

Consultation on Potential Enhancements to the MSCI Low Carbon Target Indexes Methodology

MARCH 2025

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.

Consultation Proposal Summary

MSCI proposes to enhance the **MSCI Low Carbon Target Indexes Methodology** to introduce a guaranteed minimum reduction in Carbon Exposure. This proposal aims to ensure that Low Carbon Target Indexes are consistently aligned with the methodology objectives by having a guaranteed minimum improvement in their carbon profile relative to their respective market cap weighted Parent Indexes.

Proposal:

- Introduce a guaranteed minimum reduction of **30%** in **Carbon Exposure** (both **Carbon Emissions Intensity** and **Potential Emissions Intensity**) in Low Carbon Target indexes relative to their respective market cap weighted parent indexes, to be applied as part of the optimization process during Index Reviews.

Discussion Points:

- Should there be a better balance in reduction levels for Carbon Emissions Intensity vs. Potential Emissions Intensity?
- Should the Index Review frequency change from semi-annual to quarterly, for all or some of the index construction steps?

MSCI invites feedback from market participants on or before **April 17, 2025**, and will announce the results of the consultation as well as the implementation timeline on or before **April 30, 2025**.

Background: Low Carbon Target Indexes Methodology

The MSCI Low Carbon Target Indexes address two dimensions of carbon exposure:

1

Direct & Indirect
Carbon Emissions

2

Potential Emissions
from Fossil Fuel
Reserves

Objectives:

Striking
the right
balance

1. Reduce carbon exposure compared to the Parent Index
2. Keep a low tracking error relative to the Parent Indexes

Based on MSCI's Unique Expertise:

Indexes, ESG, Barra Open Optimizer and Risk Models

Proposal: Introduce a Guaranteed Minimum Reduction in Carbon Exposure Relative to the Parent Index

OVERVIEW OF PROPOSAL AND SIMULATIONS

Proposal: Introduce a 30% Guaranteed Reduction in Carbon Exposure

The proposal aims to guarantee a minimum reduction in carbon exposure that is significant enough considering the underlying index objective, without requiring additional tracking error budget during regular Index Reviews:

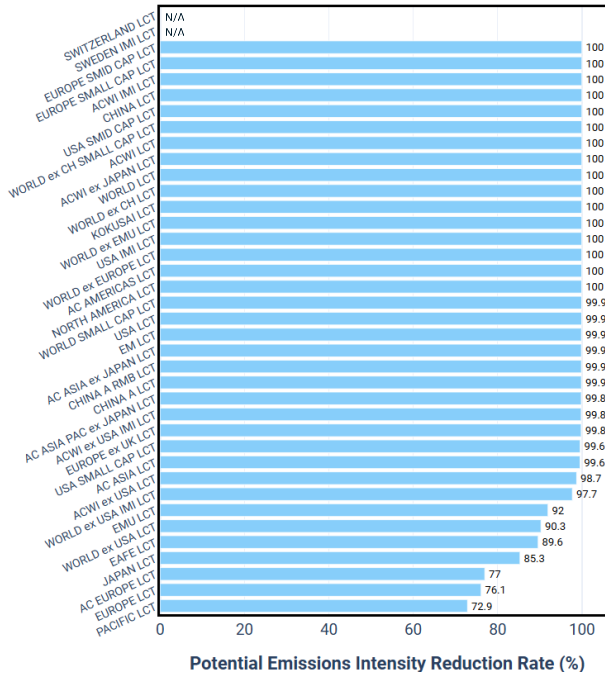
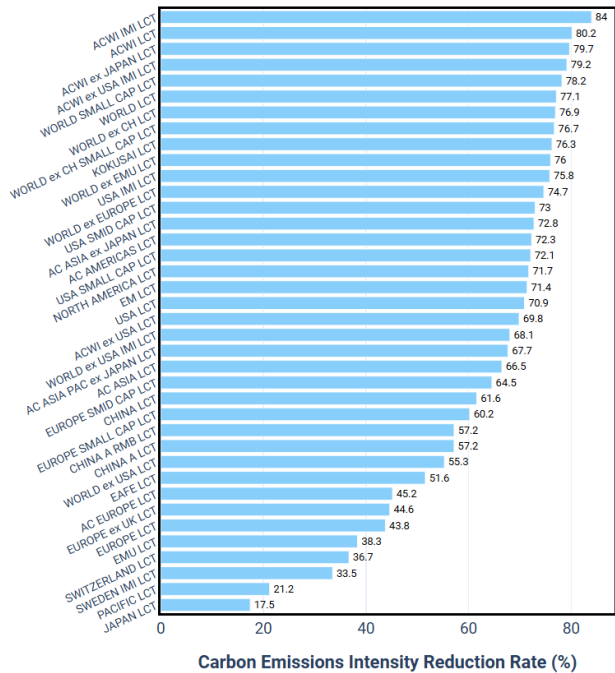
- The current methodology maximizes the carbon emissions intensity and potential emissions intensity reduction under an ex-ante tracking error budget of 50 bps and most indexes already achieve a reduction of at least 30% for both metrics.
- The below table provides a summary of the current versus proposed methodology applied during Index Reviews.

| | Current Methodology | Proposed Methodology |
|---------------------|---|--|
| Exclusions | ESG Controversy, Controversial Weapons, Thermal Coal & Oil Sands | No change |
| Optimization | Maximize the reduction of Carbon Emissions Intensity relative to a Parent Index without a guaranteed minimum reduction | Continue to maximize the reduction of Carbon Emissions Intensity relative to a Parent Index with a 30% guaranteed minimum reduction |
| | Maximize the reduction of Potential Emissions Intensity relative to a Parent Index without a guaranteed minimum reduction | Continue to maximize the reduction of Potential Emissions Intensity relative to Parent Index with a 30% guaranteed minimum reduction |
| | Tracking Error = 50bps Turnover = 10% Country Weights = +/- 2% Sector Weights = +/- 2% (except Energy Sector) | No change |

Carbon Intensity and Potential Emission Intensity Reduction for Standard Low Carbon Indexes at the November 2024 Index Review

CE Intensity Reduction with respect to Parent Index of Standard Low Carbon Target Indexes | Nov-2024 SAIR

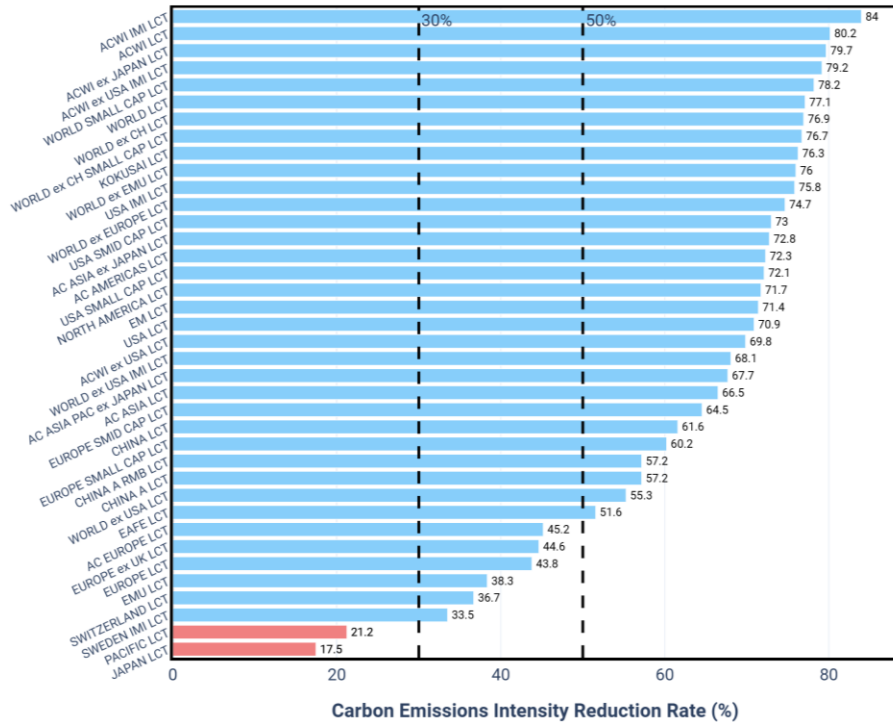
PE Intensity Reduction with respect to Parent Index of Standard Low Carbon Target Indexes | Nov-2024 SAIR



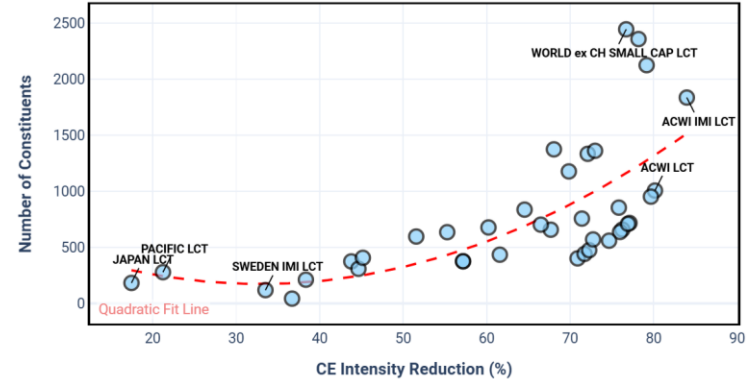
- Potential Emission (PE) reductions are generally and consistently larger Carbon Emission reductions (CE).
- All standard Low Carbon Indexes have achieved a PE reduction higher than 30%.

Indexes that do not Achieve a 30% or 50% Reduction in Carbon Intensity at the Most Recent (Nov 2024) Index Review

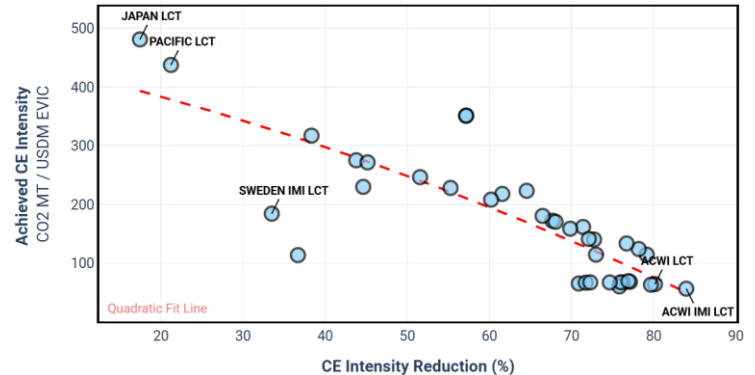
CE Intensity Reduction with respect to Parent Index of Standard Low Carbon Target Indexes | Nov-2024 SAIR



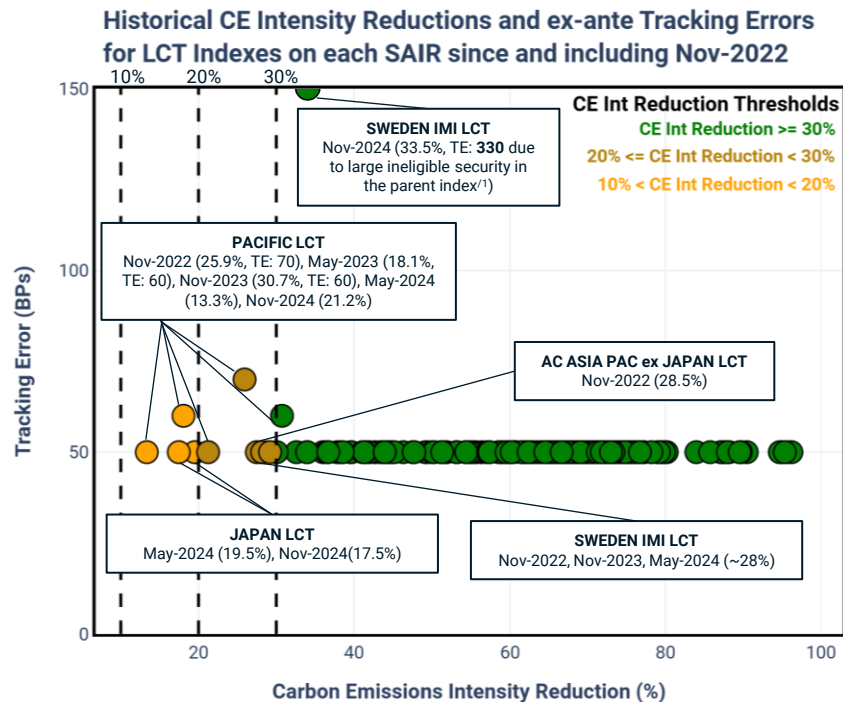
CE Intensity Reduction vs Number of Constituents Standard Low Carbon Target Indexes | Nov-2024 SAIR



CE Intensity Reduction vs Achieved CE Intensity Standard Low Carbon Target Indexes | Nov-2024 SAIR



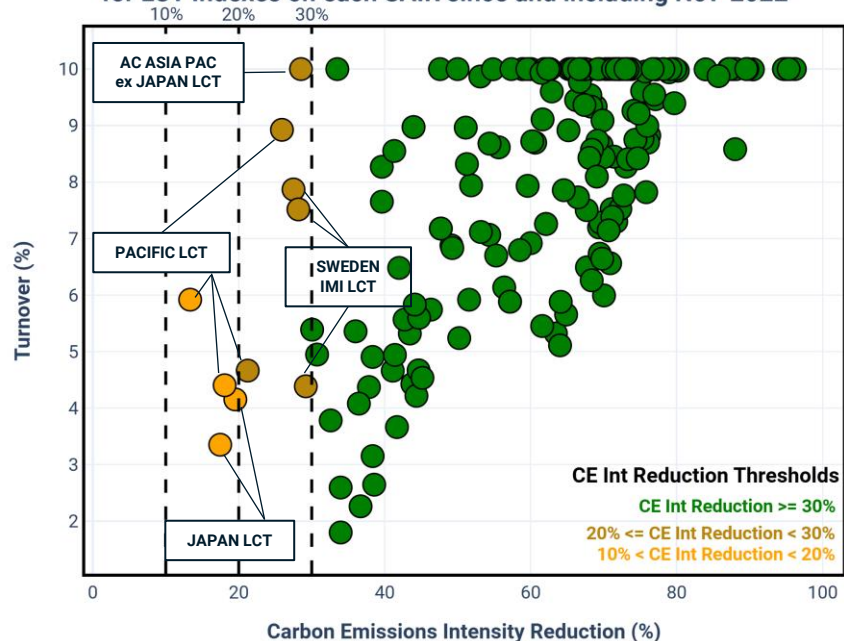
Historical ex-ante Tracking Error and Carbon Intensity Reduction for Standard Low Carbon Target Indexes



- Most Low Carbon Target indexes have rebalanced with an ex-ante tracking error budget of 50 basis points, since the latest methodology enhancement (Nov-2022).
- There have been very few exceptions where Low Carbon Target indexes have rebalanced with an ex-ante tracking error of more than 50 basis points.

Historical Turnover and Carbon Intensity Reduction for Standard Low Carbon Target Indexes

Historical CE Intensity Reductions and achieved Turnover for LCT Indexes on each SAIR since and including Nov-2022



- Generally, all Low Carbon Target Indexes have rebalanced without requiring a turnover budget of more than 10%.
- Additionally, indexes that achieve lower carbon intensity reductions, such as Japan LCT and Pacific LCT, require a turnover of less than 10%.

Assessing the Impact of Introducing a Guaranteed Minimum Reduction in Carbon Exposure for MSCI Japan LCT & Pacific LCT Indexes

| MSCI Japan Low Carbon Target Index | Live Index | Simulation – 30% Carbon Exp Red | Simulation – 50% Carbon Exp Red |
|---|--------------|---------------------------------|---------------------------------|
| Index CE Int | 486 | 408 | 292 |
| Parent CE Int | 583 | 583 | 583 |
| Carbon Emissions Int. Reduction | 16.6% | 30.0% | 50.0% |
| Index PE int | 97 | 349 | 35 |
| Parent PE Int | 697 | 697 | 697 |
| Potential Emissions Int. Reduction | 86.1% | 49.9% | 95.0% |
| Turnover (%) | 3.4 | 5.4 | 11.6 |
| Tracking Error (BPs) | 50 | 50 | 90 |
| NOC | 182 | 172 | 158 |

| MSCI Pacific Low Carbon Target Index | Live Index | Simulation – 30% Carbon Exp Red | Simulation – 50% Carbon Exp Red |
|---|--------------|---------------------------------|---------------------------------|
| Index CE Int | 456 | 388 | 277 |
| Parent CE Int | 555 | 555 | 555 |
| Carbon Emissions Int. Reduction | 17.8% | 30.0% | 50.0% |
| Index PE int | 243 | 470 | 196 |
| Parent PE Int | 997 | 997 | 997 |
| Potential Emissions Int. Reduction | 75.6% | 52.9% | 80.3% |
| Turnover (%) | 4.2 | 5.8 | 12.0 |
| Tracking Error (BPs) | 50 | 50 | 70 |
| NOC | 280 | 272 | 248 |

- Simulations performed as of the November 2024 Index Review.
- The “Live Index” has a lower reduction of **carbon emissions (CE) intensity**, but a higher reduction of **potential emissions (PE) intensity**.
- Introducing a guaranteed 30% reduction would increase the reduction in CE intensity to such level but lower the reduction in PE intensity.
- A guaranteed minimum 30% reduction would have no impact on ex-ante tracking error, but 50% reduction would require greater tracking error budget.

Binding/relaxed Optimization Constraints.

‘Simulation’ refers to the application of the proposed guaranteed minimum reduction constraint as of the November 2024 Index Review. ‘Live Index’ refers to the application of the current methodology, simulated as of the November 2024 Index Review, and may differ from published index results.

Assessing the Impact of Introducing a Guaranteed Minimum Reduction in Carbon Exposure for MSCI World LCT & MSCI EM LCT Indexes

| MSCI World Low Carbon Target Index | Live Index | Simulation – 30% Carbon Exp Red | Simulation – 50% Carbon Exp Red |
|---|---------------|---------------------------------|---------------------------------|
| Index CE Int | 68 | 68 | 68 |
| Parent CE Int | 299 | 299 | 299 |
| Carbon Emissions Int. Reduction | 77.3% | 77.3% | 77.3% |
| Index PE int | 0 | 0 | 0 |
| Parent PE Int | 729 | 729 | 729 |
| Potential Emissions Int. Reduction | 100.0% | 100.0% | 100.0% |
| Turnover (%) | 9.6 | 9.6 | 9.6 |
| Tracking Error (BPs) | 50 | 50 | 50 |
| NOC | 715 | 715 | 715 |

| MSCI EM Low Carbon Target Index | Live Index | Simulation – 30% Carbon Exp Red | Simulation – 50% Carbon Exp Red |
|---|--------------|---------------------------------|---------------------------------|
| Index CE Int | 162 | 162 | 162 |
| Parent CE Int | 566 | 566 | 566 |
| Carbon Emissions Int. Reduction | 71.4% | 71.4% | 71.4% |
| Index PE int | 3 | 3 | 3 |
| Parent PE Int | 3,833 | 3,833 | 3,833 |
| Potential Emissions Int. Reduction | 99.9% | 99.9% | 99.9% |
| Turnover (%) | 8.5 | 8.5 | 8.5 |
| Tracking Error (BPs) | 50 | 50 | 50 |
| NOC | 755 | 755 | 755 |

- Simulations performed as of the November 2024 Index Review.
- For indexes with higher Carbon Exposure reduction levels, such as World and EM LCT, the application of a 30% or 50% guaranteed minimum reduction will have no impact on rebalancing results, as the achieved reductions already exceed the specified limits.

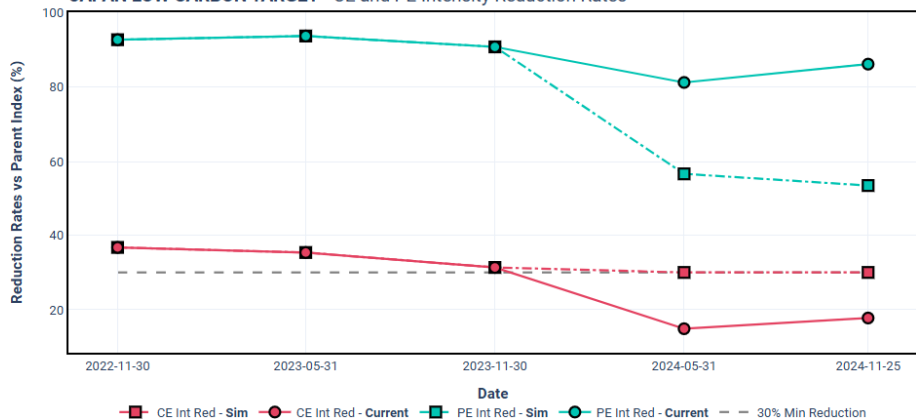
Binding/relaxed Optimization Constraints.

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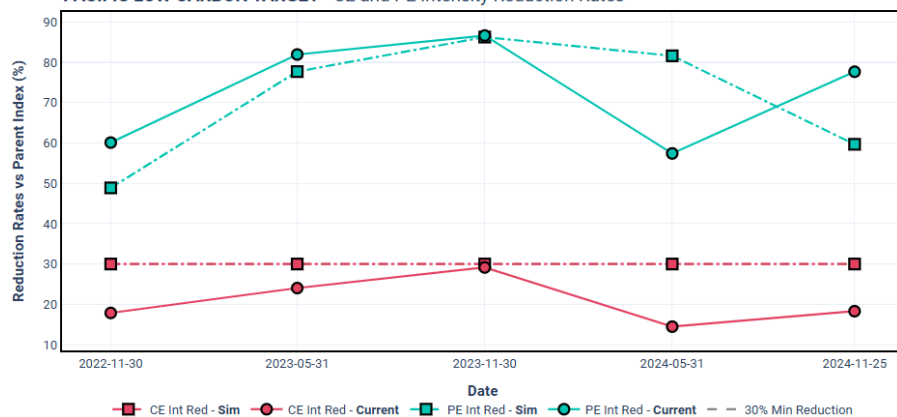
Historical Simulation to Introduce a 30% Guaranteed Minimum Reduction for MSCI Japan LCT and MSCI Pacific LCT Indexes

- Historical simulation demonstrates how the 30% minimum guaranteed reduction binds on the carbon emissions intensity, with lower potential emissions intensity reduction to achieve a balance in the carbon exposure without significantly impacting turnover or ex-ante tracking error.

JAPAN LOW CARBON TARGET - CE and PE Intensity Reduction Rates



PACIFIC LOW CARBON TARGET - CE and PE Intensity Reduction Rates



| | Nov - 2022 | | May - 2023 | | Nov - 2023 | | May - 2024 | | Nov - 2024 | |
|----------------------|------------|-----|------------|-----|------------|-----|------------|-----|------------|-----|
| | Current | Sim | Current | Sim | Current | Sim | Current | Sim | Current | Sim |
| Tracking Error (BPs) | 50 | 50 | 50 | 50 | 50 | 50 | 50 | 50 | 50 | 50 |
| Turnover (%) | 2.5 | 2.5 | 4.0 | 4.0 | 3.3 | 3.3 | 4.4 | 5.6 | 2.9 | 3.1 |
| NOC | 223 | 223 | 219 | 219 | 215 | 215 | 195 | 185 | 182 | 172 |

| | Nov - 2022 | | May - 2023 | | Nov - 2023 | | May - 2024 | | Nov - 2024 | |
|----------------------|------------|-----|------------|-----|------------|-----|------------|-----|------------|-----|
| | Current | Sim | Current | Sim | Current | Sim | Current | Sim | Current | Sim |
| Tracking Error (BPs) | 70 | 70 | 60 | 60 | 60 | 60 | 50 | 60 | 50 | 50 |
| Turnover (%) | 6.9 | 6.2 | 4.4 | 4.4 | 4.1 | 4.1 | 5.1 | 4.6 | 3.5 | 4.0 |
| NOC | 347 | 342 | 342 | 338 | 319 | 319 | 299 | 286 | 280 | 273 |

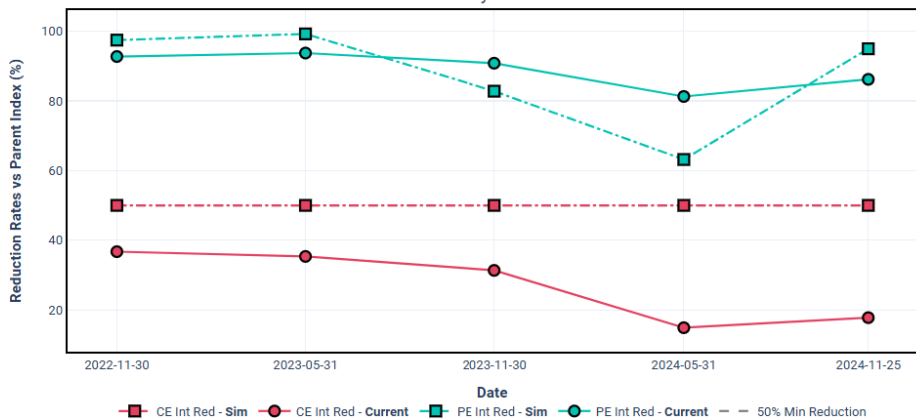


* 'Current' refers to the application of the current methodology simulated in history. 'Sim' refers to the application of the proposed enhancement simulated in history.

Historical Simulation to Introduce a 50% Guaranteed Minimum Reduction for MSCI Japan LCT and MSCI Pacific LCT Indexes

- On the other hand, using 50% minimum guaranteed reduction binds on the carbon emissions intensity to the higher reduction level, so that no optimal solution is found with the starting 50 bps ex-ante tracking error budget.

JAPAN LOW CARBON TARGET - CE and PE Intensity Reduction Rates



PACIFIC LOW CARBON TARGET - CE and PE Intensity Reduction Rates



| | Nov - 2022 | | May - 2023 | | Nov - 2023 | | May - 2024 | | Nov - 2024 | |
|----------------------|------------|-----|------------|-----|------------|-----|------------|-----|------------|-----|
| | Current | Sim | Current | Sim | Current | Sim | Current | Sim | Current | Sim |
| Tracking Error (BPs) | 50 | 70 | 50 | 70 | 50 | 70 | 50 | 80 | 50 | 90 |
| Turnover (%) | 2.5 | 3.9 | 4.0 | 6.2 | 3.3 | 6.3 | 4.4 | 7.5 | 2.9 | 6.7 |
| NOC | 223 | 200 | 219 | 203 | 215 | 191 | 195 | 165 | 182 | 158 |

| | Nov - 2022 | | May - 2023 | | Nov - 2023 | | May - 2024 | | Nov - 2024 | |
|----------------------|------------|-----|------------|-----|------------|-----|------------|-----|------------|-----|
| | Current | Sim | Current | Sim | Current | Sim | Current | Sim | Current | Sim |
| Tracking Error (BPs) | 70 | 80 | 60 | 70 | 60 | 70 | 50 | 70 | 50 | 70 |
| Turnover (%) | 6.9 | 7.4 | 4.4 | 6.5 | 4.1 | 6.0 | 5.1 | 5.9 | 3.5 | 5.0 |
| NOC | 347 | 308 | 342 | 313 | 319 | 291 | 299 | 261 | 280 | 248 |



* 'Current' refers to the application of the current methodology simulated in history. 'Sim' refers to the application of the proposed enhancement simulated in history.

Consultation Questions



Proposal and Timelines

Proposal

Introduce a guaranteed minimum reduction in Carbon Exposure during Index Reviews. This enhancement will ensure Low Carbon Target Indexes have a guaranteed minimum improvement in their carbon profile, achieving a meaningful reduction in carbon intensity relative to market capitalization-weighted Parent Indexes.

- Do you agree with the introduction of a guaranteed minimum reduction for Carbon Emissions Intensity and Potential Emissions Intensity?
- Do you agree that we should implement a guaranteed minimum reduction of 30% based on the results of the analysis we have shared?

Timeline of Implementation

If changes are made following the consultation, do you agree with an implementation timeline of November 2025 for all changes, to coincide with the Semi-Annual Index Review of the MSCI Low Carbon Target Indexes?

Discussion Point 1 – Potential Emissions

The MSCI Low Carbon Target indexes have generally achieved a higher reduction in potential emissions (PE) intensity compared to carbon emissions (CE) intensity (see slide 6 for reduction levels at the November 2024 Index Review).

PE Intensity is based on the potential emissions from the ownership of fossil fuel reserves. Given that a small proportion of companies own fossil fuel reserves (5.0% of companies in MSCI ACWI Index as of November 2024 Index Review), a higher reduction in PE Intensity compared to CE intensity is observed under the 50 basis points tracking error budget.

Discussion Point 1: Should there be a better balance in reduction levels for Carbon Emissions Intensity vs. Potential Emissions Intensity? We welcome preliminary feedback on the following potential options*:

1) Fixed PE Intensity Reduction

- Apply a fixed level of reduction in PE Intensity (e.g., 30% or 50%) while continuing to maximize the reduction in CE Intensity

2) Priority on CE Intensity Reduction

- Continue to maximize the reduction in both CE Intensity and PE Intensity but adjust the optimization process to achieve higher CE reduction

3) Full PE Intensity Reduction

- Exclude securities with fossil fuel reserves prior to the optimization and only focus on carbon intensity reduction during the optimization

Discussion Point 2 – Rebalancing Frequency

As per the current methodology for the MSCI Low Carbon Target Indexes, both the exclusions and optimization process are applied on a semi-annual basis:

- Exclusion of companies involved in Red Flag ESG Controversies (ESG Controversies Score of 0)
- Controversial activities exclusions (Controversial Weapons, Thermal Coal, Oil Sands)

Discussion Point 2: Should the Index Review frequency change from semi-annual to quarterly, for all or some of the index construction steps? We welcome preliminary feedback on the following potential options*:

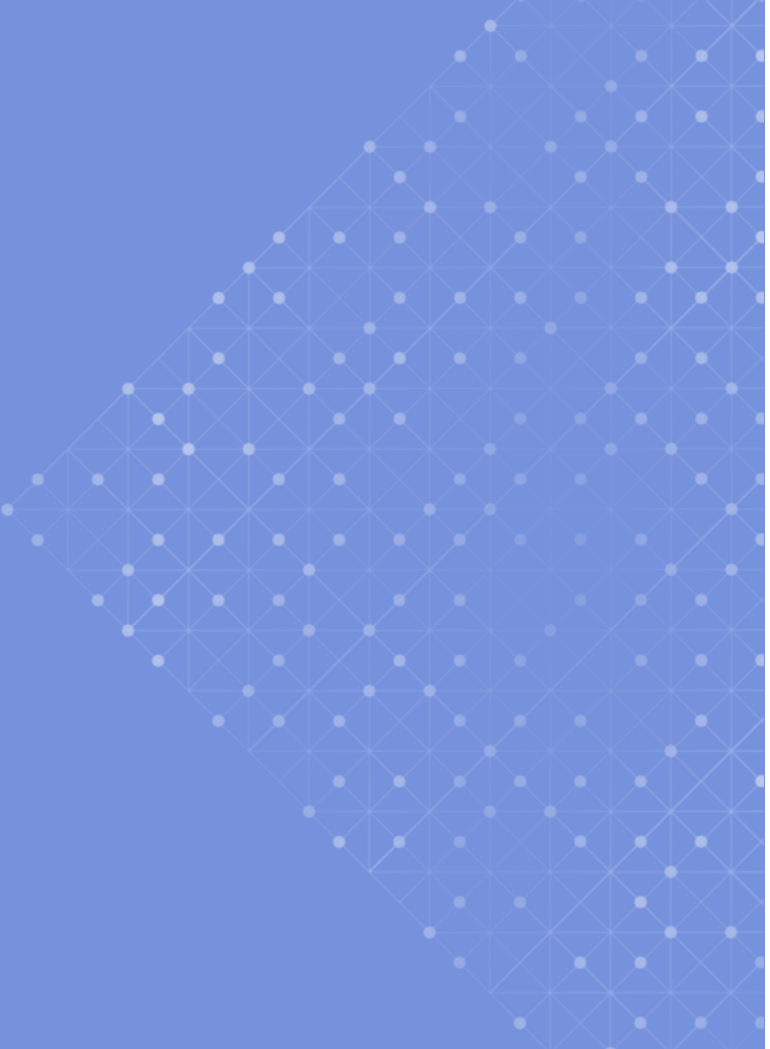
1) Full Quarterly Index Reviews

- The exclusion criteria and the carbon exposure reduction process would be applied on a quarterly basis, using latest available data
- Aligns with the Index Review frequency of the Parent Index (e.g., World, EM)
- The turnover budget could be adjusted to 5% (instead of 10%) to maintain the same annualized budget

2) Full Semi-Annual, Partial Quarterly Index Reviews

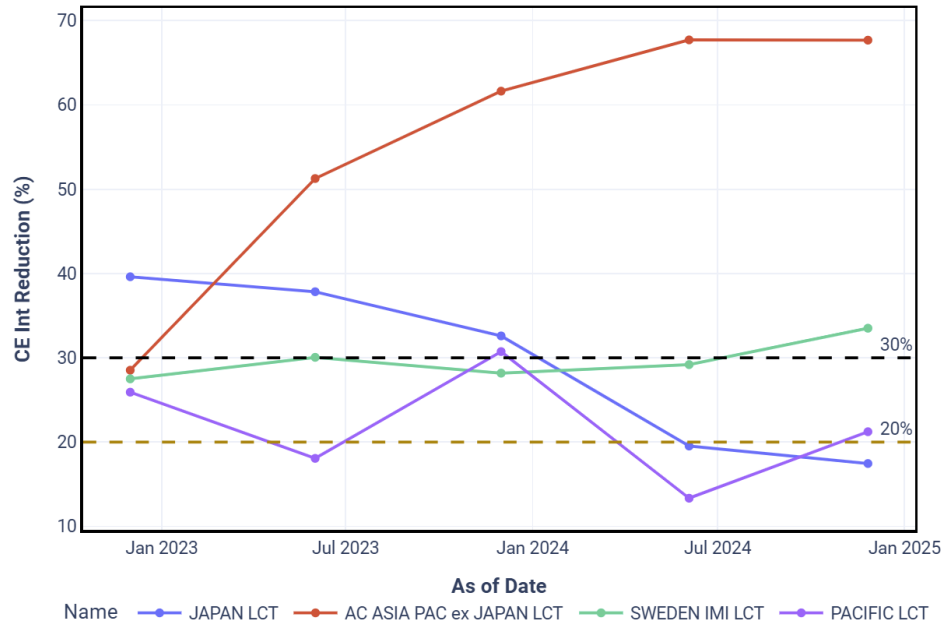
- The exclusion criteria would be applied on a quarterly basis, using latest available data, to achieve more timely exclusion of Red Flags and companies involved in controversial activities
- The carbon exposure reduction process would continue to be applied semi-annually with an unchanged 10% turnover budget

Appendix



Assessing Historical Reduction in Carbon Intensity for Select Regions Since November 2022 Index Review

Historical CE Reduction for Select LCT Standard Indexes



- **Four** standard low carbon target indexes have **shown a CE intensity reduction below 30%** since the November 2022 index review:
 - **JAPAN** and **PACIFIC**: Both have shown reductions below **20%**, even after recent rebalances, and are **trending downward**.
 - **SWEDEN IMI**: This index has consistently reduced CE intensity, staying close to the 30% mark.
 - **AC ASIA PAC ex JAPAN**: This index has demonstrated relatively high CE intensity reductions since the May 2023 index review.
- No standard indexes have achieved a CE intensity reduction lower than 10%.
- As of the November 2024 SAIR, the **minimum potential emissions intensity reduction** observed was for the **PACIFIC LCT index**, which was **72.9%**.

Comparing Carbon Emissions & Potential Emissions Data and Missing Data Treatment

Carbon Exposure Data as of Nov-2024 SAIR

| Index | Carbon Emissions | Potential Emissions |
|---------|----------------------------|-------------------------|
| ACWI | 2,644 out of 2,651 (99.7%) | 105 out of 2,651 (5.0%) |
| EUROPE | 413 out of 415 (99.5%) | 13 out of 415 (3.1%) |
| PACIFIC | 294 out of 294 (100%) | 14 out of 294 (4.8%) |
| JAPAN | 191 out of 191 (100%) | 6 out of 191 (3.1%) |

Missing Data Treatment

- If **carbon emissions** data is missing for a security, the average emissions intensity of all constituents in the same GICS Industry Group within the MSCI ACWI index is used.
- If **potential emissions** data is missing for a security, a value of 0 will be used.

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