[3] – government support for clean energy investment has grown over recent years, but is now starting to reduce.

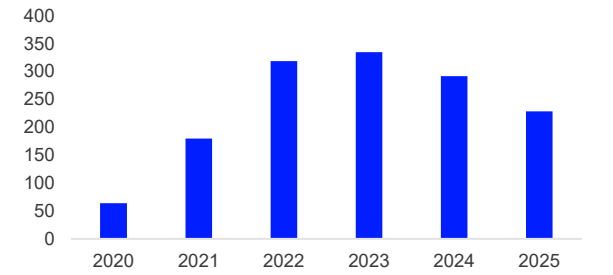
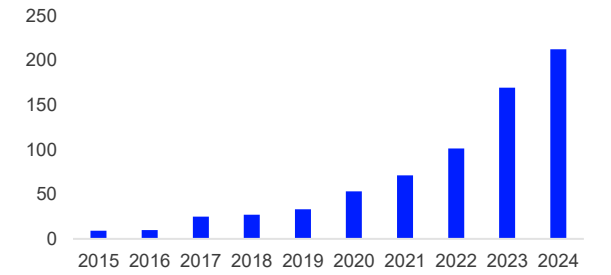


Chart 6: Clean energy trade policies[3] – increasing number of trade policies related to clean energy.



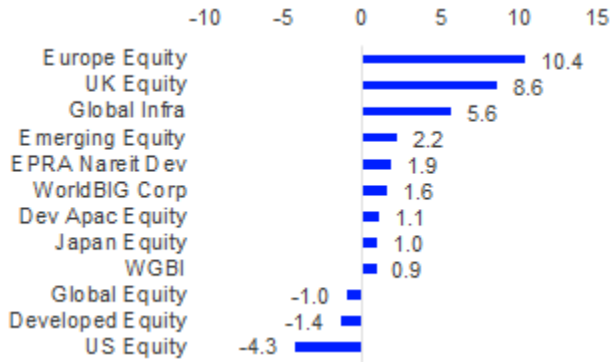
1. LSEG Lipper SI focused bond and equity ETFs and mutual funds; 2. LSEG Lipper SI focused global equity funds ETF and mutual funds, USD total return; 3. State of Energy Policy 2024 – Analysis – IEA; 4. Sustainability Policy Recommendations | LSEG

Source: FTSE Russell/LSEG. All data as of March 31, 2025. 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.

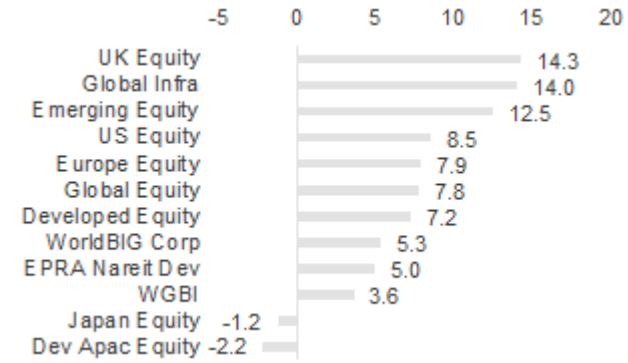
Absolute Returns – 3M & 12M (TR, USD %) Q1 2025

Q1 saw strong positive returns across most asset classes, except for US equities, which underperformed on the back of US growth concerns and the potential impact of recent trade policy uncertainty. European and UK equities performed particularly well over the 3-months ending March 31, with USD-based returns helped by a weaker dollar. The combination of weakening growth expectations and softer-than-expected inflation data in the US caused US yields to fall during the quarter, while European and UK yields rose. WGBI returned 0.9% in Q1. Quarterly SI performance was mixed, with European and UK indices the top performers, while US and Global indices lagged. Low Carbon indices performed well.

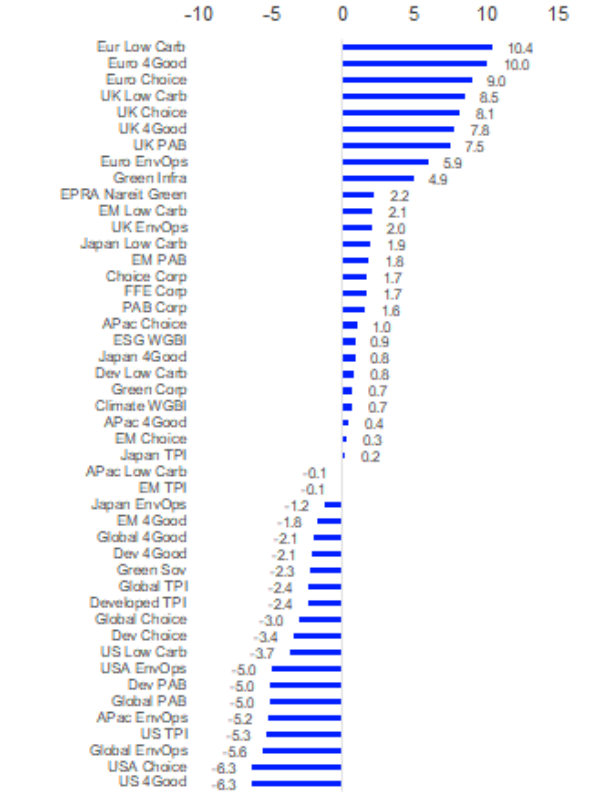
Regional 3M Absolute Returns* (TR, USD %): European and UK equities led the 3-month performance, as equity leadership shifted from the US to rest-of-world.



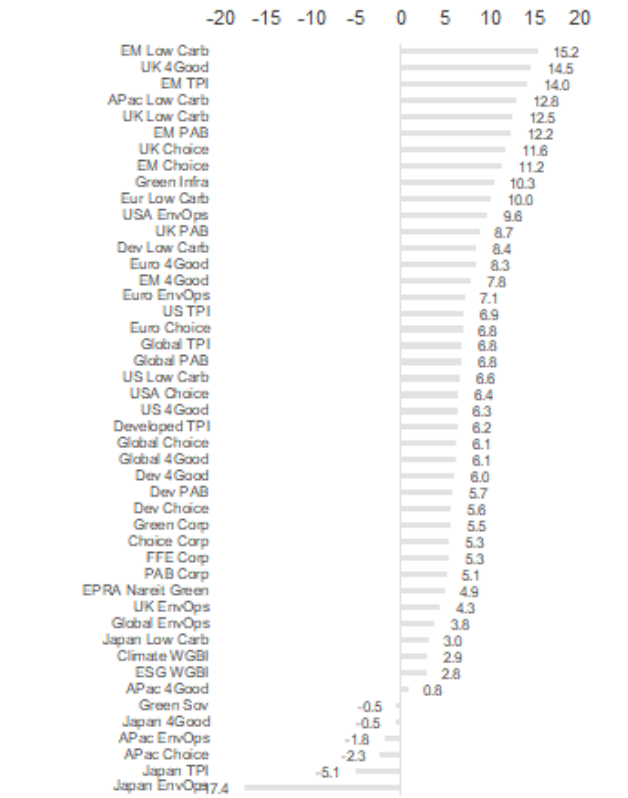
Regional 12M Absolute Returns* (TR, USD %): A strong quarter from UK equities and weakness in US equities caused 12-month performance leadership to shift in Q1.



SI Index 3M Absolute Returns (TR, USD %): European and UK indices were the top performers in Q1, while US and Global indices lagged. Low Carbon indices performed well.



SI Index 12M Absolute Returns (TR, USD %): EM Low Carb was the best performer, with EM and UK indices broadly performing well. Japan EnvOps and TPI strategies lagged.



*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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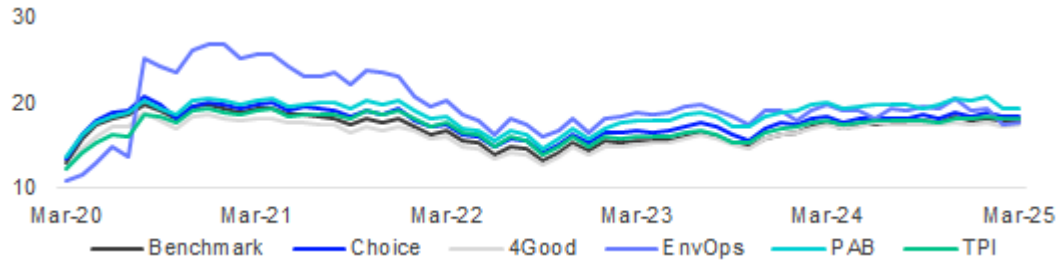
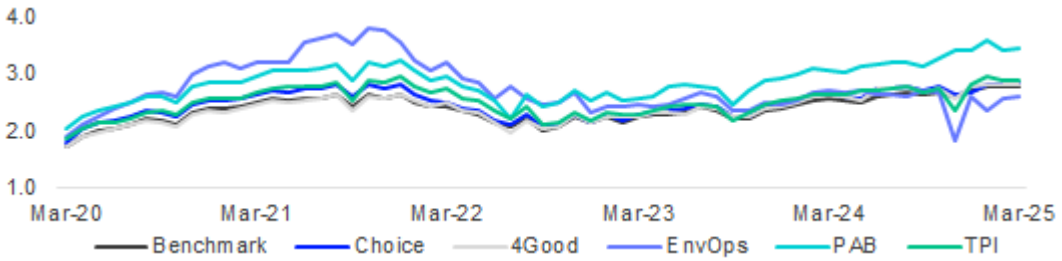
SI Equity Index Valuation – Q1 2025

Weakening growth expectations in the US created headwinds for equity markets to begin the year, especially in the US. The result was a significant decrease in valuations for PAB and EnvOps, but with Choice, FTSE4Good and TPI largely flat versus where they were in December. Despite these changes, all SI indices retained their higher valuations versus the broader equity market on a forward P/E basis, except for FTSE4Good, which remains cheaper vs. FTSE All World. EnvOps saw the greatest decline in valuation during the quarter. Most SI indices (except FTSE4Good) retained their lower dividend yield than the market, with Env Ops the lowest. Only EnvOps remains cheaper on a price to book basis than the broader FTSE All World index. At a regional level, the US remains the most expensive market, although SI UK strategies exhibit the highest premia.

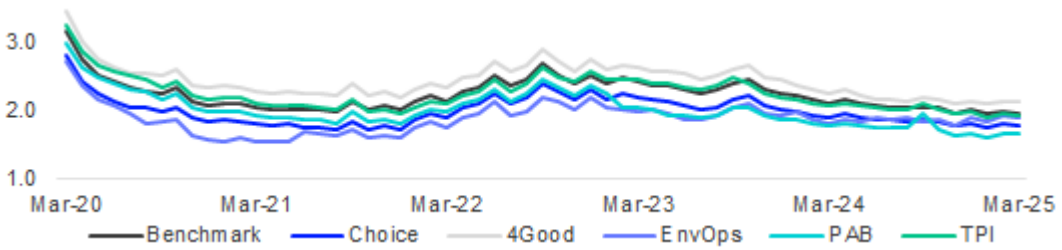
Global Markets – 12-month forward factor P/E ratios



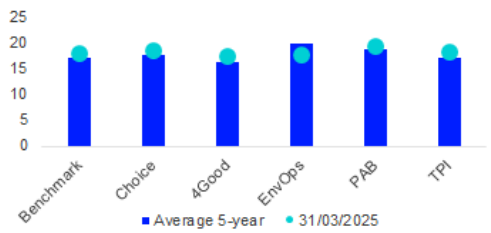
Global Markets – 12-month forward factor Price to Book ratios



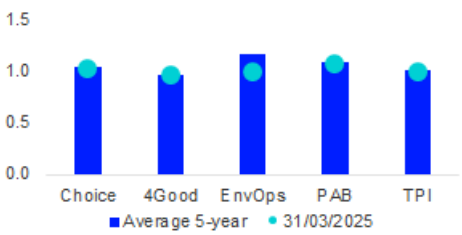
Global Markets – Dividend Yield



12-month forward P/E vs history



12-month forward P/E premium vs history



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SI Sovereigns – Q1 2025

SI Sovereign performance was positive in Q1, except for Advanced Climate WGBI, which saw negative returns as its US underweight versus Europe during a period of rising European yields detracted from performance. The remaining SI Sovereign indices benefitted from falling US yields on the back of lower growth expectations. On a relative basis, performance was mixed, with ESG WGBI and Climate WGBI outperforming thanks to their positive active duration as yields fell for both indices, but with Advanced Climate underperforming. With additional uncertainty from changes in global trade policy having a varied effect on markets, yields and sovereign performance has begun to diverge regionally. As a result, country allocation effects should play a large role in performance leadership moving forward.

Currently, both climate indices are heavily underweight the US in favour of selected European sovereigns, while ESG WGBI has a slight overweight to US government bonds. All three indices are underweight China and remain overweight the UK and France. On credit quality, all three SI Sovereign indices retain a quality bias versus WGBI, capturing a higher weighting of AAA sovereign debt in place of lower-rated government bonds.

Despite a quality bias for both Climate WGBI and ESG WGBI versus WGBI, both indices exhibit higher relative yields, with a higher weighted average life for both indices allowing them to capture more term premium. Advanced Climate WGBI's relative yield remains negative at the end of the quarter but has been increasing since the second half of 2022. Active duration remains positive for all three SI Sovereign indices but declined in Q1.

Chart 1: Selected SI Sovereign Returns (TR, USD Hedged) – returns were positive in Q1, except for Adv Climate, whose US underweight in favour of EU detracted from performance.

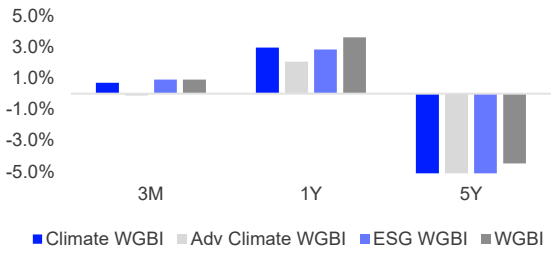


Chart 2: Selected SI Sovereign Relative Performance vs. WGBI (TR, USD Hedged) – ESG WGBI and Climate WGBI both outperformed WGBI in Q1, while Adv Climate lagged.

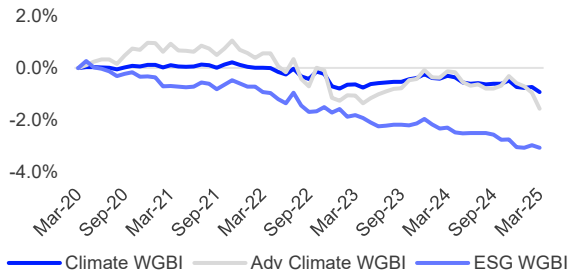


Chart 3: Selected SI Sovereign Active Weights vs WGBI – while ESG WGBI is overweight the US, climate indices remain heavily underweight in favour of select European sovereigns.

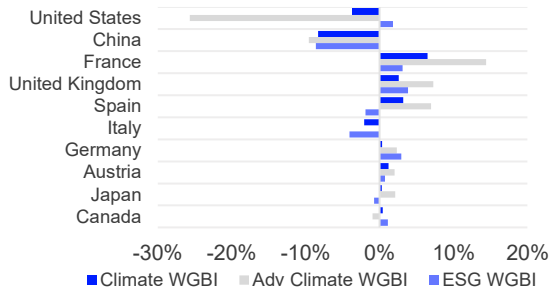


Chart 4: Selected SI Sovereign Relative Credit Weighting vs WGBI – ESG WGBI and Adv Climate WGBI both exhibit a quality bias, while Climate WGBI's shift to quality is negligible.

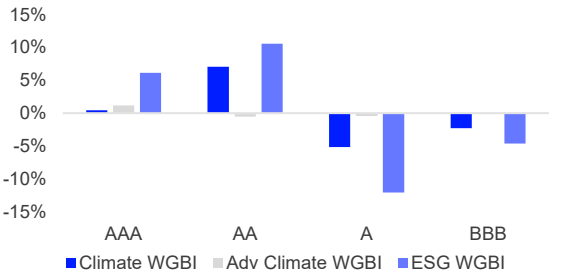


Chart 5: Selected SI Sovereign Relative Yield vs WGBI – with yields and monetary policy continuing to diverge, relative yields continued to tighten in Q1.

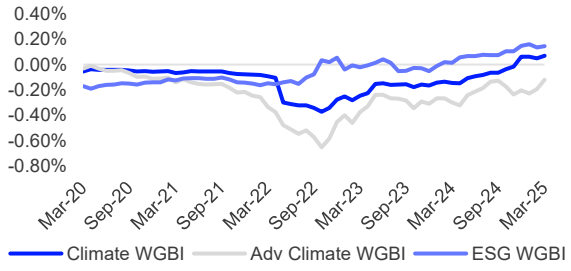
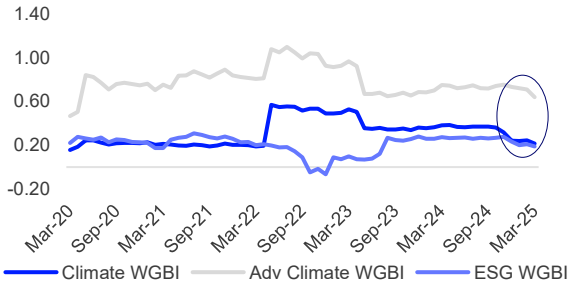


Chart 6: Selected SI Sovereign Active Duration vs WGBI – all three indices saw active duration fall in Q1, but they continue to exhibit positive active duration.



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SI Corporate Bonds – Q1 2025

Absolute performance was positive across the board in Q1, as spread widening was largely offset by lower benchmark yields in the US due to lower growth expectations. On a relative basis, Choice Corp and FFE Corp both outperformed the broader WorldBIG index, while PAB Corp underperformed. Duration has largely explained the divergent relative performance between Choice Corp/FFE Corp and PAB Corp in recent years, with Q1 being no exception. Significant overweights in Banks and the broader financials also benefited relative performance for Choice and FFE Corp.

Although the SI corporate indices take a varied approach to active weights in the Financials, Electric and Manufacturing sectors, all three indices continue to have an overweight in Services, and an underweight in Energy versus WBIG Corp. Relative to WBIG Corp, the SI Indices also have a lower BBB exposure in favour of AAA and AA, indicating a quality bias. While there were no major changes in credit exposure during the quarter, we note that PAB Corp saw a slight improvement in relative credit quality, while FFE Corp saw a slight deterioration.

During the quarter, weaker growth expectations for the US saw real yields fall and credit spreads widen, with offsetting effects on SI corporate bond returns. With all three indices exhibiting a quality bias, the effect of spread widening on yields was greater than the effect of lower real yields, resulting in an increase in relative yields. In Q1, there were no major changes to active duration, with PAB Corp remaining the only index with a positive active duration.

Chart 1: Selected SI Corporate Returns (TR, USD Hedged) – absolute performance was positive in Q1 as spread widening was largely offset by lower benchmark yields in the US.

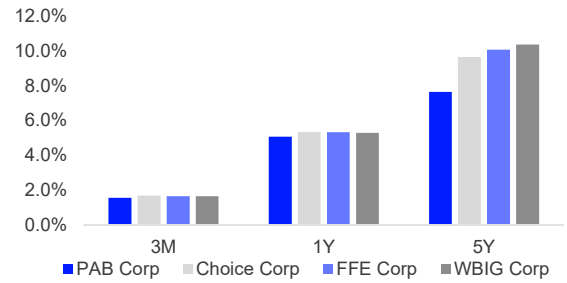


Chart 2: Selected SI Corporate Relative Performance vs. WBIG Corp (TR, USD Hedged) – duration largely explains divergent relative performance.

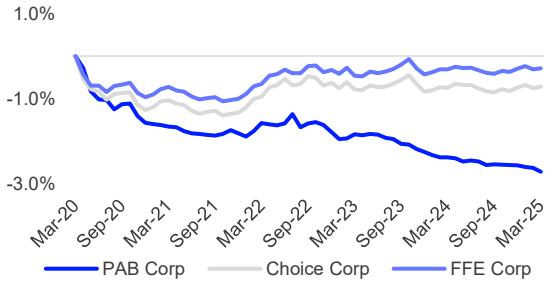


Chart 3: Selected SI Corporate Active Weights vs WBIG Corp – SI corporate indices take a varied approach to active weights in the Financials, Electric and Manufacturing sectors.

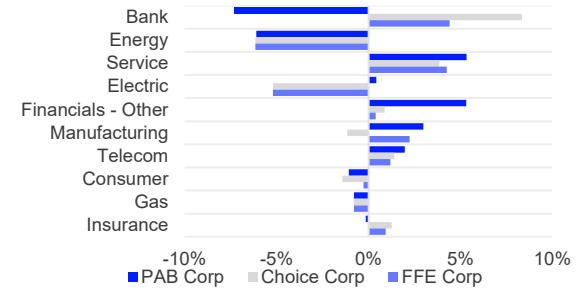


Chart 4: Selected SI Corporate Relative Credit Weighting vs WBIG Corp – all three indices continue to show a quality bias and there were no major changes in quality in Q1.

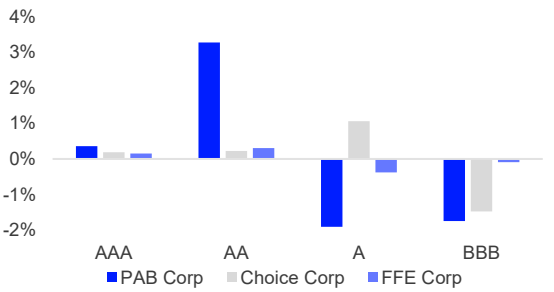


Chart 5: Selected SI Corporate OAS (bps) vs YTM (%) – in Q1, wider credit spreads were offset by lower benchmark yields due to weaker US growth expectations.

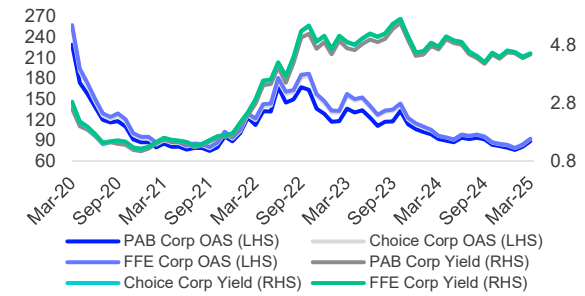
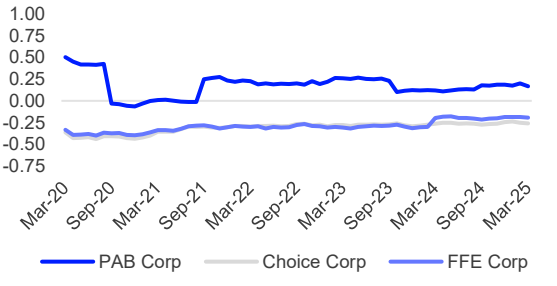


Chart 6: Selected SI Corporate Active Duration vs WBIG Corp – there were no major changes to active duration in Q1. PAB Corp remains the only index with positive active duration.



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Green Bonds – Q1 2025

Green bond performance was mixed over 3M. Green Sov saw negative returns, as the index's exclusion of the US meant that it failed to capture falling US yields and captured rising European and rest-of-world yields instead. Green Corp benefitted from its slightly higher US exposure and spread tightening from within its two largest industry overweights – Banks and Electric Utilities. On a relative basis, both indices underperformed mainly due to underweights in US Bonds. Another contributing factor to underperformance was active duration. For Green Corp, negative active duration acted as a headwind to relative performance during the quarter given its exposure to falling US yields, whereas Green Sov's positive active duration also acted as a headwind, this time given its exposure to rising European yields.

Within Green Sov, currency exposure remains heavily weighted towards EUR due to the large amount of sovereign Green bond issuance in Europe and a lack of sovereign Green bond issuance in the US (resulting in no USD holdings in the index). GBP holdings are also significant for Green Sov, with SGD and NZD rounding out the main currency overweights. On the corporate side, sectoral exposures include an overweight in Banks and Financials, as well as Electric Utilities.

Green Sov's active duration continued its multi-year trend lower in Q1 but remains significantly positive. Green Sov's large positive active duration stands as a clear contrast to corporate Green bonds, which have had a consistently lower duration than their non-green-bond counterparts. Green bond issuance in Q1 was consistent with the 5-year average levels, with the Green bond issuance ratio averaging 4.1% in Q1.

Chart 1: Selected SI Green Bond Returns (TR Rebased, USD Hedged) – SI green bond performance was mixed over 3M. Sovereigns weakened as yields rose in Europe.

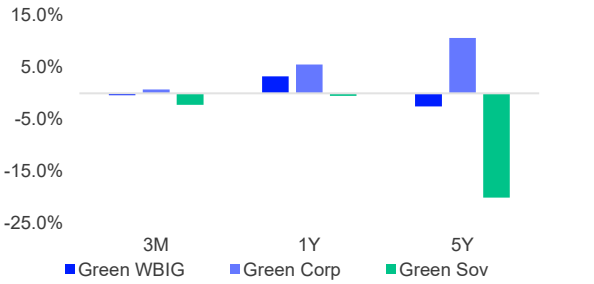


Chart 2: Selected SI Green Bond Index Relative Performance vs. WBIG, WBIG Corp, WBIG Sov (TR, USD Hedged) – all three indices underperformed in Q1.

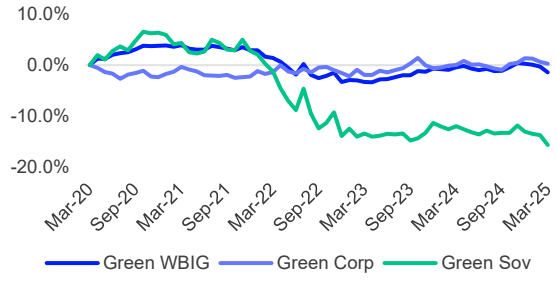


Chart 3: WBIG Sov and Green Sov Absolute Weight by Currency – currency exposure remains heavily weighted towards EUR due to high Green bond issuance in the region.

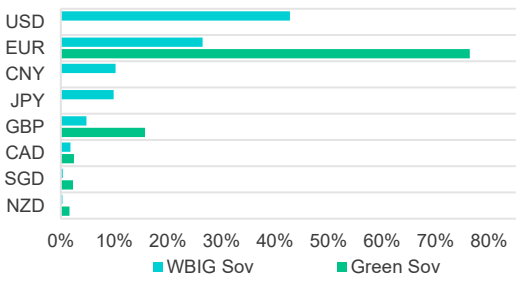


Chart 4: WBIG Corp and Green Corp Absolute Weight by industry – Green Corp's weights were largely unchanged. Electric Utilities and Banks remain the largest overweights.

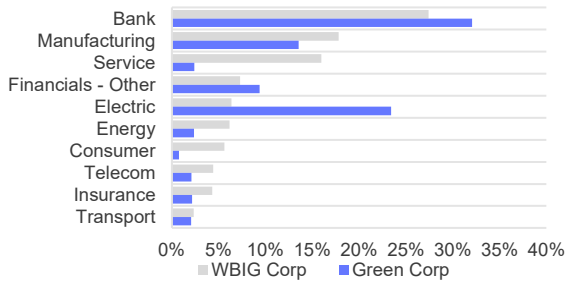


Chart 5: Selected SI Green Bond Active Duration vs WBIG, WBIG Corp, WBIG Sov – Green Sov active duration continued its trend lower in Q1.

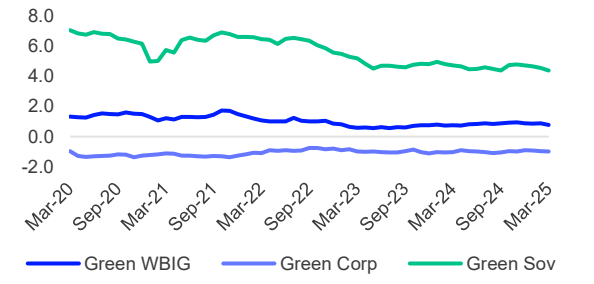
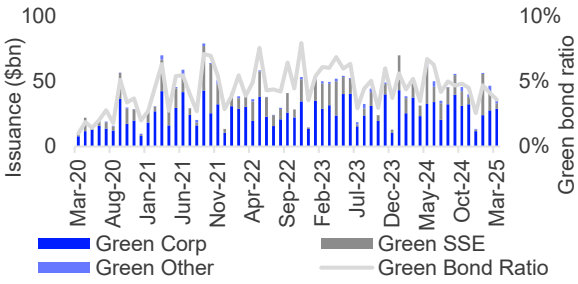


Chart 6: Green Bond Issuance – Green bond issuance ratio averaged 4.1% in Q1, which is consistent with the longer-term 5-year average.



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SI Alternatives (Real Estate & Infrastructure) – Q1 2025

SI alternatives offer different options for investors looking to diversify their portfolio, while also implementing an SI philosophy and maintaining exposure to liquid assets. FTSE Global Core Infrastructure TPI Climate Transition Index ('Green Infra') adjusts weights in the Global Core Infrastructure index based on risks and opportunities related to the climate transition, using TPI data. FTSE EPRA Nareit Developed Green Low Carbon Target ('EPRA Nareit Green') index adjusts the weights of listed real estate stocks based on energy usage and green building certification.

The listed infrastructure market performed strongly in Q1, despite volatile bond yields, driven by expectations of increased infrastructure spending in Europe. Green infrastructure underperformed the market in Q1. The underperformance over 12M was driven by negative selection in both Conventional Electricity utilities and Multi-utilities, and by an overweight allocation in Railroads, which was also the main driver of underperformance in Q1.

The listed real estate market also recovered in Q1, although not as strongly as infrastructure. EPRA Nareit Green slightly outperformed the broader market in Q1, driven by positive selection in Industrial, Retail and Speciality REITs, offset by weakness from underweight allocation to Healthcare REITs, which were the top performing subsector. Over 12M, EPRA Nareit Green was in line with the market, with positive selection in Residential, Retail and Diversified REITs offset by the underweight allocation to Healthcare.

Chart 1: FTSE Global Core Infrastructure TPI Climate Transition Active Performance – underperforming market over time, but underperformance getting smaller.

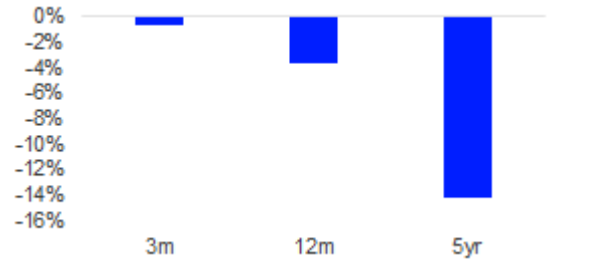


Chart 2: FTSE EPRA Nareit Developed Green Low Carbon Target Active Performance – underperformance over longer term but close to market over 3M and 1 year.

Chart 3: 12M Attribution vs FTSE Global Infrastructure – underperformance came from Railroads and weak selection in Utilities.

Chart 4: 12M Attribution vs FTSE EPRA Nareit Developed – in line over 1 year, strength in Residential, Retail and Diversified balancing weakness in Storage and Healthcare.

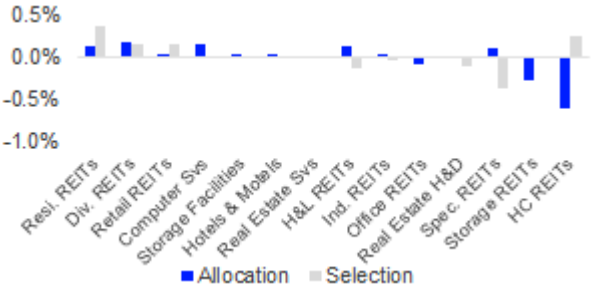


Chart 5: Active weights vs FTSE Global Infrastructure – overweight Railroads and underweight in conventional Electricity Utilities.

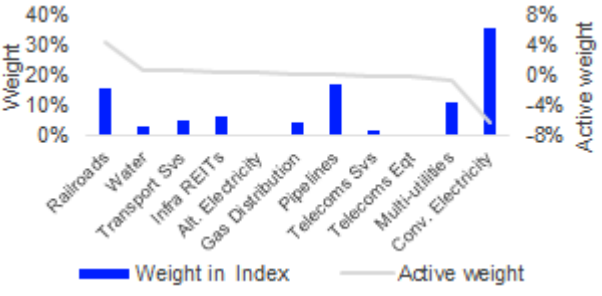
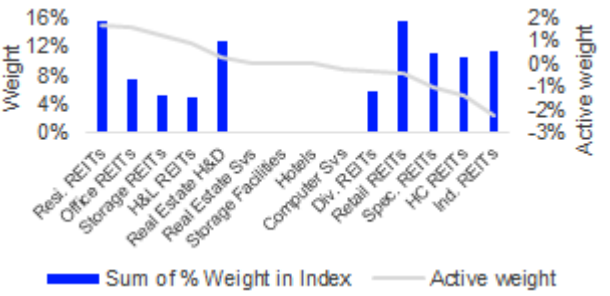


Chart 6: Active weights vs FTSE EPRA Nareit Developed – overweight Residential & Office, underweight Healthcare, Specialty and Industrial.



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SI Risk / Return – Q1 2025

Recent weak performance in global equities has brought return more in line between equities and fixed income over 1 year, despite the former having a higher volatility. SI equities saw relatively similar return over 1 year, except for EnvOps, and were more differentiated by volatility. EnvOps and PAB saw the highest volatility, while 4Good was the only SI index with a lower volatility than the All World. In both periods, SI equities had a lower volatility than oil, outperforming it over 1 year.

SI corporate bond indices registered better returns, but with a slightly higher volatility, than SI sovereign bond indices over 1 year and 5 years. SI corporate bond indices saw similar risk/return to the market (WorldBIG Corp) in both periods. SI sovereigns saw slightly lower returns and a higher volatility than the market (WGBI) over both periods, due to their slightly longer durations. Green corporate experienced a lower volatility than the market and Green sovereign saw a higher volatility than the market over both periods, driven by the latter's longer duration.

Infrastructure had the best return over one year (except for gold). However, Green Infra return was behind the market (Global Infra). EPRA Nareit saw the highest volatility over one year (except for oil), and the second highest over 5 years, reflecting the volatility of both the real estate market and interest rates.

Chart 1: 1 year risk vs return – Low Carb was the strongest equity performer, after the Q1 pull back and Global Infra saw the strongest return, after gold, with high volatility; Green Corp saw lower volatility than other credit strategies, while Green Sov had higher volatility than other sovereign strategies.

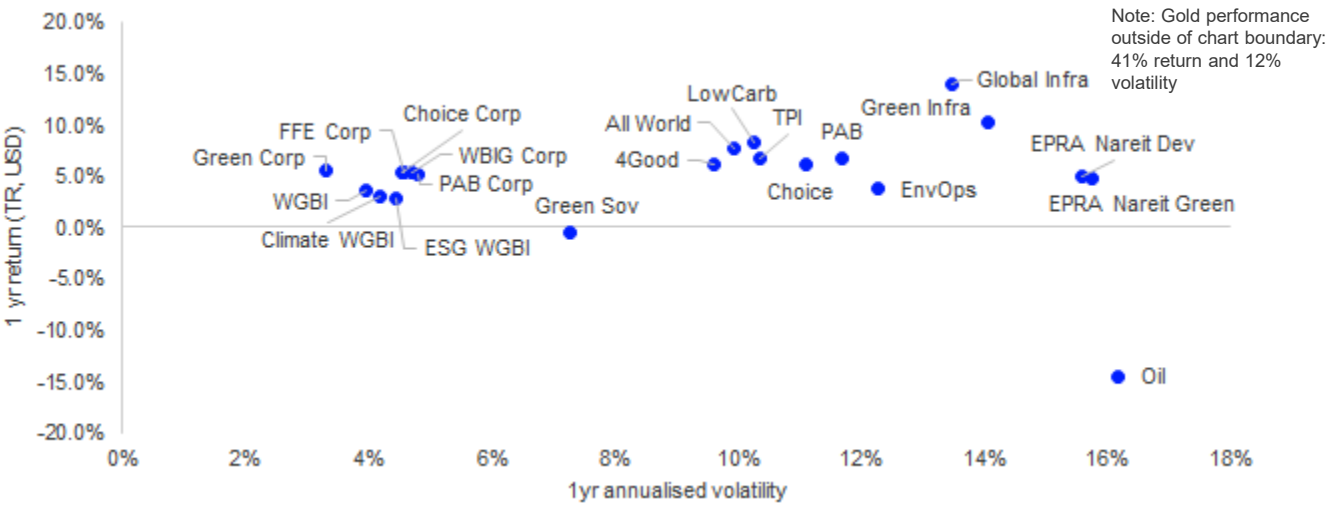
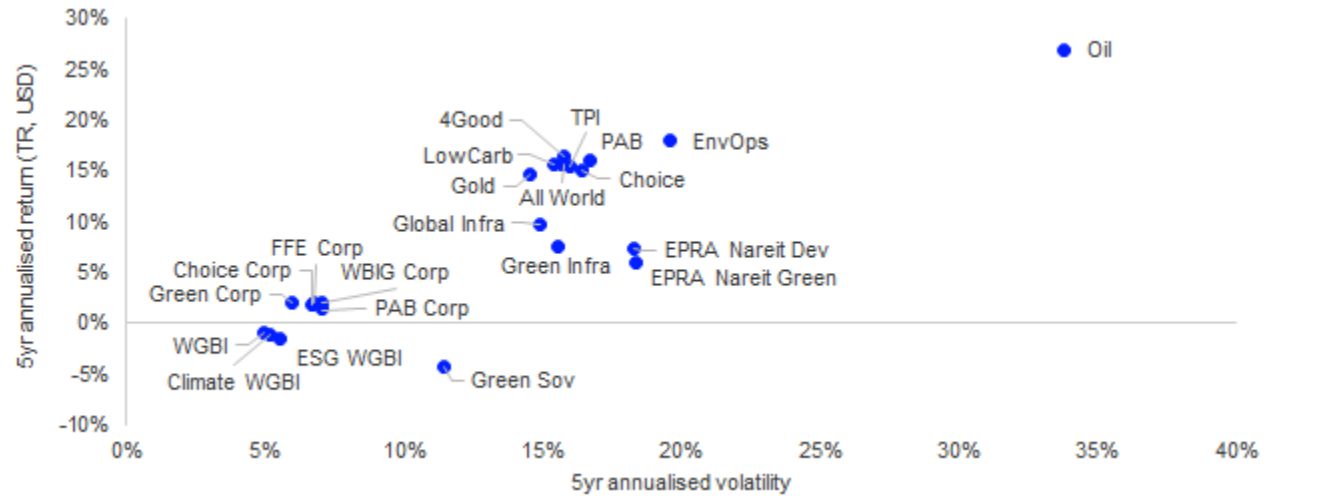


Chart 2: 5 year risk vs return – EnvOps had the strongest return, but with a higher risk than other equity strategies, which all have similar risk/return. SI bond strategies have similar risk/return to parent indices, except Green Corp, which has lower volatility and Green Sov, which has higher volatility. Oil has a weak return and considerably greater risk, particularly compared to equity.



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Risk calculated as the annualized monthly volatility

SI Correlation – Q1 2025

SI/broad market correlations are high over both periods but are generally lower over 1 year than 5 years. EnvOps, Green Infrastructure and EPRA Nareit Green see the lowest correlations with the All World. Correlations with oil were low over five years and turned negative over one year.

SI fixed income strategies saw a lower correlation to SI equities (although higher over 1 year) but remain highly correlated to the broad market. EPRA Nareit indices, in particular, have become highly correlated with corporate bonds over one year, reflecting the exposure of real estate to the interest rate cycle. Green corporate bonds saw slightly lower correlations to bond markets over five years, but correlation increased over one year.

Chart 1: 1 year cross correlation – high SI/broad market correlations remain within assets classes, with correlation between equities and fixed income rising (particularly in listed real estate). Oil negatively correlated over 1 year.

	Choice	EnvOps	4Good	LowCarb	PAB	TPI	All World	EPRA Nareit Green	EPRA Nareit Dev	Green Infra	Global Infra	Choice Corp	FFE Corp	PAB Corp	Green Corp	WBIG Corp	Climate WGBI	ESG WGBI	Green Sov	WGBI	Gold	Oil
Choice	100%																					
EnvOps	93%	100%																				
4Good	97%	86%	100%																			
LowCarb	94%	80%	95%	100%																		
PAB	97%	96%	92%	84%	100%																	
TPI	100%	93%	98%	95%	97%	100%																
All World	99%	91%	97%	97%	94%	99%	100%															
EPRA Nareit Green	72%	62%	75%	83%	58%	73%	79%	100%														
EPRA Nareit Dev	74%	63%	76%	84%	60%	74%	80%	100%	100%													
Green Infra	48%	44%	49%	63%	33%	48%	57%	87%	87%	100%												
Global Infra	48%	42%	49%	63%	32%	48%	56%	87%	87%	100%	100%											
Choice Corp	74%	66%	76%	85%	60%	74%	79%	94%	94%	81%	80%	100%										
FFE Corp	74%	67%	76%	85%	61%	74%	79%	94%	94%	81%	80%	100%	100%									
PAB Corp	74%	66%	76%	85%	60%	74%	79%	94%	94%	80%	80%	100%	100%	100%								
Green Corp	78%	74%	74%	83%	68%	76%	80%	85%	85%	69%	68%	94%	94%	94%	100%							
WBIG Corp	74%	66%	75%	85%	60%	73%	79%	94%	94%	81%	81%	100%	100%	100%	94%	100%						
Climate WGBI	72%	64%	71%	80%	59%	71%	76%	92%	92%	75%	74%	97%	98%	98%	97%	98%	100%					
ESG WGBI	72%	63%	73%	81%	59%	71%	76%	92%	93%	75%	75%	98%	98%	98%	95%	98%	100%	100%				
Green Sov	74%	70%	68%	78%	65%	71%	76%	80%	81%	69%	68%	87%	88%	88%	98%	88%	93%	90%	100%			
WGBI	72%	65%	73%	81%	60%	71%	76%	92%	92%	75%	74%	98%	98%	98%	95%	98%	100%	100%	90%	100%		
Gold	-34%	-26%	-35%	-31%	-37%	-32%	-27%	2%	1%	19%	19%	-11%	-12%	-13%	-29%	-12%	-19%	-18%	-36%	-18%	100%	
Oil	-31%	-34%	-36%	-43%	-19%	-33%	-37%	-59%	-58%	-20%	-20%	-53%	-54%	-53%	-56%	-53%	-53%	-52%	-51%	-53%	-4%	100%

Chart 2: 5 year cross correlation– high correlations between SI strategies and broader market within similar asset classes.

	Choice	EnvOps	4Good	LowCarb	PAB	TPI	All World	EPRA Nareit Green	EPRA Nareit Dev	Green Infra	Global Infra	Choice Corp	FFE Corp	PAB Corp	Green Corp	WBIG Corp	Climate WGBI	ESG WGBI	Green Sov	WGBI	Gold	Oil
Choice	100%																					
EnvOps	96%	100%																				
4Good	98%	93%	100%																			
LowCarb	98%	92%	99%	100%																		
PAB	99%	97%	98%	97%	100%																	
TPI	99%	95%	99%	99%	99%	100%																
All World	99%	95%	99%	99%	99%	100%	100%															
EPRA Nareit Green	88%	82%	88%	89%	85%	89%	89%	100%														
EPRA Nareit Dev	88%	82%	88%	89%	85%	89%	89%	100%	100%													
Green Infra	77%	75%	79%	81%	75%	80%	80%	84%	84%	100%												
Global Infra	77%	74%	79%	81%	75%	80%	80%	84%	84%	99%	100%											
Choice Corp	79%	73%	75%	75%	76%	77%	77%	77%	77%	70%	66%	100%										
FFE Corp	79%	73%	76%	76%	76%	77%	77%	77%	77%	70%	67%	100%	100%									
PAB Corp	79%	73%	75%	75%	76%	77%	77%	77%	77%	70%	67%	100%	100%	100%								
Green Corp	75%	71%	72%	72%	73%	73%	73%	73%	73%	62%	60%	95%	95%	95%	100%							
WBIG Corp	79%	74%	76%	76%	76%	77%	78%	77%	77%	70%	67%	100%	100%	100%	95%	100%						
Climate WGBI	63%	62%	59%	60%	62%	63%	61%	65%	64%	58%	56%	90%	89%	90%	87%	89%	100%					
ESG WGBI	62%	60%	59%	59%	61%	62%	60%	65%	65%	59%	56%	90%	90%	91%	88%	90%	100%	100%				
Green Sov	63%	63%	59%	59%	63%	62%	60%	61%	61%	53%	51%	85%	85%	86%	89%	84%	95%	95%	100%			
WGBI	63%	61%	59%	60%	62%	62%	61%	65%	64%	59%	56%	91%	91%	92%	87%	90%	100%	100%	94%	100%		
Gold	24%	20%	23%	22%	22%	24%	24%	26%	25%	40%	37%	37%	37%	37%	32%	37%	32%	34%	26%	34%	100%	
Oil	25%	21%	30%	28%	24%	25%	28%	17%	17%	12%	12%	-1%	-1%	-3%	-4%	0%	-2%	-2%	-1%	-2%	-8%	100%

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Correlation calculated based on monthly performance

3M & 12M rolling relative performance (equities & alternatives) – Q1 2025

10 years (or longest available) of rolling 12M and 3M performance relative to parent benchmark.

Chart 1: Choice – outperforming ahead of Covid, with lower quarterly volatility; relative performance fell in 2021/22 and recovered in 2023/24.

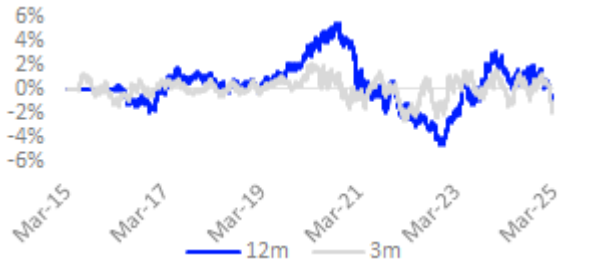


Chart 2: EnvOps – after seeing significant outperformance in 2020, EnvOps underperformed through 2021/22, strongly recovered in 2023, and was again weak in 2024 and Q1-25.

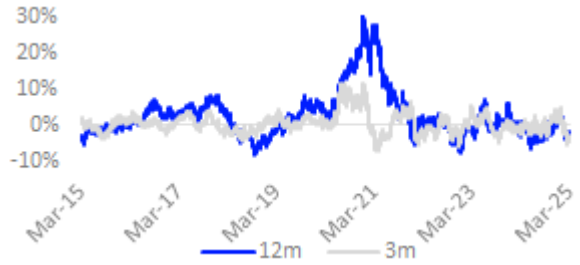


Chart 3: 4Good – underperformed in early covid period, recovering strongly in 2021, and continuing to outperform in 2022 to Q3 2024, before underperforming since late 2024.

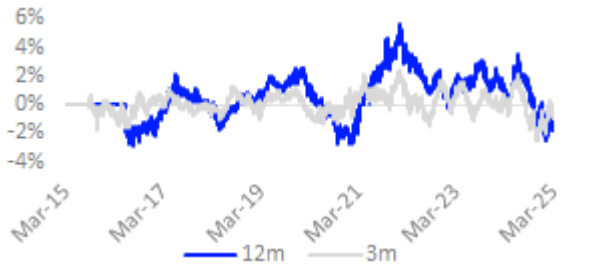


Chart 4: LowCarb – after a consistent pre-covid performance, LowCarb fell in 2020, recovering in 2021. It underperformed from late 2022 and strongly recovered in Q1-25.

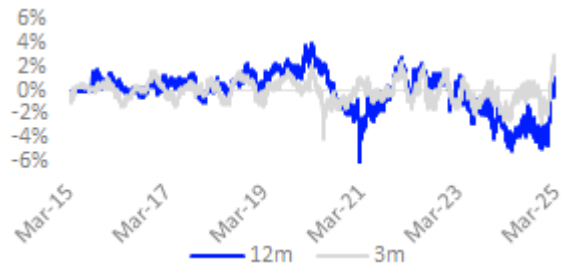


Chart 5: PAB – strong performance from 2017 to late 2020, fell and underperformed in 2021/22. The strategy recovered in 2023 but has been volatile in 2024 and Q1-25.

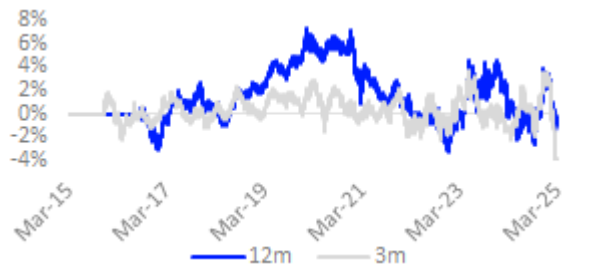


Chart 6: TPI – relative performance difference is typically lower than other SI equity strategies, with underperformance in 2018 and 2021, recovering in 2022 and in line since.

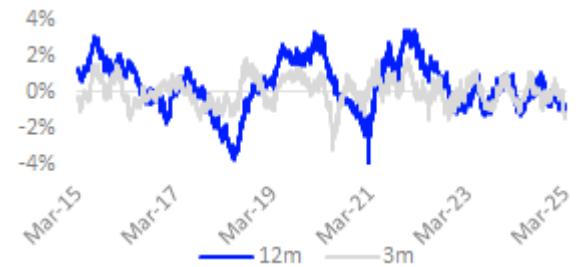


Chart 7: EPRA Nareit Green – lower tracking error, except during sharp underperformance in mid 2021, which persisted through 2022. Recent performance is closer to the market.

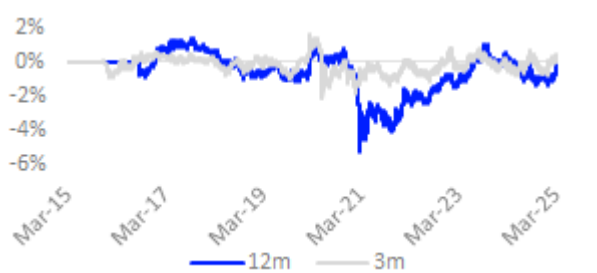
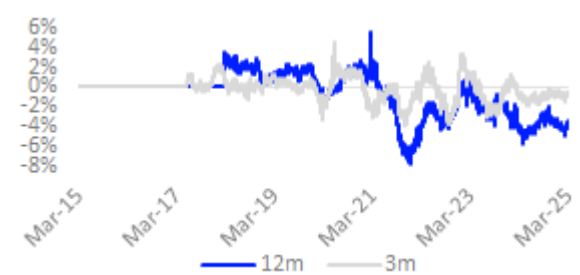


Chart 8: Green Infra – weak relative performance in 2021, recovered in 2022. Further underperformance in 2023 stabilised in 2024, but remains behind the market.



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1. Vs FTSE Global Core Infrastructure + ICB Alternative Electricity

Relative performance over time (fixed income) – Q1 2025

10 years (or longest available) of rolling 12M and 3M performance relative to parent benchmark.

Chart 1: Climate WGBI – performed closely to the market until early 2022, when higher duration European overweight led to weakness, a strong 2023 recovery and recent fall.

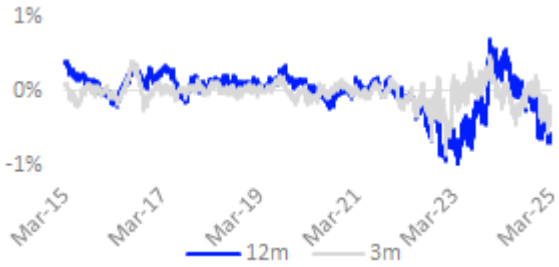


Chart 2: ESG WGBI – gradual underperformance from mid 2019, particularly from early 2022, before recovering from mid 2023 and weakness in Q4 and Q1.

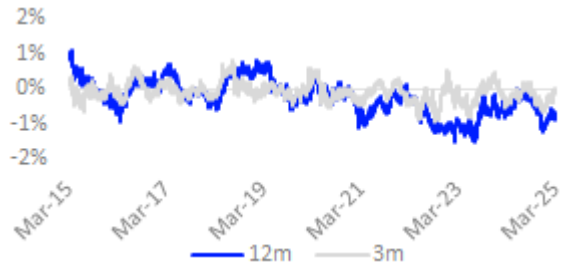


Chart 3: Choice Corp – tracking closely with market, out/underperformance typically <1%, except for in 2016/17.

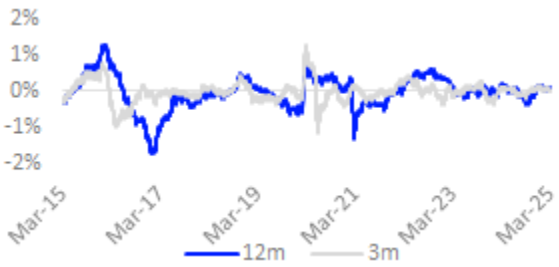


Chart 4: FFE Corp – tracking closely with market, out/underperformance typically <1%, except for in 2016/17.

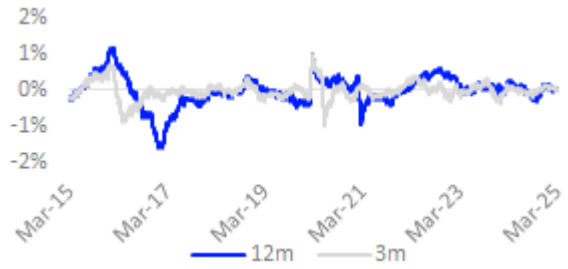


Chart 5: PAB Corp – larger underperformance spikes in 2017 and 2021 and outperformance in 2020, with performance close to market in other periods & slightly below market recently.

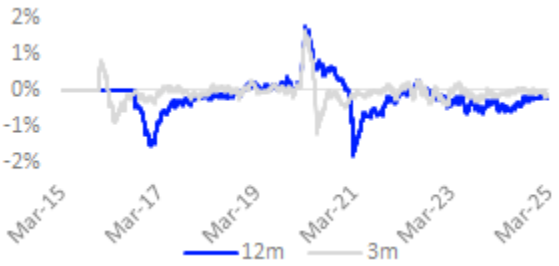


Chart 6: Green Sov – outperforming pre-covid, before underperforming from 2020 to 2022, due to longer duration. Strategy recovered in 2023 and 2024, but weak in Q1.

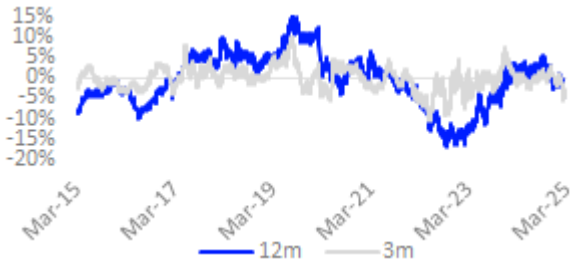


Chart 7: Green Corp – performed closer to the market than Green sovereigns. Predominantly outperforming since 2021, although more volatile over the last year.

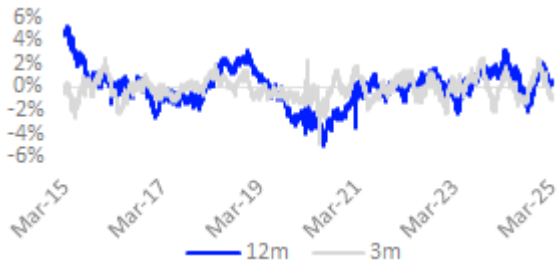
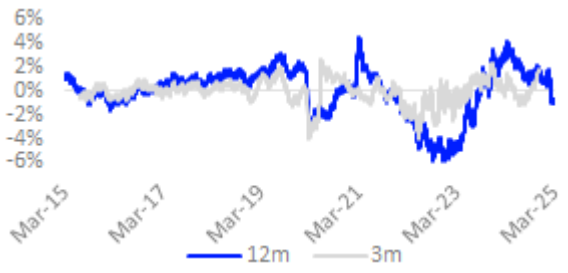


Chart 8: Green WBIG – overall green bonds outperformed up to 2019, before going through a series of cycles, notably an underperformance in 2021/22 and outperformance in 2023/4.



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Global Index Comparisons – Q1 2025

Global SI indices underperformed the market in Q1 2025. EnvOps, followed by PAB, saw the largest underperformance of the market, driven by negative selection in Consumer Discretionary (overweight in Tesla) and underweight allocation in Financials. Choice, 4Good and TPI also underperformed, due to an overweight allocation and negative selection in Tech and underweight allocation in Energy. Choice, 4Good, PAB and TPI are trading at close to their 5-year relative P/E premium, while EnvOps is trading below its historic premium. During Q1, premia for PAB and EnvOps fell, however PAB remains the most expensive strategy, whereas 4Good remains the cheapest.

Chart 1: Active Performance (TR, USD %)

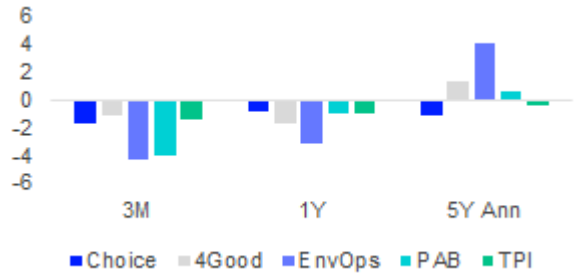


Chart 2: Index tracking error (%)

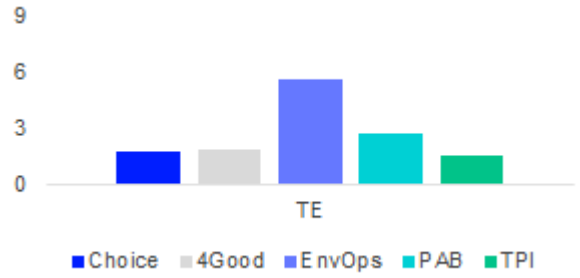


Chart 3: Industry active weight (3M average %)

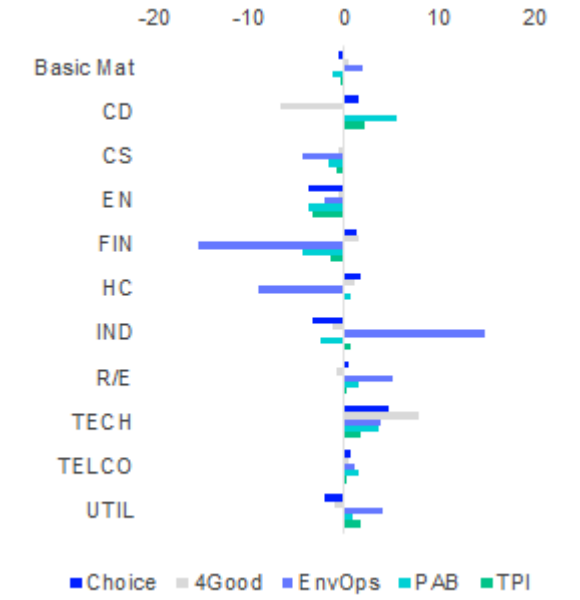


Chart 4: 3M industry allocation effect (%)

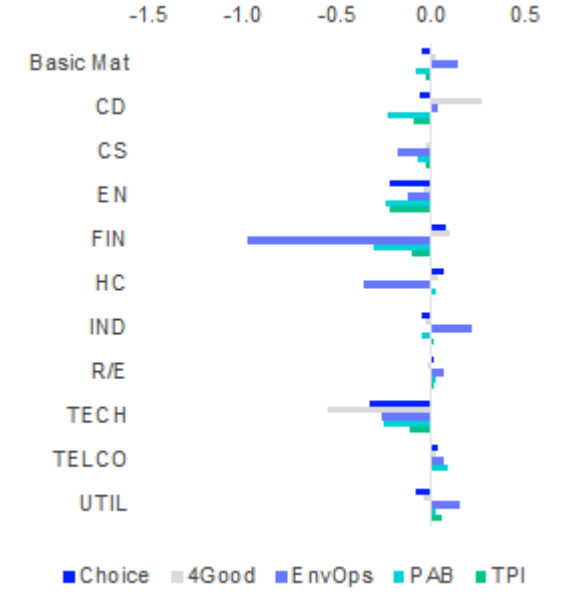
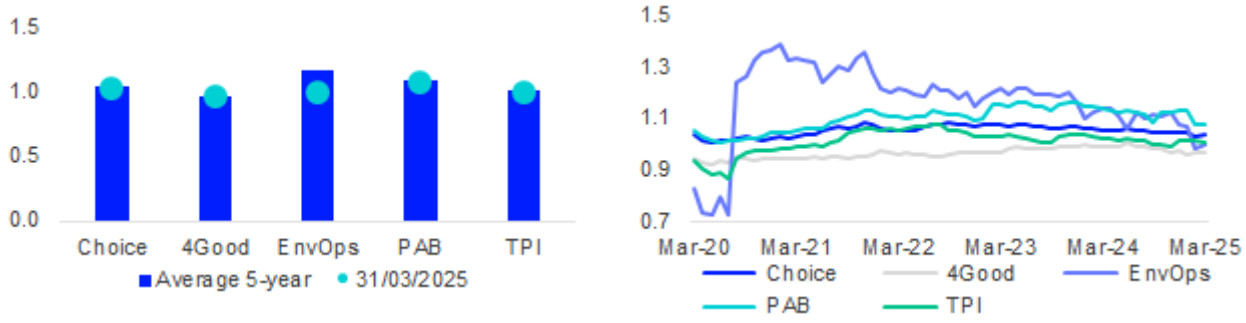


Chart 5: Global indices Relative Valuation: Latest 12-month Forward P/E relative to 5-year average



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FTSE Global Choice indices – Q1 2025

Global Choice underperformed at the global level in Q1. Geographically all regions also underperformed, with the US seeing the greatest underperformance, and APAC the least. The majority of underperformance came from an overweight allocation and negative selection in Tech, negative selection in Industrials and underweight allocation in Energy. US underperformance was also driven by overweight allocation in Tech and underweight allocation in Energy, while lower Emerging underperformance was driven by a slightly positive allocation in Energy and Tech, although selection was still negative in Tech. 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 %)

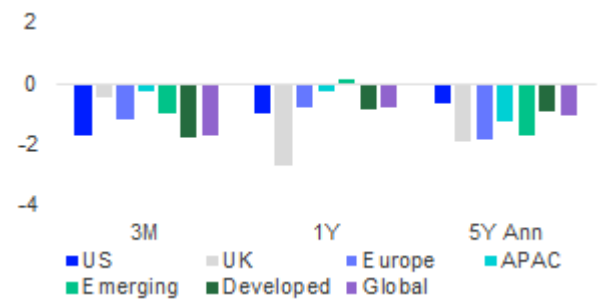


Chart 2: Global Choice carbon emissions / revenues

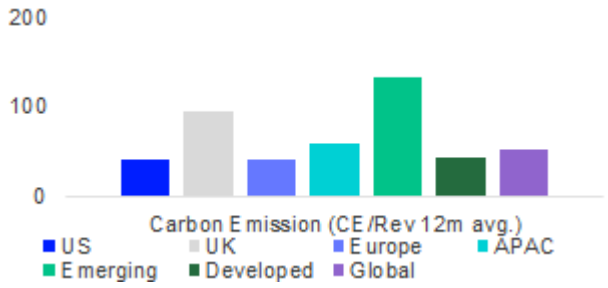


Chart 3: 3M Attribution of global index (TR, USD %)

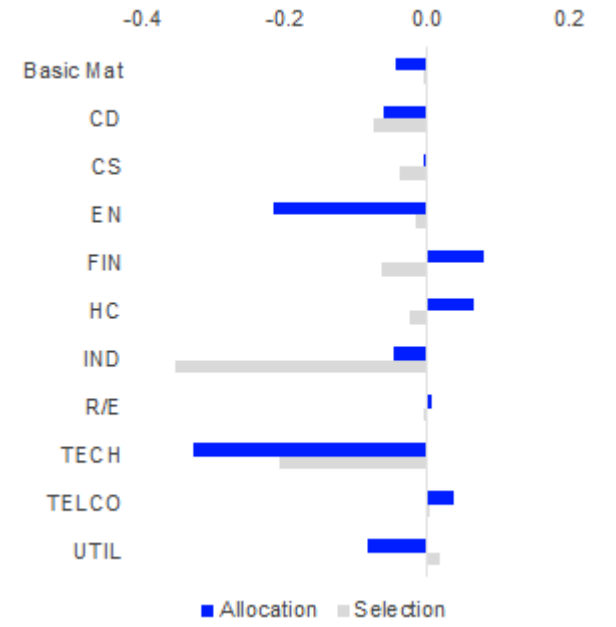


Chart 4: Contribution to carbon reduction (%)

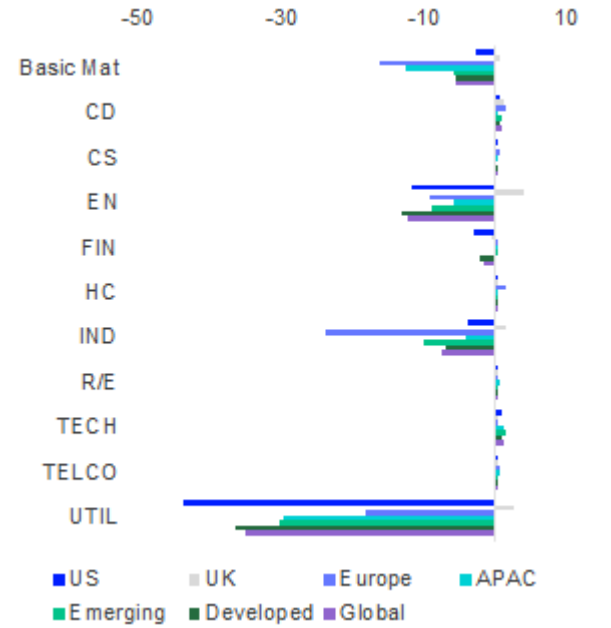
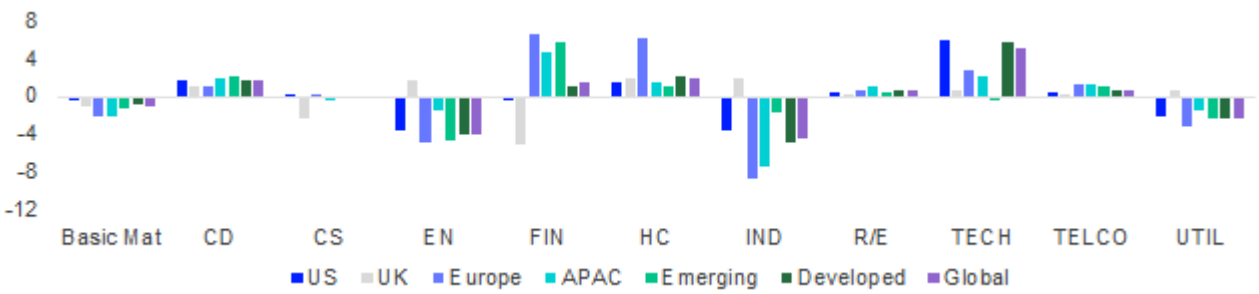


Chart 5: Active industry weights (%)



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FTSE4Good indices – Q1 2025

FTSE4Good underperformed at the global level in Q1. Geographical performance was also negative, with Emerging and US seeing the largest underperformance, while UK slightly outperformed. The majority of underperformance came from an overweight allocation and negative selection in Tech, partially compensated by positive selection and underweight allocation in Consumer Discretionary. Emerging underperformance was also driven by negative selection in Tech, but the underweight in Consumer Discretionary was negative to performance in Emerging (rather than positive Globally). UK, European and Japanese indices have the highest ESG scores, while EM has the lowest.

Chart 1: Active Performance (TR, USD %)

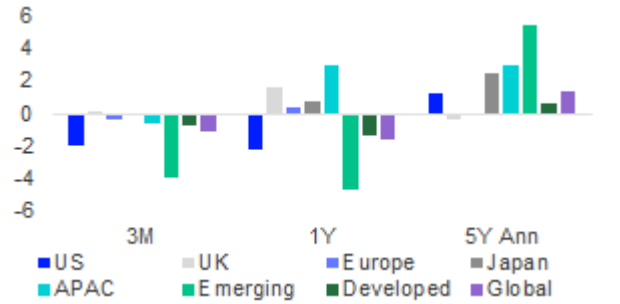


Chart 2: FTSE4Good ESG scores

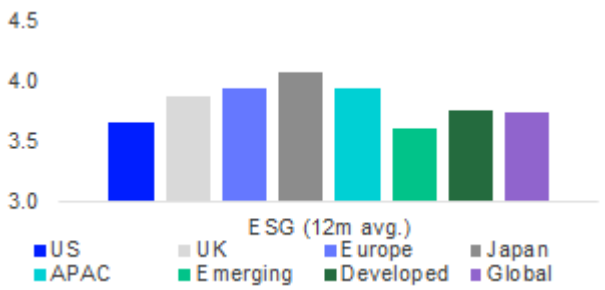


Chart 3: 3M Attribution of global index (TR, USD %)

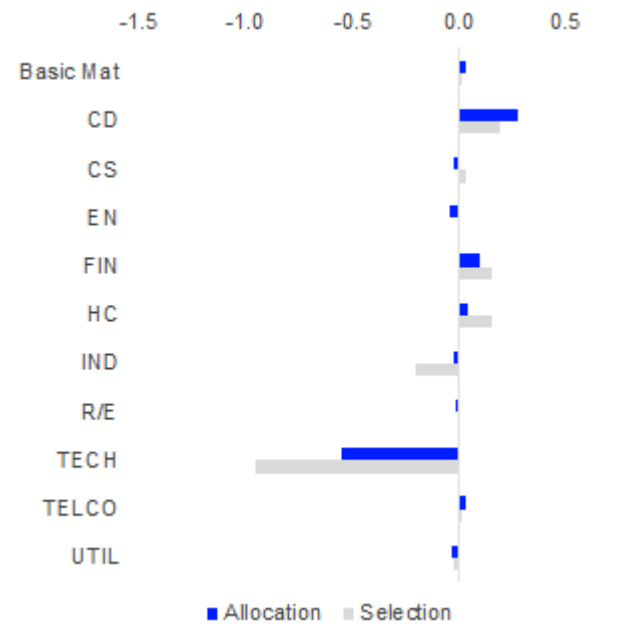


Chart 4: Contribution to ESG uplift (%)

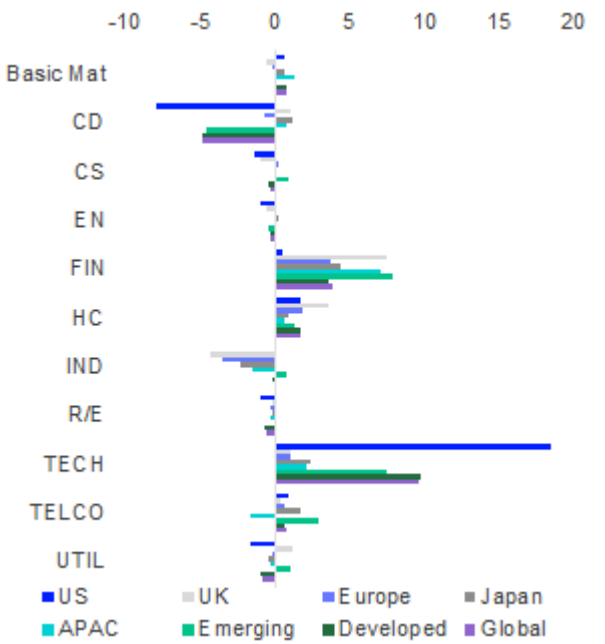
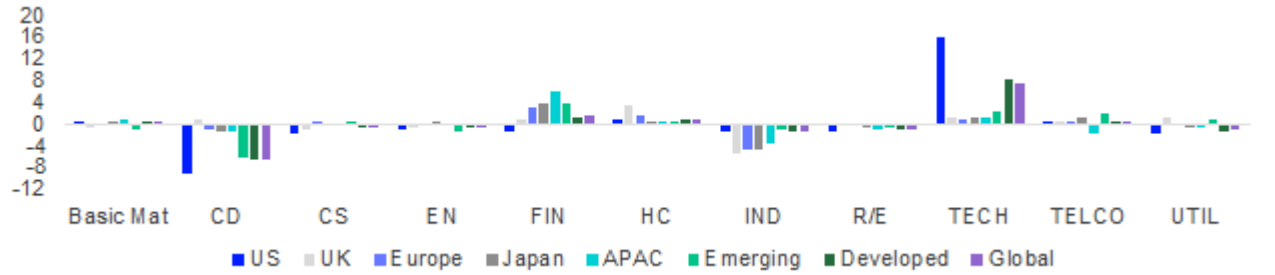


Chart 5: Active industry weights (%)



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FTSE Environmental Opportunities (EO) indices – Q1 2025

EnvOps underperformed the market at the global level in Q1. Geographically all regions also underperformed, with APAC seeing the greatest underperformance and US the least. The majority of underperformance came from negative selection in Consumer Discretionary (overweight Tesla) and underweight allocation in Financials, partially compensated positive selection in Tech. APAC underperformance came from overweight allocation and negative selection in Industrials; lower US underperformance came from overweight allocation and positive selection in Tech and Industrials. EO indices are heavily overweight Industrials, Technology and Utilities (& Consumer Discretionary in Japan).

Chart 1: Active Performance (TR, USD %)

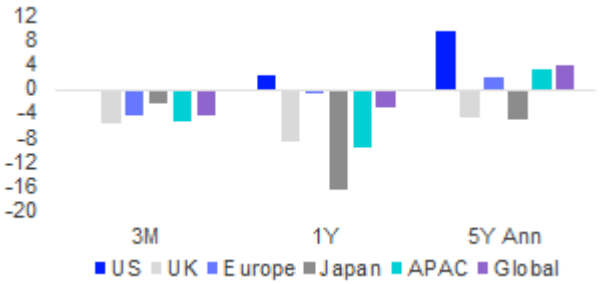


Chart 2: Environmental Ops Green Revenues scores

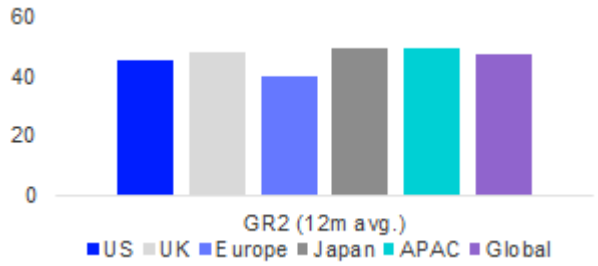


Chart 3: 3M Attribution of global index (TR, USD %)

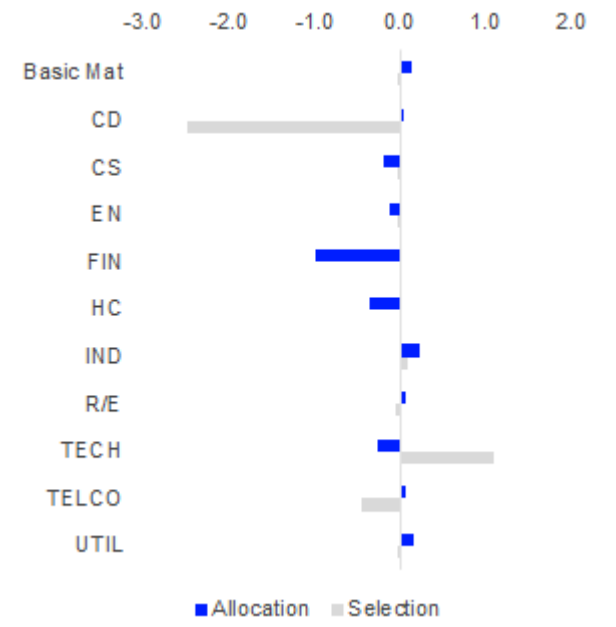


Chart 4: Contribution to Green Revenues uplift (%)

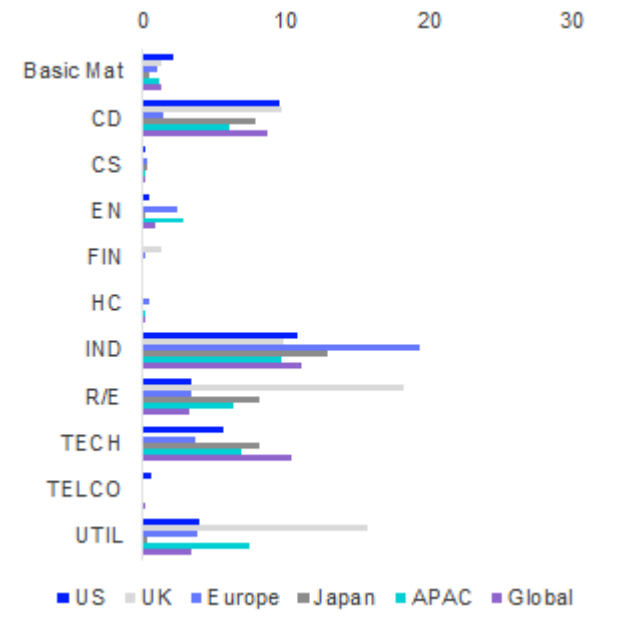
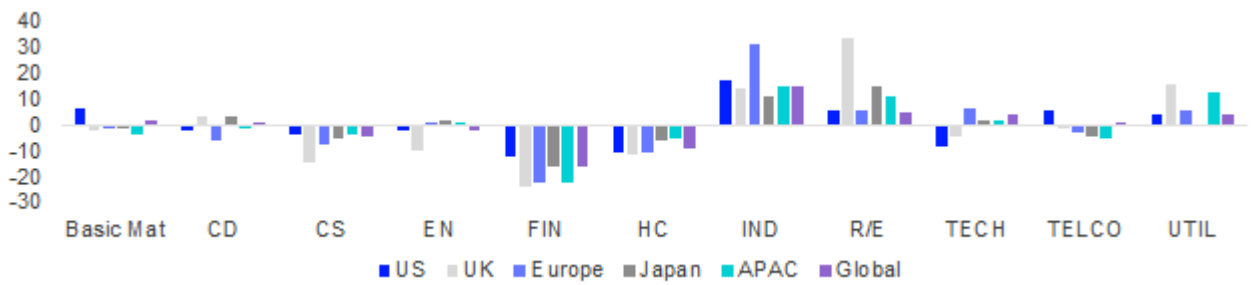


Chart 5: Active industry weights (%)



Note: The report is now using capped versions of the FTSE Environmental Markets/Opportunities indices

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FTSE ESG Low Carbon Target Exposure indices – Q1 2025

FTSE ESG Low Carbon outperformed in the Developed market in Q1. Geographical performance was mixed, US and Japan outperformed, while APAC and Emerging underperformed and UK and Europe were in line with the market. Outperformance was driven by an overweight allocation and positive selection in Financials, and underweight allocation and positive selection in Consumer Discretionary, partially compensated by negative selection in Tech. US outperformance was driven by overweight allocation and positive selection in Healthcare, partially compensated by overweight allocation and negative selection in Tech. Japanese outperformance was driven by a positive selection in Tech. 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 %)

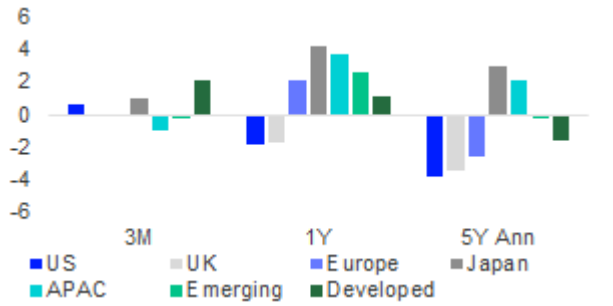


Chart 2: ESG Low Carbon ESG scores

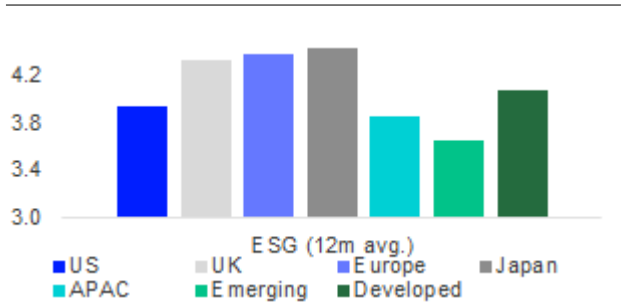


Chart 3: 3M Attribution of developed index (TR, USD %)

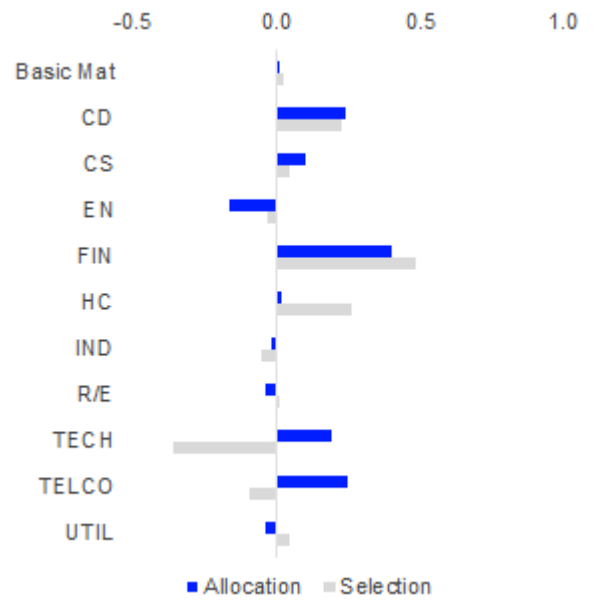


Chart 4: Contribution to ESG uplift (%)

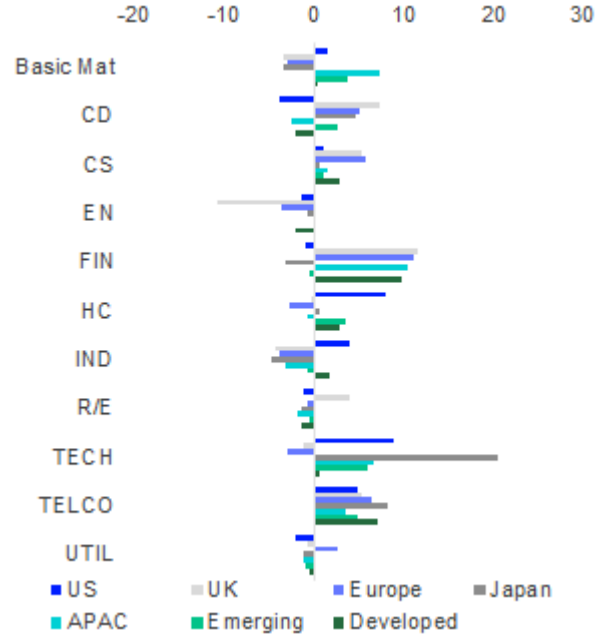
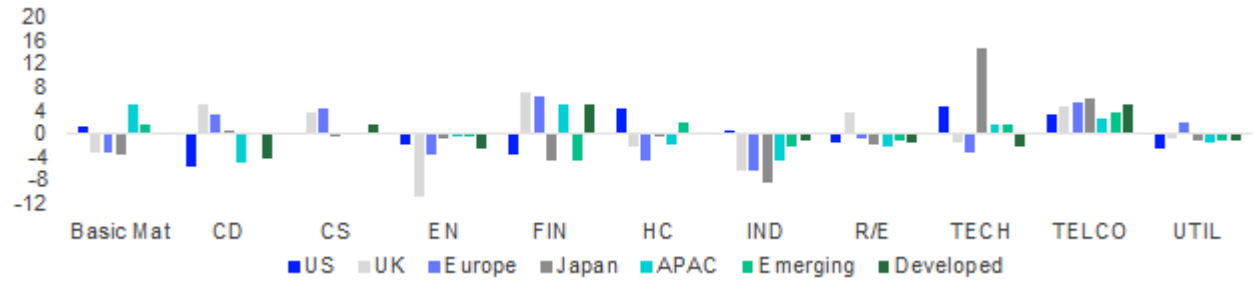


Chart 5: Active industry weights (%)



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FTSE EU Paris-Aligned Benchmark (PAB) indices – Q1 2025

Paris-Aligned Benchmark underperformed at the global level in Q1. Geographical performance was also negative, Developed underperformed similarly to Global, while Emerging and UK underperformance was lower. The majority of outperformance came from negative selection in Consumer Discretionary (overweight Tesla) and overweight allocation and negative selection in Tech. Developed outperformance came from the same source as global. Emerging underperformance came from negative selection in Tech partially offset by overweight allocation and positive selection in Consumer Discretionary (opposite to Global) The carbon reduction in PAB comes primarily from underweights in Energy and Basic Materials, and lower carbon Utilities.

Chart 1: Active Performance (TR, USD %)

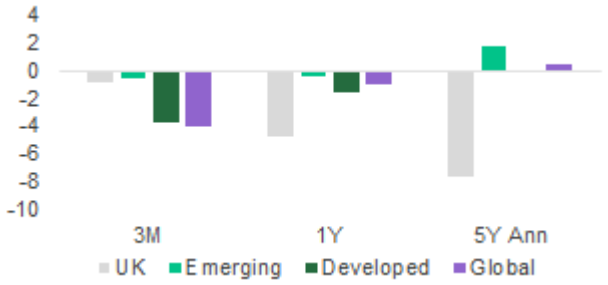


Chart 2: PAB Carbon Emissions / EVIC

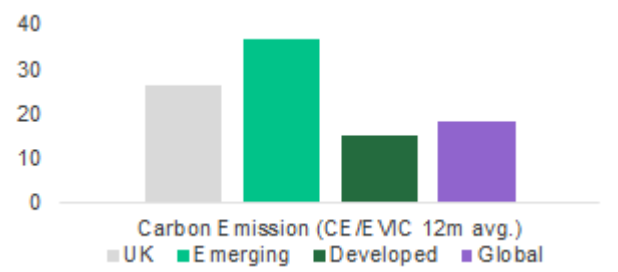


Chart 3: 3M Attribution of global index (TR, USD %)

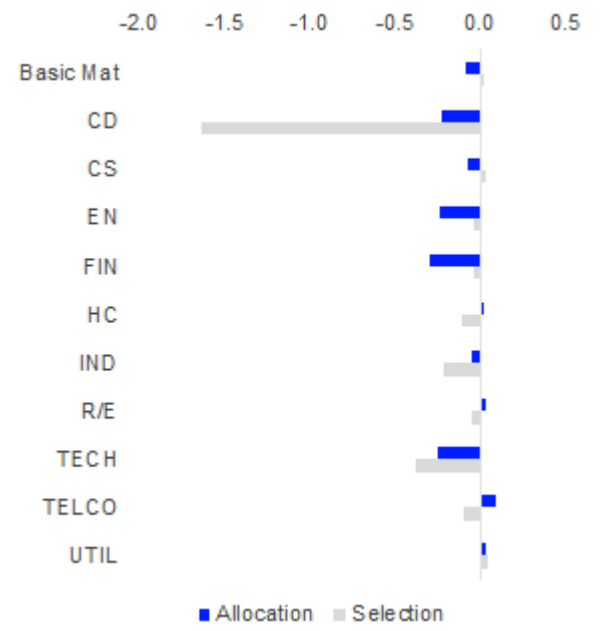


Chart 4: Contribution to Carbon Reduction (%)

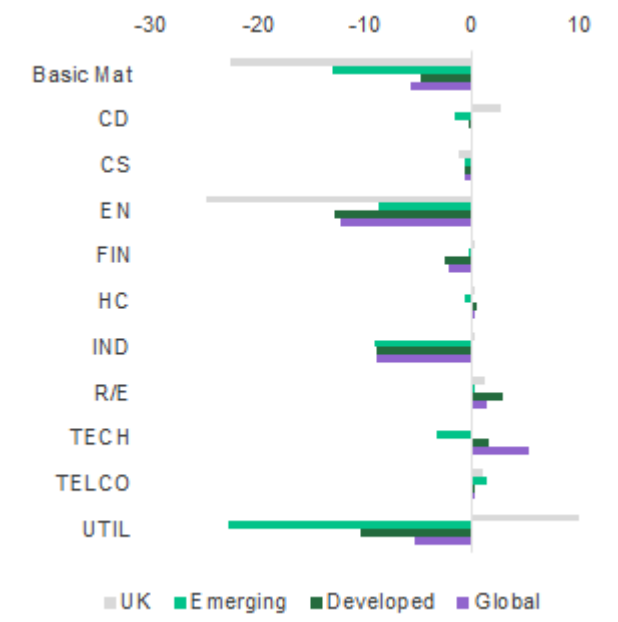
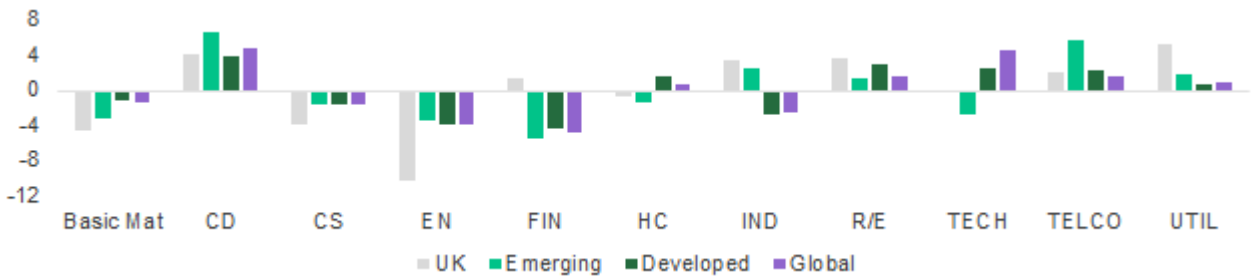


Chart 5: Active industry weights (%)



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FTSE TPI Climate Transition indices – Q1 2025

TPI underperformed the market at the global level in Q1. Geographical performance was also negative, Emerging saw the largest underperformance, while the underperformance in the US and Japan was lower. The majority of underperformance came from overweight allocation and negative selection in Tech and underweight allocation in Energy. Underperformance in Emerging came from negative selection in Tech, partially offset by positive selection in Consumer Discretionary. Underperformance in Japan was driven by negative selection in Consumer Discretionary. 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 %)

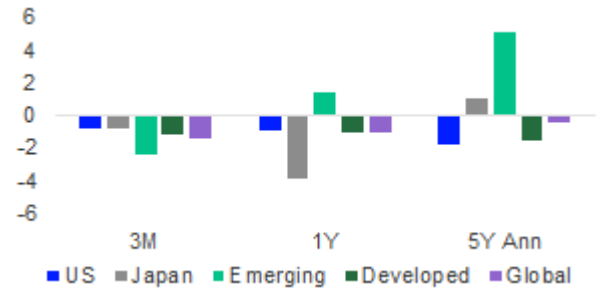


Chart 2: TPI Index TPI Management Quality scores

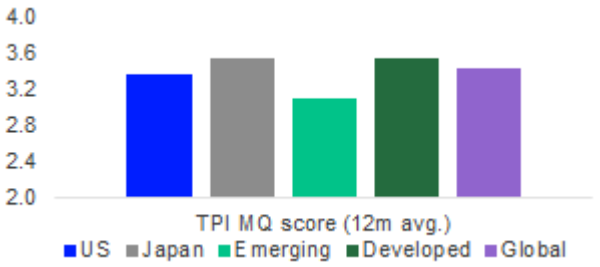


Chart 3: 3M Attribution of global index (TR, USD %)

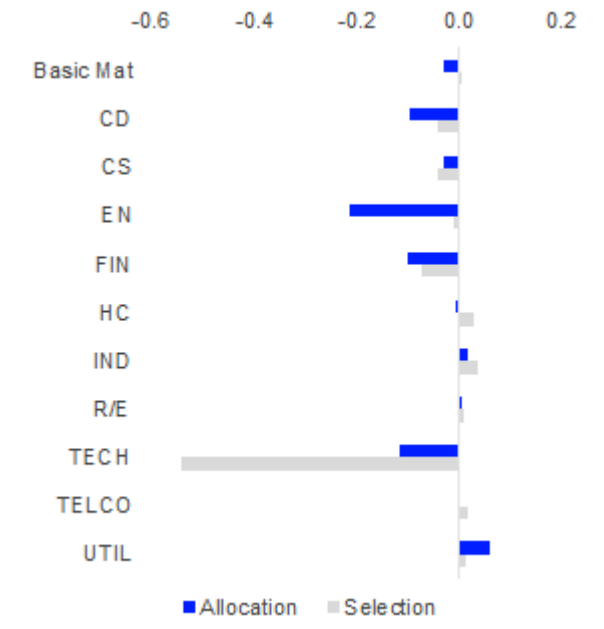


Chart 4: Contribution to TPI Management Quality uplift (%)

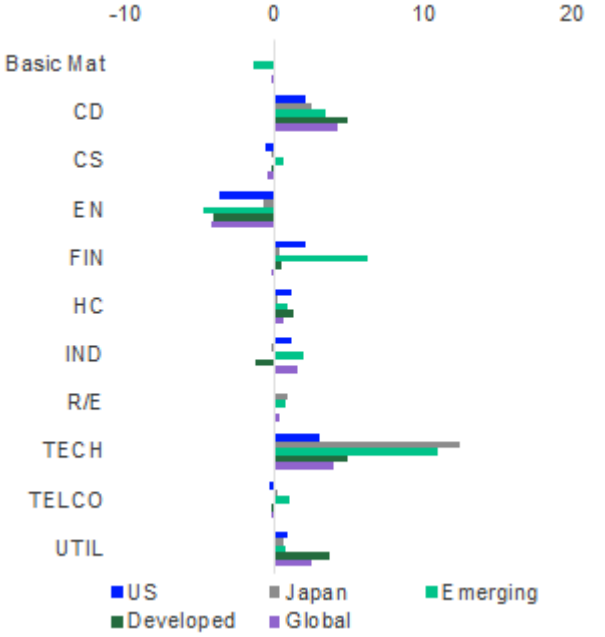
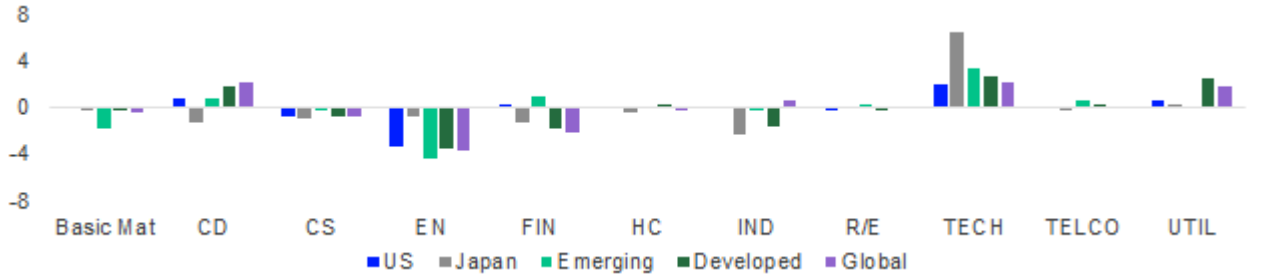


Chart 5: Active industry weights (%)



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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 tilting and target exposure methodologies 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.

Market-Cap Weighted indices*

Equity

FTSE Global Choice Index Series | LSEG exclude companies based on the impact of their products and conduct on society and the environment.
FTSE4Good Index Series | LSEG include companies with an ESG and climate-change scores above a minimum threshold, with exclusions.
Environmental Markets Index Series | LSEG include companies that derive at least 20% of their revenue from green.

Note: The report is now using capped versions of the FTSE Environmental Markets/Opportunities indices

Fixed Income

FTSE Fixed Income Global Choice Index | LSEG designed to represent the performance of securities in FTSE Fixed Income indexes that exclude issuers based on their conduct or product involvement in specific sectors.
FI Ex Fossil Fuels Enhanced Index | LSEG designed to represent the performance of securities in FTSE Fixed Income indexes after the exclusion of issuers that have certain exposure to fossil fuels.
FTSE Green Impact Bond Index Series | LSEG comprehensive measure of the global green bond market across various asset classes and credit sectors.

Tilted / Target Exposure indices*

Equity

FTSE ESG Low Carbon Target Exposure targets a 20% uplift in the ESG score ** and a 50% reduction in carbon emissions, controlling for country and ICB industry exposures.
EU Climate Benchmarks Index Series | LSEG Paris Aligned Benchmark (PAB) targets a 50% reduction in carbon emissions, 100% uplift in Green Revenues and high climate governance.
FTSE TPI Climate Transition Index Series | LSEG over/underweights companies based on fossil fuel reserves, carbon emissions, green revenues, TPI management quality and TPI carbon performance.

Alternative

FTSE EPRA Nareit Green index of eligible real estate equities worldwide, with an improved climate and sustainability performance based on two sustainable investment measures; green building certification and energy usage.
FTSE Green Infrastructure index of companies from three core infrastructure sectors (transportation, energy and telecommunications) and adjusts stock weights to account for the risks and opportunities associated with the transition to a low-carbon economy

Fixed Income

Climate Risk Adjusted Gov Bond Index | LSEG quantitatively incorporates climate transition, physical and resilience risk into government bond index.
FTSE ESG Government Bond Index Series | LSEG adjusts index weights according to each country's relative Environmental, Social and Governance (ESG) performance.
FTSE Fixed Income EU Climate Benchmarks Index Series | LSEG achieving the required minimum targets as stipulated by the EU 2019 Regulation on EU Climate Transition Benchmarks.

* Please refer to FTSE | The Right Index for Your Sustainable Investment Objectives (lseg.com) | 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.

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Appendix 1: SI Index Coverage and Benchmarks

				Regional Coverage		Market Cap Coverage	
Region	SI FAMILY	FTSE Russell Index	FTSE Russell Benchmark	DM	EM	Large + Mid Cap	Large + Mid + Small Cap
Equities							
Global	Global Choice	FTSE Global All Cap Choice	FTSE Global All Cap	✓	✓		✓
	FTSE4Good	FTSE4Good All World	**FTSE All World**	✓	✓	✓	
	Environmental Ops	FTSE Environmental Opportunities All Share	FTSE Global All Cap	✓	✓		✓
	Paris Aligned	FTSE All-World Paris-Aligned (PAB)	**FTSE All World**	✓	✓	✓	
	TPI Climate Transition	FTSE All-World TPI Climate Transition ex FF	**FTSE All World**	✓	✓	✓	
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	FTSE 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**		✓	✓	
Dev.	Global Choice	FTSE Developed All Cap Choice	FTSE Developed All-Cap	✓			✓
	FTSE4Good	FTSE4Good Developed	**FTSE Developed**	✓		✓	
	ESG Low Carbon Target	FTSE Developed ESG Low Carbon Target Exposure	**FTSE Developed**	✓		✓	
	Paris Aligned	FTSE Developed Paris-Aligned (PAB)	**FTSE Developed**	✓		✓	
	TPI Climate Transition	FTSE Developed TPI Climate Transition ex Coal ex FF ex Tobacco	**FTSE Developed**	✓		✓	
Alternative							
Global	EPRA Nareit Green	FTSE EPRA Nareit Developed Green Low Carbon Target	**FTSE EPRA Nareit Developed**	✓			✓
	Green Infrastructure	FTSE Global Core Infrastructure TPI Climate Transition	**FTSE Global Core Infrastructure Index**	✓	✓		✓
Fixed Income							
Global	SI Sovereign	FTSE Climate Risk Adjusted WGBI	**FTSE WGBI**	✓	✓		
		FTSE ESG WGBI	**FTSE WGBI**	✓	✓		
Global	SI Corporate Bond	FTSE WorldBIG Choice Corporate Bond Index	**FTSE WorldBIG Corporate**	✓	✓		
		FTSE WorldBIG ex Fossil Fuel Enhanced Corporate Bond Index	**FTSE WorldBIG Corporate**	✓	✓		
		FTSE WorldBIG PAB Corporate Bond Index	**FTSE WorldBIG Corporate**	✓	✓		
Global	Green Bond	FTSE WorldBIG Green Impact Corporate Bond Index	**FTSE WorldBIG Corporate**	✓	✓		
		FTSE WorldBIG Green Impact Domestic Sovereing Index	FTSE WorldBIG Domestic Sovereign				

*The indices in bold are used as representative benchmarks on page 7

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 2: Reference Guide

Report calculations

- Unless noted otherwise, all performance calculations are total return in US dollar currency terms (fixed income indices are USD hedged).
- 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 CO2 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 CO2 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	Official Name	Report Abbreviation
FTSE Global Choice	Choice	FTSE Climate WGBI	Climate WGBI
FTSE4Good	4Good	FTSE Advanced Climate WGBI	Adv Climate WGBI
FTSE Environmental Opportunities	Env Ops or EO	FTSE ESG WGBI	ESG WGBI
FTSE ESG Low Carbon Target Exposure	Low Carb	FTSE Choice Corporate Bond	Choice Corp
FTSE Paris-Aligned Benchmark	PAB	FTSE Ex Fossil Fuel Enhanced Corporate Bond	FFE Corp
FTSE TPI Climate Transition	TPI	FTSE PAB Corporate Bond	PAB Corp
FTSE EPRA Nareit Developed Green Low Carbon Target	EPRA Nareit Green	FTSE Green Impact Corporate Bond	Green Corp
FTSE Global Core Infrastructure TPI Climate Transition	Green Infra	FTSE Green Impact Domestic Sovereign	Green Sov

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

Note: The report is now using capped versions of the FTSE Environmental Markets/Opportunities indices

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To learn more, visit lseg.com/en/ftse-russell; 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 6441 1430
Sydney +61 (0) 2 7228 5659

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