

Consultation on Potential Enhancements to the MSCI Climate Change Indexes Methodology

MAY 2024

This consultation may or may not lead to the implementation of any or all of the proposed changes in the highlighted or any other MSCI indexes. Consultation feedback will remain confidential. MSCI may publicly disclose feedback if specifically requested by specific market participants. In that case, the relevant feedback would be published together with the final results of the consultation.

Summary

MSCI proposes to enhance the MSCI Climate Change Indexes methodology to address the following:

1. Increased ex-ante and observed Tracking Error over time
2. Sector overrepresentation, for example, in Information Technology
3. Larger increase in concentration in top constituents, as compared to the Parent Indexes
4. Higher observed turnover

MSCI invites feedback from market participants on or before July 31st, 2024 and will announce the results of the consultation as well as the implementation timeline on or before August 14th, 2024.

Summary of Proposed Enhancements

No.	Proposed Enhancements	What the Proposal Aims to Achieve
1	Lower the weight multiplier on Solutions Category	Increased diversification and lower tracking error
2	Add sector, issuer, and solutions category active weights limits prior to the iterative downweighting	Improved sector, issuer, and Low Carbon Transition (LCT) category representations while making the Indexes more robust to future changes in LCT categories distribution

Key Elements of the Climate Change Indexes Methodology

Exclusions

- Controversial Weapons
- Thermal Coal Mining
- Tobacco
- Red Flags ESG Controversies
- Orange Flags Environmental Controversies

Weighting based on LCT Category

LCT Category	Multiplier
Solutions	3
Neutral	1
Operational Transition	2/3
Product Transition	1/3
Asset Stranding	1/6

Iterative Downweighting

- 30% reduction in carbon intensity relative to the parent index
- 30% reduction in potential emissions relative to the parent index
- 7% average YoY self-decarbonization
- Green Revenue/Fossil fuels-based Revenue at least equivalent

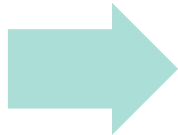
Proposal 1: Lower the Solutions Category Multiplier

OVERVIEW OF PROPOSAL AND SIMULATIONS

Proposal 1: Lower the Solutions Category Multiplier

Exclusions

- Controversial Weapons
- Thermal Coal Mining
- Tobacco
- Red Flags ESG Controversies
- Orange Flags Environmental Controversies



Weighting based on LCT Category

LCT Category	Multiplier
Solutions	3 -> 1.5
Neutral	1
Operational Transition	2/3
Product Transition	1/3
Asset Stranding	1/6



Iterative Downweighting

- 30% reduction in carbon intensity relative to the parent index
- 30% reduction in potential emissions relative to the parent index
- 7% average YoY self-decarbonization
- Green Revenue/Fossil fuels-based Revenue at least equivalent

Proposal 1: Rationale and Analysis

Lower the Solutions Category Multiplier

Rationale:

- Over time we have seen a significant growth in the LCT Solutions category as a % of the MSCI ACWI Index.
 - As of 31st Dec 2019, Solutions formed 2.6% of ACWI while it increased to 10.9% by 29th Dec 2023.
 - Moreover, many of the securities from the Information Technology sector have been reclassified to Solutions category over time e.g., Microsoft, Nvidia, Salesforce
- As such, a 3x multiplier on the weight of Solutions category has led to a higher tracking error and a larger IT overweight.

	MSCI ACWI Index	Simulated ACWI Climate Change	Simulated ACWI Climate Change: Solutions 1.5x
Total Return* (%)	3.0	3.7	2.9
Total Risk (%)	17.5	18.8	18.2
Return / Risk	0.17	0.20	0.16
Sharpe Ratio	0.02	0.05	0.01
Active Return (%)		0.7	-0.1
Tracking Error (%)		3.1	1.9
Information Ratio		0.22	-0.06
Historical Beta	1.00	1.06	1.03
Number of Constituents***	2928	2681	2681
Turnover** (%)	1.6	7.3	5.5

Period: May 31, 2021 to Dec 29, 2023. * Gross returns annualized in USD ** Annualized one-way index turnover over index reviews *** Monthly averages

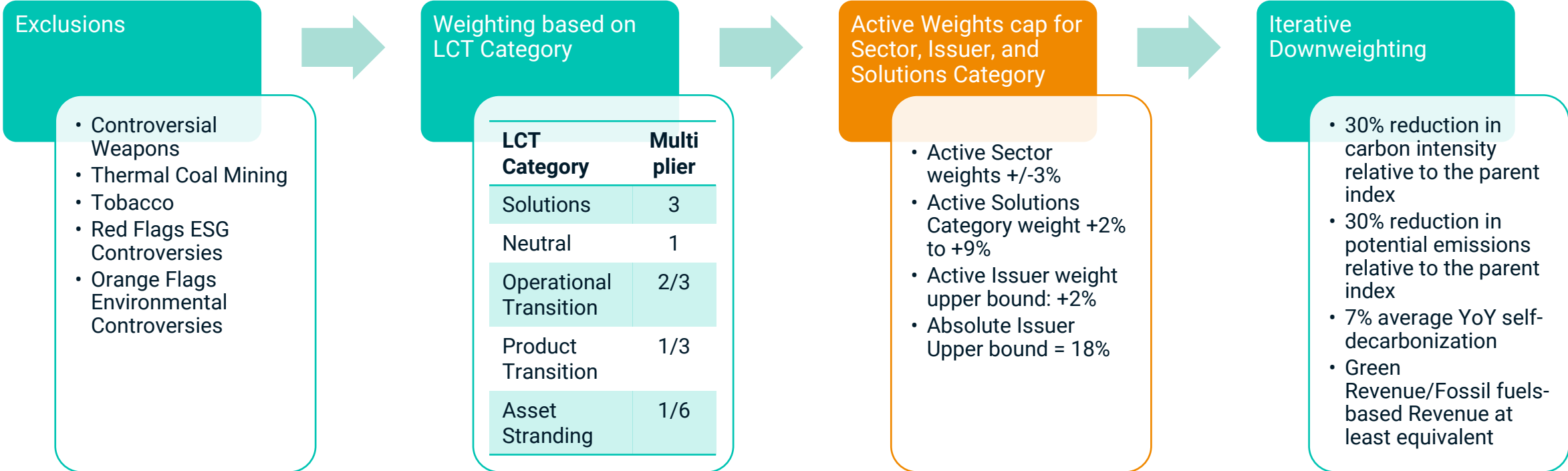
	MSCI ACWI Index	Simulated ACWI Climate Change	Simulated ACWI Climate Change: Solutions 1.5x
Active IT Sector weight		7.2	4.6
Max Active Sector Weight		7.2	4.6
Min Active Sector Weight		-4.2	-4.1
Top 10 Constituents Weight (%)	16.5	23.1	20.2
Carbon Intensity to EVIC - Scope 1 + 2 + 3*	399	156	158
Low Carbon Transition Score	6.2	6.6	6.5
Solutions (%)	10.9	23.2	15.3
Product & Operational Transition (%)	14.6	4.3	4.6
Asset Stranding (%)	0.4	0.0	0.0

As of December 29, 2023. * Wtd Avg t CO2e/\$M EVIC

Proposal 2: Add Active Weights Limits

OVERVIEW OF PROPOSAL AND SIMULATIONS

Proposal 2: Add Active Weights Limits



Proposal 2: Rationale

Add Active Weights Limits

Over time we have seen a significant growth in the LCT Solutions category as a % of the MSCI ACWI Index.

- As of 31st Dec 2019, Solutions formed 2.6% of ACWI while it increased to 10.9% by 29th Dec 2023.

Considering possible future scenarios:

- 1) If growth in Solutions category continues, it can result in further concentration of the index in particular sectors and issuers, thereby resulting in a higher tracking error.
 - In such a scenario, limits on active sector, issuer and Solutions category weights should increase diversification and reduce tracking error
- 2) Equally, if the Solutions category weight drops over time, then a lower category weight multiplier in Proposal 1 can result in reduced weight to Solutions providers.
 - Here, a minimum threshold on active weight of Solutions category should contribute towards maintaining Solutions category weight

Proposal 2: Analysis

Add Active Weights Limits

	MSCI ACWI Index	Simulated ACWI Climate Change	Simulated ACWI Climate Change + Active Limits
Total Return* (%)	3.0	3.7	3.4
Total Risk (%)	17.5	18.8	18.5
Return / Risk	0.17	0.20	0.18
Sharpe Ratio	0.02	0.05	0.04
Active Return (%)		0.7	0.4
Tracking Error (%)		3.1	2.7
Information Ratio		0.22	0.13
Historical Beta	1.00	1.06	1.05
Number of Constituents***	2928	2681	2681
Turnover** (%)	1.6	7.3	8.3
Active IT Sector weight		7.2	3.8
Max Active Sector Weight		7.2	3.8
Min Active Sector Weight		-4.2	-3.7
Top 10 Constituents Weight (%)	16.5	23.1	22.1
Carbon Intensity to EVIC - Scope 1 + 2 + 3*	399	156	159
Low Carbon Transition Score	6.2	6.6	6.6
Solutions (%)	10.9	23.2	20.7
Product & Operational Transition (%)	14.6	4.3	4.5
Asset Stranding (%)	0.4	0.0	0.0

Period: May 31, 2021 to Dec 29, 2023. * Gross returns annualized in USD ** Annualized one-way index turnover over index reviews *** Monthly averages

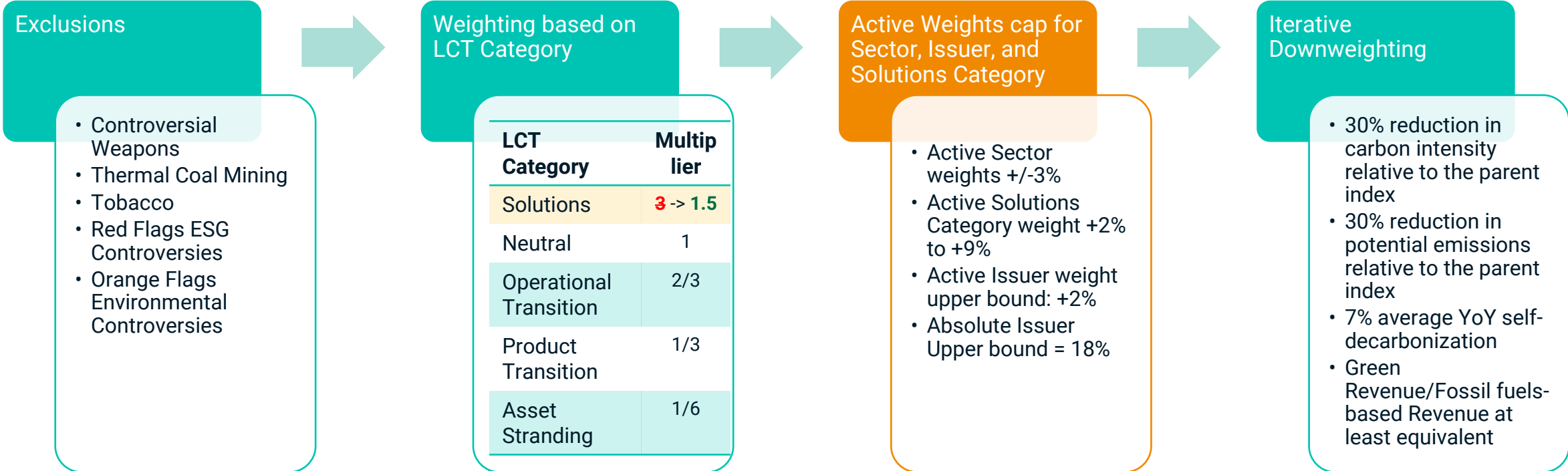
As of December 29, 2023. * Wtd Avg t CO2e/\$M EVIC

Combined Proposal

OVERVIEW AND SIMULATIONS



Combined Proposal



Combined Proposal: Analysis

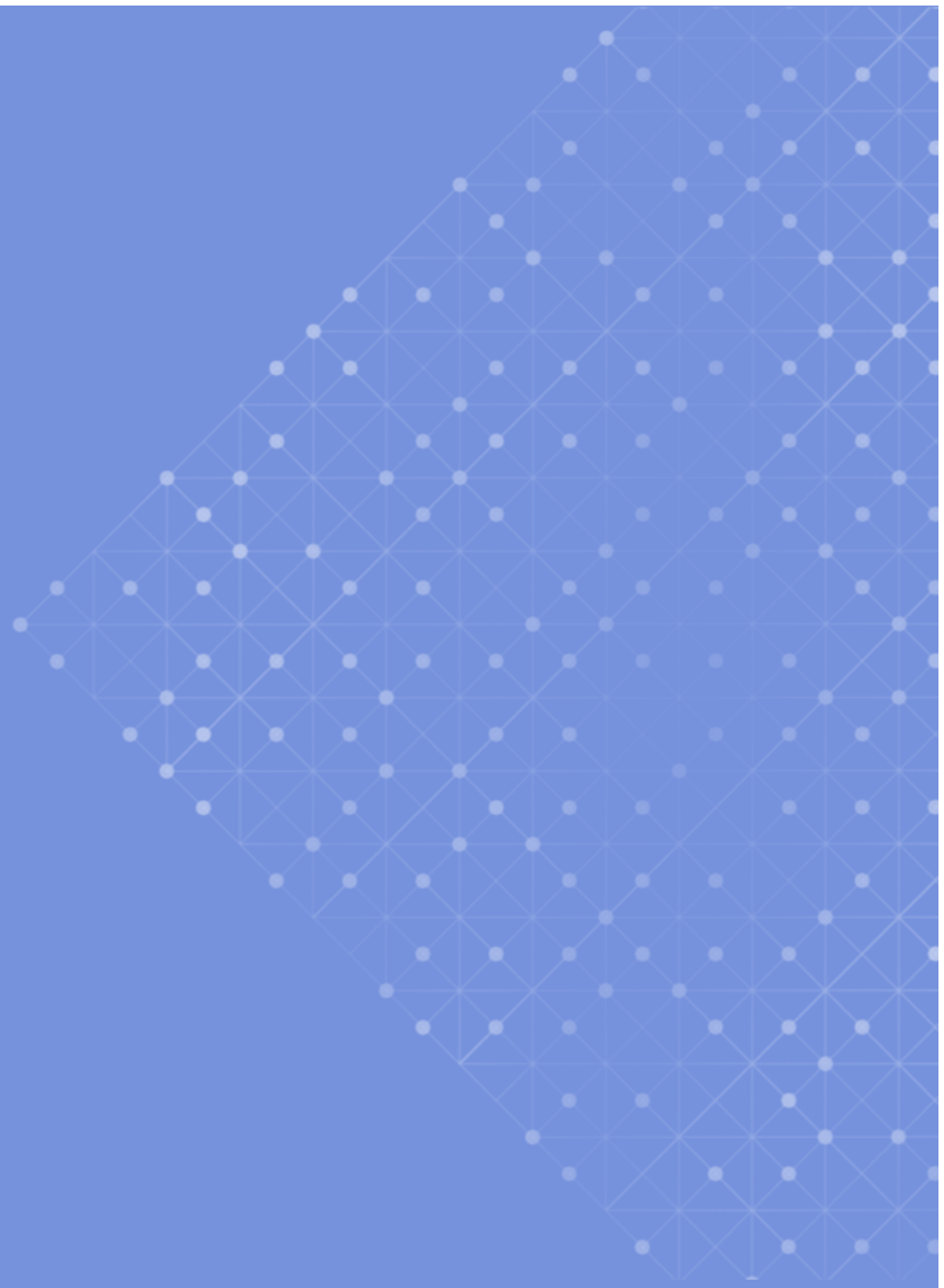
	MSCI ACWI Index	Simulated ACWI Climate Change	Simulated ACWI Climate Change: Solutions 1.5x + Active Limits
Total Return* (%)	3.0	3.7	2.9
Total Risk (%)	17.5	18.8	18.2
Return / Risk	0.17	0.20	0.16
Sharpe Ratio	0.02	0.05	0.01
Active Return (%)		0.7	-0.2
Tracking Error (%)		3.1	1.9
Information Ratio		0.22	-0.09
Historical Beta	1.00	1.06	1.03
Number of Constituents***	2928	2681	2681
Turnover** (%)	1.6	7.3	6.3

Period: May 31, 2021 to Dec 29, 2023. * Gross returns annualized in USD ** Annualized one-way index turnover over index reviews *** Monthly averages

Active IT Sector weight		7.2	3.5
Max Active Sector Weight		7.2	3.6
Min Active Sector Weight		-4.2	-3.7
Top 10 Constituents Weight (%)	16.5	23.1	20.1
Carbon Intensity to EVIC - Scope 1 + 2 + 3*	399	156	158
Low Carbon Transition Score	6.2	6.6	6.5
Solutions (%)	10.9	23.2	14.9
Product & Operational Transition (%)	14.6	4.3	4.8
Asset Stranding (%)	0.4	0.0	0.0

As of December 29, 2023. * Wtd Avg t CO2e/\$M EVIC

Consultation Questions



Consultation Questions

1. **Proposal 1:** Lower the weight multiplier on Solutions Category

- Do you agree with a lower weight multiplier for Solutions category considering the increase in the category weight in MSCI ACWI over time and the resulting impact on the concentration and tracking error? If yes, should it be 1.5x or higher?

2. **Proposal 2:** Add active weights limits prior to the iterative downweighting

- Do you agree with adding guard rails in terms of active sector and issuer weights limits?
- Do you agree with adding active solutions category limits as a mechanism to maintain diversification in the event of future changes to LCT categories distribution?

3. **Technical Adjustment:** Should the exclusions in the methodology be applied at a quarterly frequency?

Appendix



Transition Turnover Analysis

Assuming transition of the indexes in the November 2023 Index review, the below analysis gives suggestion of the likely one-off turnover incurred for the MSCI ACWI Climate Change Index.

	ACWI	
	Current	Combined Proposal
Turnover**	3.0%	9.9%

Note: Assuming a hypothetical transition of the indexes as of November 2023 Index review
** One-way turnover.

Additional Test Proposal 1:

Lower the Solutions Category
Multiplier to 2x

Additional Test Proposal 1: Lower the Solutions Category Multiplier to 2x

Exclusions

- Controversial Weapons
- Thermal Coal Mining
- Tobacco
- Red Flags ESG Controversies
- Orange Flags Environmental Controversies



Weighting based on LCT Category

LCT Category	Multiplier
Solutions	3 -> 2
Neutral	1
Operational Transition	2/3
Product Transition	1/3
Asset Stranding	1/6



Iterative Downweighting

- 30% reduction in carbon intensity relative to the parent index
- 30% reduction in potential emissions relative to the parent index
- 7% average YoY self-decarbonization
- Green Revenue/Fossil fuels-based Revenue at least equivalent

Additional Test Proposal 1: Analysis

Lower the Solutions Category Multiplier to 2x

	MSCI ACWI Index	Simulated ACWI Climate Change	Combined Proposal (Sol: 2x + Active Limits)
Total Return* (%)	3.0	3.7	3.0
Total Risk (%)	17.5	18.8	18.3
Return / Risk	0.17	0.20	0.17
Sharpe Ratio	0.02	0.05	0.02
Active Return (%)		0.7	0.0
Tracking Error (%)		3.1	2.2
Information Ratio		0.22	0.01
Historical Beta	1.00	1.06	1.04
Number of Constituents***	2928	2681	2681
Turnover** (%)	1.6	7.3	6.7

Period: May 31, 2021 to Dec 29, 2023. * Gross returns annualized in USD ** Annualized one-way index turnover over index reviews *** Monthly averages

Active IT Sector weight		7.2	3.7
Max Active Sector Weight		7.2	3.7
Min Active Sector Weight		-4.2	-3.7
Top 10 Constituents Weight (%)	16.5	23.1	21.4
Carbon Intensity to EVIC - Scope 1 + 2 + 3*	399	156	158
Low Carbon Transition Score	6.2	6.6	6.5
Solutions (%)	10.9	23.2	17.9
Product & Operational Transition (%)	14.6	4.3	4.7
Asset Stranding (%)	0.4	0.0	0.0

As of December 29, 2023. * Wtd Avg t CO2e/\$M EVIC

Snapshot on Updated LCT Model

Proposals with Updated LCT Model¹

	MSCI ACWI Index	Simulated ACWI Climate Change	Combined Proposal (Updated LCT model)
Active IT Sector weight		7.6	2.8
Max Active Sector Weight		7.6	3.1
Min Active Sector Weight		-3.8	-3.4
Top 10 Constituents Weight (%)	16.5	23.1	20.1
Carbon Intensity to EVIC - Scope 1 + 2 + 3*	399	160	162
Solutions (%)	9.7	23.2	13.4
Product & Operational Transition (%)	21.2	4.4	8.8
Asset Stranding (%)	2.1	0.0	0.4

As of December 29, 2023. * Wtd Avg t CO2e/\$M EVIC

	MSCI ACWI Index	Simulated ACWI Climate Change	Combined Proposal: Sol 2x (Updated LCT model)
Active IT Sector weight		7.6	2.9
Max Active Sector Weight		7.6	2.9
Min Active Sector Weight		-3.8	-3.3
Top 10 Constituents Weight (%)	16.5	23.1	21.4
Carbon Intensity to EVIC - Scope 1 + 2 + 3*	399	160	162
Solutions (%)	9.7	23.2	16.0
Product & Operational Transition (%)	21.2	4.4	8.7
Asset Stranding (%)	2.1	0.0	0.4

As of December 29, 2023. * Wtd Avg t CO2e/\$M EVIC

¹ For this exercise, LCT categories and LCT scores from the Updated Model as of Feb 29, 2024 have been used for the simulated Nov 2023 Index review. Please refer to the here for details on the Updated LCT Model.

Regional Simulations

Proposal 1: Impact Analysis (1/2)

Lower the Solutions Category Multiplier

	World			EM		
	Parent	Current	Proposed*	Parent	Current	Proposed*
Active Return (%)		0.8	-0.1		-1.8	-1.4
Tracking Error (%)		3.3	2.1		2.3	1.7
Turnover (%)	1.4	8.4	5.7	3.8	10.2	8.6
Number of Constituents (Avg)	1525	1428	1426	1404	1255	1255
Max Active Sector Weight		8.5	4.5		3.7	3.1
Min Active Sector Weight		-5.2	-5.2		-4.7	-4.5
Top 10 Constituents Weight (%)	18.5	25.1	22.2	23.6	25.4	25.2

Period: May 31, 2021 to Dec 29, 2023

Carbon Intensity to EVIC - Scope 1 + 2 + 3**	362	142	144	717	251	254
Low Carbon Transition Score	6.2	6.7	6.5	5.9	6.5	6.3
Solutions (%)	11.3	22.8	16.0	7.7	16.6	10.8
Product & Operational Transition (%)	14.0	3.6	4.0	19.7	8.5	9.5
Asset Stranding (%)	0.3	0.0	0.0	1.6	0.1	0.1

As of Dec 29, 2023. ** Wtd Avg t CO2e/\$M EVIC

Proposal 1: Impact Analysis (2/2)

Lower the Solutions Category Multiplier

	USA			Europe			Japan		
	Parent	Current	Proposed*	Parent	Current	Proposed*	Parent	Current	Proposed*
Active Return (%)		1.3	0.2		-1.1	-0.9		-2.0	-1.9
Tracking Error (%)		3.7	2.3		2.7	2.3		1.7	1.7
Turnover (%)	1.3	11.4	8.8	1.7	10.2	6.8	2.0	8.8	7.0
Number of Constituents (Avg)	624	583	582	428	400	399	248	240	240
Max Active Sector Weight		4.6	5.4		7.3	7.5		4.3	4.6
Min Active Sector Weight		-5.0	-5.0		-6.3	-6.2		-5.1	-3.8
Top 10 Constituents Weight (%)	26.8	31.2	29.2	21.5	26.4	25.8	23.1	22.4	23.1

Period: May 31, 2021 to Dec 29, 2023

Carbon Intensity to EVIC - Scope 1 + 2 + 3**	259	95	96	574	241	239	669	331	324
Low Carbon Transition Score	6.3	6.7	6.6	6.1	6.6	6.5	6.1	6.5	6.4
Solutions (%)	14.0	22.7	18.3	6.0	17.1	9.3	5.4	17.9	9.7
Product & Operational Transition (%)	10.9	2.2	2.3	19.8	4.6	5.0	19.0	4.8	6.3
Asset Stranding (%)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

As of Dec 29, 2023. ** Wtd Avg t CO2e/\$M EVIC

Proposal 2: Impact Analysis (1/2)

Add Active Weights Limits

	World			EM		
	Parent	Current	Proposed*	Parent	Current	Proposed*
Active Return (%)		0.8	0.7		-1.8	-1.5
Tracking Error (%)		3.3	2.8		2.3	2.2
Turnover (%)	1.4	8.4	9.1	3.8	10.2	10.0
Number of Constituents (Avg)	1525	1428	1426	1404	1255	1255
Max Active Sector Weight		8.5	5.2		3.7	3.8
Min Active Sector Weight		-5.2	-4.7		-4.7	-3.7
Top 10 Constituents Weight (%)	18.5	25.1	24.1	23.6	25.4	25.1

Period: May 31, 2021 to Dec 29, 2023

Carbon Intensity to EVIC - Scope 1 + 2 + 3**	362	142	145	717	251	280
Low Carbon Transition Score	6.2	6.7	6.6	5.9	6.5	6.4
Solutions (%)	11.3	22.8	21.2	7.7	16.6	16.4
Product & Operational Transition (%)	14.0	3.6	3.9	19.7	8.5	9.7
Asset Stranding (%)	0.3	0.0	0.0	1.6	0.1	0.1

As of Dec 29, 2023. ** Wtd Avg t CO2e/\$M EVIC

Proposal 2: Impact Analysis (2/2)

Add Active Weights Limits

	USA			Europe			Japan		
	Parent	Current	Proposed*	Parent	Current	Proposed*	Parent	Current	Proposed*
Active Return (%)		1.3	1.0		-1.1	-0.9		-2.0	-2.1
Tracking Error (%)		3.7	3.2		2.7	2.4		1.7	1.7
Turnover (%)	1.3	11.4	12.7	1.7	10.2	9.4	2.0	8.8	8.0
Number of Constituents (Avg)	624	583	582	428	400	399	248	240	240
Max Active Sector Weight		4.6	6.4		7.3	6.2		4.3	4.4
Min Active Sector Weight		-5.0	-4.5		-6.3	-5.7		-5.1	-3.9
Top 10 Constituents Weight (%)	26.8	31.2	30.7	21.5	26.4	26.5	23.1	22.4	22.5

Period: May 31, 2021 to Dec 29, 2023

Carbon Intensity to EVIC - Scope 1 + 2 + 3**	259	95	96	574	241	256	669	331	334
Low Carbon Transition Score	6.3	6.7	6.7	6.1	6.6	6.5	6.1	6.5	6.4
Solutions (%)	14.0	22.7	21.6	6.0	17.1	15.2	5.4	17.9	15.8
Product & Operational Transition (%)	10.9	2.2	2.2	19.8	4.6	6.0	19.0	4.8	6.0
Asset Stranding (%)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

As of Dec 29, 2023. ** Wtd Avg t CO2e/\$M EVIC



* Indexes are simulated from May 2021 Index Review . Simulations show the impact of implementing proposal 2.

Information Classification: GENERAL

Combined Proposal: Impact Analysis (1/2)

	World			EM		
	Parent	Current	Proposed (1+2)*	Parent	Current	Proposed (1+2)*
Active Return (%)		0.8	-0.1		-1.8	-1.3
Tracking Error (%)		3.3	2.1		2.3	1.6
Turnover (%)	1.4	8.4	6.5	3.8	10.2	8.3
Number of Constituents (Avg)	1525	1428	1426	1404	1255	1255
Max Active Sector Weight		8.5	4.5		3.7	3.2
Min Active Sector Weight		-5.2	-4.7		-4.7	-3.7
Top 10 Constituents Weight (%)	18.5	25.1	22.2	23.6	25.4	25.1

Period: May 31, 2021 to Dec 29, 2023

Carbon Intensity to EVIC - Scope 1 + 2 + 3**	362	142	144	717	251	282
Low Carbon Transition Score	6.2	6.7	6.5	5.9	6.5	6.3
Solutions (%)	11.3	22.8	15.9	7.7	16.6	10.5
Product & Operational Transition (%)	14.0	3.6	4.2	19.7	8.5	10.5
Asset Stranding (%)	0.3	0.0	0.0	1.6	0.1	0.1

As of Dec 29, 2023. **Wtd Avg t CO2e/\$M EVIC



* Indexes are simulated from May 2021 Index Review. Simulations show the impact of combining both proposals 1 and 2 = Solutions 1.5x + Active Weights Limits.

Combined Proposal: Impact Analysis (2/2)

	USA			Europe			Japan		
	Parent	Current	Proposed (1+2)*	Parent	Current	Proposed (1+2)*	Parent	Current	Proposed (1+2)*
Active Return (%)		1.3	0.2		-1.1	-0.8		-2.0	-1.9
Tracking Error (%)		3.7	2.4		2.7	2.1		1.7	1.7
Turnover (%)	1.3	11.4	10.0	1.7	10.2	7.3	2.0	8.8	7.1
Number of Constituents (Avg)	624	583	582	428	400	399	248	240	240
Max Active Sector Weight		4.6	6.3		7.3	6.0		4.3	4.6
Min Active Sector Weight		-5.0	-4.5		-6.3	-5.6		-5.1	-3.8
Top 10 Constituents Weight (%)	26.8	31.2	29.5	21.5	26.4	25.7	23.1	22.4	23.1

Period: May 31, 2021 to Dec 29, 2023

Carbon Intensity to EVIC - Scope 1 + 2 + 3**	259	95	96	574	241	256	669	331	324
Low Carbon Transition Score	6.3	6.7	6.6	6.1	6.6	6.4	6.1	6.5	6.4
Solutions (%)	14.0	22.7	18.3	6.0	17.1	9.0	5.4	17.9	9.7
Product & Operational Transition (%)	10.9	2.2	2.4	19.8	4.6	6.2	19.0	4.8	6.3
Asset Stranding (%)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

As of Dec 29, 2023. ** Wtd Avg t CO2e/\$M EVIC



* Indexes are simulated from May 2021 Index Review . Simulations show the impact of combining both proposals 1 and 2 = Solutions 1.5x + Active Weights Limits.

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