

Consultation on Decarbonization Trajectory Adjustments for MSCI Equity CTB/PAB Indexes

ADDRESSING SIGNIFICANT CHANGES IN THE CALCULATION METHODOLOGY OF GHG INTENSITY

February 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.

Summary

- MSCI proposes a default approach to adjust the targeted decarbonization trajectory of MSCI equity CTB/PAB indexes
- Such adjustments would be made following significant changes to the calculation methodology of GHG intensity, which require a change in base date (Article 8(2) of Commission Delegated Regulation (EU) 2020/1818)
 - Scope covers both index methodology changes and emissions data methodology changes
 - Significance established through quantitative and/or qualitative criteria
- Under the proposed default treatment, the decarbonization trajectory would be adjusted for the effects of the calculation methodology changes. This approach aims for:
 - Continuity: the trajectory remains anchored to the original decarbonization start date
 - Credibility: the index continues to target the same % emissions reduction by 2050
 - Consistency: the trajectory reflects the same (latest) calculation methodology of GHG intensity
- MSCI proposes to apply the default treatment to the MSCI EU CTB/PAB Overlay, MSCI Climate Change and MSCI Climate Paris Aligned index methodologies*
- MSCI invites feedback from market participants on or before March 7, 2025 and will announce the results of the consultation by the end of March 2025.





Conditions for Changes in CTB/PAB Base Dates

BACKGROUND CONTEXT - NOT FOR CONSULTATION

Conditions for Changes in Base Dates (1/2)

Commission Delegated Regulation (EU) 2020/1818, Article 8(2):

"Significant changes in the calculation methodology of GHG intensity" require setting a new base date

"Changes in the calculation methodology of GHG intensity" include:

1) Changes in emissions data methodology, e.g.:

- approach to raw data sourcing
- estimation models (Scope 1&2, Scope 3)

2) Changes in index methodology, e.g.:

- calculation of security-level emissions intensity
- index-level aggregation of emissions intensity

raw data

MSCI ESG Research (data provider) security-level emissions data

MSCI Indexes (Benchmark Administrator) index-level GHG intensity



Details to be published in March 2025 in MSCI EU CTB/PAB Index Framework.

Conditions for Changes in Base Dates (2/2)

Commission Delegated Regulation (EU) 2020/1818, Article 8(2):

"Significant changes in the calculation methodology of GHG intensity" require setting a new base date

→ New base date whenever changes in the calculation methodology of GHG intensity (as defined on the previous slide) are assessed as **quantitatively or qualitatively significant**:

	Quantitative Significance	Qualitative Significance
Condition	Impact of the methodology change on the GHG intensity equivalent to 3 years or more of CTB/PAB annual decarbonization ¹	Conceptual change in calculation and interpretation of index-level GHG intensity
Scope: Changes to the index methodology	Yes	Yes, if material and conceptual change (e.g. changes in calculation logic)
Scope: Changes to the MSCI ESG Research emissions data methodology	Yes	Yes, if material and conceptual change (e.g. changes to definitions of data points)
Granularity	Evaluated for each CTB/PAB index individually , based on the impact on the GHG intensity of the investable universe of the index, at its decarbonization start date	Evaluated jointly for all CTB/PAB indexes affected by the change





Proposal: Adjustments to Targeted Decarbonization Trajectories of CTB/PAB Indexes

Overview of the Proposal

 MSCI proposes to apply a default approach to adjust the targeted decarbonization trajectory of equity CTB/PAB indexes at the time of the change in base date.

Proposal – Default Approach	What the Proposal Aims to Achieve
Adjust the decarbonization trajectory to where it would have been, had the new methodology been applied since the original decarbonization start date.	 Continuity: the trajectory remains anchored to the original decarbonization start date Credibility: the index continues to target the same % emissions reduction by 2050 Consistency: the trajectory reflects the same (latest) calculation methodology of GHG intensity

 MSCI proposes to apply the default treatment to the MSCI EU CTB/PAB Overlay, MSCI Climate Change and MSCI Climate Paris Aligned index methodologies*

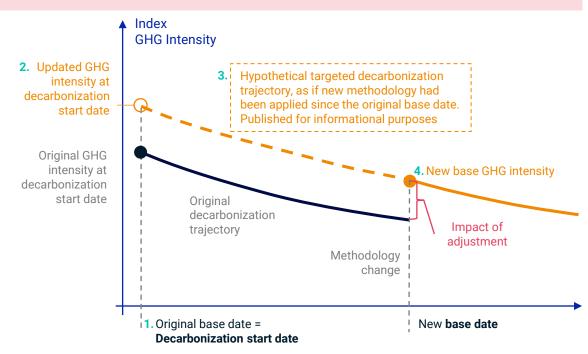


Illustration of the Proposal

Aim: reflect the decarbonization trajectory as-if the new methodology had been applied since the original base date

Proposed adjustment approach:

- Decarbonization start date (=original base date) does not change
- GHG intensity at the decarbonization start date is recalculated according to the new methodology*
- Hypothetical targeted decarbonization trajectory is calculated by applying the annual decarbonization rate since the decarbonization start date (=original base date), with the GHG intensity recalculated with the new methodology
- New base date: Date when adjustment is applied
 New base GHG intensity: Target GHG intensity value at the new base date





Conceptual Scope of Decarbonization Trajectory Adjustments

What is adjusted for?

- Index methodology changes affecting the GHG intensity calculation
- Changes to emissions data due to "model" and "methodology" updates by MSCI ESG Research, e.g.
 - Changes to model granularity, configuration and parameters

What is not adjusted for?

- "Data changes" by MSCI ESG Research, e.g.
 - Changes in company-reported emissions data
 - Changes in other company-reported data used for emissions estimates

Adjustments only meant to mitigate the effect of methodological changes

Adjusted trajectories still fully incorporate changes in actual company emissions since the decarbonization start date



Regulatory Considerations

Commission Delegated Regulation (EU) 2020/1818, Article 8(2): "Significant changes in the calculation methodology of GHG intensity" require setting a new base date

- Adjustment proposal distinguishes:
 - Index decarbonization start date: Conceptual starting point of decarbonization trajectory, remains unchanged
 - "Base date" reported for regulatory purposes reflects the date of the last adjustment
- Updated decarbonization trajectory applies going forward; historical intensities are not restated
- For transparency, MSCI may publish the simulated historical targeted decarbonization trajectory, reflecting the new emissions methodology (see Appendix for a possible example)
- Proposed adjustment approach would become part of MSCI EU CTB/PAB Index Framework¹ and would be referenced in the relevant index methodologies





Simulated Impact of the Proposal

Historical "Significant" Changes to the Calculation Methodology of GHG Intensity

- Qualitatively, across standard equity CTB/PAB index methodologies*, there have been no significant changes to the calculation methodology of the GHG intensity since June 2020 (no conceptual changes to index calculation or emissions data methodologies).
- Quantitatively, several historical changes to the scope 3 estimation methodology from MSCI ESG Research had significant impact on certain CTB/PAB indexes. Relevant changes include e.g.:



February 2021: Update of Scope 3 Category 11 estimates:

- Change to a new sector classification, providing more granularity esp. for manufacturing industries
- Switch from revenue-based to production-based estimates for mining, refining, transportation



- More granular assessment of mining industries
- New emissions factors for processing of raw materials, esp. iron ore and precious metals

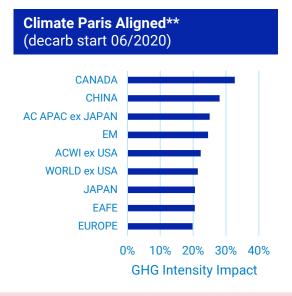
October 2023:

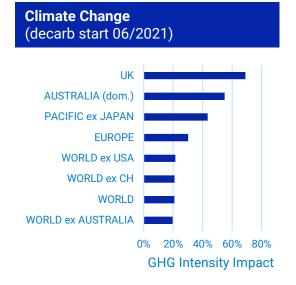
- Alignment of reference years of inputs to scope 3 estimates
- Time-dependent emission factors in commodity sectors
- Revenue-based estimation for integrated oil and gas companies

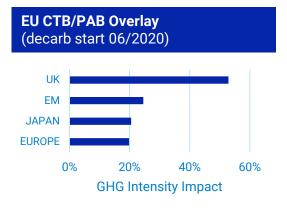


Quantitatively Significant Data Methodology Changes

Simulated list of parent indexes ("investable universes") and decarbonization start dates used in standard MSCI equity CTB/PAB indexes*, where the cumulative impact of scope 3 estimation methodology changes applied by MSCI ESG Research since the decarbonization start date is considered quantitatively significant







3y decarbonization \approx 20% impact 5y decarbonization \approx 30% impact 7y decarbonization \approx 40% impact

Based on simulation, these indexes would be in scope for a decarbonization trajectory adjustment under the Proposal



^{*} MSCI equity CTB/PAB indexes included in the MSCI ESG Standard and MSCI ESG IMI Modules

^{**} Note that the Climate Paris Aligned indexes follow a 10% year-on-year decarbonization trajectory which exceeds the 7% year-on-year regulatory requirement.

Information Classification: GENERAL



Consultation Questions

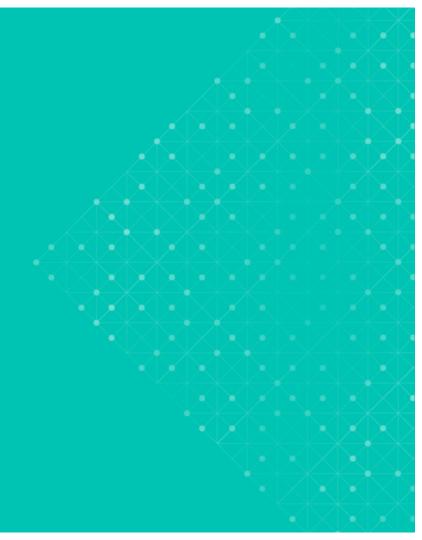
Consultation Questions

- **Proposal**: Adjust the targeted decarbonization trajectory of equity CTB/PAB indexes for significant changes to the calculation methodology of GHG intensity as outlined above
 - Do you agree with the proposed default approach to adjust the trajectory to where it would have been, had the new (latest) calculation methodology of GHG Intensity been applied since the original decarbonization start date?
 - Do you agree to implement the default approach in the MSCI EU CTB/PAB Overlay Indexes?
 - Do you agree to implement the default approach in the MSCI Climate Change Indexes?
 - Do you agree to implement the default approach in the MSCI Climate Paris Aligned Indexes?
- **Discussion Point**: MSCI welcomes feedback on customizations of the default approach, which may be appropriate e.g. for specific custom index methodologies, depending on underlying index objectives. Subject to validation on regulatory compliance, such customizations may include:
 - Apply the proposed approach when the decarbonization trajectory needs to be stricter following a methodology change, but remain on the same trajectory if a relaxation would be warranted
 - Apply the proposed approach but calculate the trajectory from a different decarbonization start date





Appendix



Mock-up of Expanded Decarbonization Trajectory Disclosures

Rebalancing date	Decarbonization Start Date	Targeted GHG Intensity ("I") at decarb start date	Years since decarbonization start date ("Y")	Targeted GHG intensity for rebalancing date	Base Date	GHG intensity at the base date
01/06/2020	01/06/2020	100	0	100	01/06/2020	100
01/06/2025	01/06/2020	100	5	69.57	01/06/2020	100
01/12/2025	01/06/2020	120	5.5	80.51	01/12/2025	80.51
01/12/2027	01/06/2020	120	7.5	69.63	01/12/2025	80.51
01/06/2028	01/06/2020	110	8	61.55	01/06/2028	61.55
01/12/2028	01/06/2020	110	8.5	59.36	01/06/2028	61.55

Fixed start date for 7% y-o-y decarbonization Adjusted in case of significant methodology changes

= I * (0.93)^Y 7% y-o-y reduction since decarb start date Formal regulatory disclosures: date of latest adjustment & corresponding intensity

Changes

Information Classification: GENERAL

About MSCI

MSCI is a leading provider of critical decision support tools and services for the global investment community. With over 50 years of expertise in research, data and technology, we power better investment decisions by enabling clients to understand and analyze key drivers of risk and return and confidently build more effective portfolios. We create industry-leading research-enhanced solutions that clients use to gain insight into and improve transparency across the investment process. To learn more, please visit www.msci.com.

The process for submitting a formal index complaint can be found on the index regulation page of MSCI's website at: https://www.msci.com/index-regulation.



Notice and Disclaimer

This document and all of the information contained in it, including without limitation all text, data, graphs, charts (collectively, the "Information") is the property of MSCI Inc. or its subsidiaries (collectively, "MSCI"), or MSCI's licensors, direct or indirect suppliers or any third party involved in making or compiling any Information (collectively, with MSCI, the "Information all text, data, graphs, charts (collectively, the "Information and the property of MSCI Inc. or its subsidiaries (collectively, with MSCI, the "Information and in the Information and the Information are reserved by MSCI and/or its Information Providers.

The Information may not be used to create derivative works or to verify or correct other data or information. For example (but without limitation), the Information may not be used to create indexes, databases, risk models, analytics, software, or in connection with the issuing, offering, sponsoring, managing or marketing of any securities, portfolios, financial products or other investment vehicles utilizing or based on, linked to, tracking or otherwise derived from the Information or any other MSCI data, information, products or services.

The user of the Information assumes the entire risk of any use it may make or permit to be made of the Information. NONE OF THE INFORMATION PROVIDERS MAKES ANY EXPRESS OR IMPLIED WARRANTIES OR REPRESENTATIONS WITH RESPECT TO THE INFORMATION (OR THE RESULTS TO BE OBTAINED BY THE USE THEREOF), AND TO THE MAXIMUM EXTENT PERMITTED BY APPLICABLE LAW, EACH INFORMATION PROVIDER EXPRESSLY DISCLAIMS ALL IMPLIED WARRANTIES (INCLUDING, WITHOUT LIMITATION, ANY IMPLIED WARRANTIES OF ORIGINALITY, ACCURACY, TIME! INFORMATION, SON-INFRINGEMENT, COMPLETENESS, MERCHANTABILITY AND ETHISS FOR A PARTICUL AR PURPOSE) WITH RESPECT TO ANY OF THE INFORMATION.

Without limiting any of the foregoing and to the maximum extent permitted by applicable law, in no event shall any Information Provider have any liability regarding any of the Information for any direct, indirect, special, punitive, consequential (including lost profits) or any other damages even if notified of the possibility of such damages. The foregoing shall not exclude or limit any liability that may not by applicable law be excluded or limited, including without limitation (as applicable), any liability for death or personal injury to the extent that such injury results from the negligence or willful default of itself, its servants, agents or sub-contractors.

Information containing any historical information, data or analysis should not be taken as an indication or quarantee of any future performance, analysis, forecast or prediction. Past performance does not quarantee future results,

The Information may include "Signals," defined as quantitative attributes or the product of methods or formulas that describe or are derived from calculations using historical data. Neither these Signals nor any description of historical data are intended to provide investment advice or a recommendation to make (or refrain from making) any investment decision or asset allocation and should not be relied upon as such. Signals are inherently backward-looking because of their use of historical data, and they are not intended to predict the future. The relevance, correlations and accuracy of Signals frequently will change materially.

The Information should not be relied on and is not a substitute for the skill, judgment and experience of the user, its management, employees, advisors and/or clients when making investment and other business decisions. All Information is impersonal and not tailored to the needs of any person, entity or group of persons.

None of the Information constitutes an offer to sell (or a solicitation of an offer to buy), any security, financial product or other investment vehicle or any trading strategy.

It is not possible to invest directly in an index. Exposure to an asset class or trading strategy or other category represented by an index is only available through third party investable instruments (if any) based on that index. MSCI does not issue, sponsor, endorse, market, offer, review or otherwise express any opinion regarding any fund, ETF, derivative or other security, investment, financial product or trading strategy that is based on, linked to or seeks to provide an investment return related to the performance or fany MSCI index Collectively, "Index Linked Investment, financial product or trading strategy that is based on, linked for seeks to provide an investment return related to the performance or fany MSCI index Collectively, "Index Linked Investment and the second provide and MSCI makes no representation regarding the advisability of investing in any Index Linked Investment and the second provide and MSCI makes no representation regarding the advisability of investing in any Index Linked Investment and the second provide and MSCI makes no representation regarding the advisability of investing in any Index Linked Investment and the second provide and MSCI makes no representation regarding the advisability of investing in any Index Linked Investment and the second provide and

Index returns do not represent the results of actual trading of investible assets/securities. MSCI maintains and calculates indexes, but does not manage actual assets. The calculation of indexes and index returns may deviate from the stated methodology. Index returns do not reflect payment of any sales charges or fees an investor may pay to purchase the securities underlying the index or lindex Linked Investments. The imposition of these fees and charges would cause the performance of an Index Linked Investment to be different than the MSCI index performance.

The Information may contain back tested data. Back-tested performance is not actual performance, but is hypothetical. There are frequently material differences between back tested performance results and actual results subsequently achieved by any investment strategy.

Constituents of MSCI equity indexes are listed companies, which are included in or excluded from the indexes according to the application of the relevant index methodologies. Accordingly, constituents in MSCI equity indexes may include MSCI Inc., clients of MSCI or suppliers to MSCI. Inclusion of a security within an MSCI index is not a recommendation by MSCI to buy, sell, or hold such security, nor is it considered to be investment advice.

Data and information produced by various affiliates of MSCI Inc., including MSCI ESG Research LLC and Barra LLC, may be used in calculating certain MSCI indexes. More information can be found in the relevant index methodologies on www.msci.com.

MSCI receives compensation in connection with licensing its indexes to third parties. MSCI Inc.'s revenue includes fees based on assets in Index Linked Investments, Information can be found in MSCI inc.'s company filings on the Investor Relations section of msci.com.

MSCI ESG Research LLC is a Registered Investment Adviser under the Investment Advisers Act of 1940 and a subsidiary of MSCI Inc. Neither MSCI nor any of its products or services recommends, endorses, approves or otherwise expresses any opinion regarding any issuer, securities, financial products or instruments or trading strategies and MSCI's products or services are not a recommendation to make (or refrain from making) any kind of investment decision and may not be relied on as such, provided that applicable products or services from MSCI ESG Research may climate investment advice. MSCI ESG Research materials, including materials utilized in any MSCI ESG Indexes or other products, have not been submitted to, nor received approval from, the United States Securities and Exchange Commission or any other regulatory body. MSCI ESG and Climaterials utilized in any MSCI Inc. MSCI ESG Indexes, Analytics and Real Estate are products of MSCI Inc. that utilize information from MSCI ESG Research LLC. As subsidiary of MSCI Inc. MSCI ESG and Climaterials utilized (UK) and MSCI Deutschland GmbH.

Please note that the issuers mentioned in MSCI ESG Research materials sometimes have commercial relationships with MSCI ESG Research and/or MSCI Inc. (collectively, "MSCI") and that these relationships create potential conflicts of interest. In some cases, the issuers or their affiliates purchase research or other products or services from one or more MSCI affiliates. In other cases, MSCI ESG Research rates financial products such as mutual funds or ETFs that are managed by MSCI's clients or their affiliates, or are based on MSCI Inc. Indexes. In addition, constituents in MSCI nc. equity indexes include companies that subscribe to MSCI products or services. In some cases, MSCI clients pay fees based in whole or part on the assets they manage. MSCI ESG Research has taken a number of steps to mitigate potential conflicts of interest and safeguard the integrity and independence of its research and ratings. More information about these conflict mitigation measures is available in our Form ADV, available at https://adviserinfo.sec.gov/firm/summary/169222.

Any use of or access to products, services or information of MSCI requires a license from MSCI. MSCI, Barra, RiskMetrics, IPD and other MSCI brands and product names are the trademarks, service marks, or registered trademarks of MSCI or its subsidiaries in the United States and other jurisdictions. The Global Industry Classification Standard (GICS) was developed by and is the exclusive property of MSCI and S&P Global Market Intelligence. "Global Industry Classification Standard (GICS)" is a service mark of MSCI and S&P Global Market Intelligence.

MIFID2/MIFIR notice: MSCI ESG Research LLC does not distribute or act as an intermediary for financial instruments or structured deposits, nor does it deal on its own account, provide execution services for others or manage client accounts. No MSCI ESG Research product or service supports, promotes or is intended to support or promote any such activity. MSCI ESG Research is an independent provider of ESG data.

Privacy notice: For information about how MSCI collects and uses personal data, please refer to our Privacy Notice at https://www.msci.com/privacy-pledge.



Contact Us

AMERICAS		EUROPE, MIDDLE EAST & AFRICA		ASIA PACIFIC	
United States	s +1 888 588 4567 *	South Africa	+ 27 21 673 0103	China	+ 86 21 61326611
Canada	+ 1 416 687 6270	Germany	+ 49 69 133 859 00	Hong Kong	+ 852 2844 9333
Brazil	+ 55 11 4040 7830	Switzerland	+ 41 22 817 9777	India	+ 91 22 6784 9160
Mexico	+ 52 81 1253 4020	United Kingdom	+ 44 20 7618 2222	Malaysia	1800818185*
		Italy	+ 39 02 5849 0415	South Korea	+82 70 4769 4231
		France	+ 33 17 6769 810	Singapore	+65 67011177
				Australia	+612 9033 9333
				Taiwan	008 0112 7513*
				Thailand	0018 0015 6207 7181*
* = toll free msci.com/co	ontact-us			Japan	+81 3 4579 0333

