

METHODOLOGY BOOK FOR:
-MSCI WORLD SELECT HYDROGEN
TILTED INDEX
- MSCI WORLD SELECT HYDROGEN
TILTED 4.5% DECREMENT INDEX

June 2024

Contents

1	Introduction	3
2	Index Construction.....	4
2.1	MSCI World Select Hydrogen Tilted Index	4
2.2	Hydrogen Subset	4
2.2.1	Liquidity Screen.....	4
2.2.2	Region Screen.....	5
2.2.3	Security Selection.....	5
2.2.4	Security Weighting.....	5
2.3	Application of the MSCI Decrement Indexes Methodology.....	6
3	Maintaining the Index	7
3.1	Index Reviews	7
3.2	Daily Decrement Calculation	7
3.2	Ongoing Event-Related Changes.....	7
Appendix 1: Methodology Set		9
Appendix 2: Weights of Component Indexes prior to June 2020 Index Review		10
Appendix 3: Parameters used for the MSCI World Select Hydrogen Tilted 4.5% Decrement Index		11

1 Introduction

The MSCI World Select Hydrogen Tilted Index (“the Index”)¹ is constructed by combining the MSCI World Index and the Hydrogen Subset² in fixed proportion of 80% and 20%³ respectively.

The MSCI World Select Hydrogen Tilted 4.5% Decrement Index aims to represent net performance of the Index while applying a constant markdown (‘synthetic dividend’) of 4.5% on an annual basis, expressed as a percentage of net performance.

¹ The Index is governed by a set of methodology and policy documents (“Methodology Set”), including the present index methodology document. Please refer to Appendix I for more details.

² Please refer to section 2.2 of this methodology for details on the index

³ The weights of the Component Indexes prior to June 2020 Index review date are noted in Appendix 2

2 Constructing the Indexes

The Index is constructed by combining the following two components:

- MSCI World Index
- Hydrogen Subset

The Hydrogen Subset⁴ is constructed from MSCI ACWI IMI Hydrogen and Future Fuels Index (the “Parent Index”). The Hydrogen Subset aims to represent the performance of a set of 10 securities from EMU, Switzerland, Japan, and USA that have the highest weight in the Parent Index⁵.

In addition to the above steps, MSCI Decrement Indexes Methodology⁶ is applied to the Index to construct the MSCI World Select Hydrogen Tilted 4.5% Decrement Index.

2.1 MSCI World Select Hydrogen tilted Index

At each Index Review, the Hydrogen Subset and MSCI World Index are combined based on following weights⁷ to create MSCI World Select Hydrogen Tilted Index:

Component Index	Weight
Hydrogen Subset	20%
MSCI World Index ⁸	80%

Between successive rebalancing, the weights of the component indexes will evolve based on the performance of the component indexes.

2.2 Hydrogen Subset

2.2.1 Liquidity screen

Securities from the Parent Index with 3-month ADTV greater than or equal to USD 10 million are eligible for inclusion in the Hydrogen Subset.

⁴ Please refer to section 2.2 of this methodology for details on the index

⁵ Please refer to the methodology document at <http://www.msci.com/index-methodology>.

⁶ Please refer to the MSCI Decrement Indexes Methodology at <http://www.msci.com/index-methodology>.

⁷ The weights of the Component Indexes prior to June 2020 Index review date are noted in Appendix 2

⁸ Note that the lowest weighted average relevance score of the Hydrogen Sub-Index would be 25%, hence if the weighted average relevance score of MSCI World Index is 0%, in such a case, the exposure of the MSCI World Select Hydrogen Tilted Index to the Hydrogen theme would be 5%. Additionally, in cases where the weighted average relevance score for the Hydrogen theme of the MSCI World Index is greater than 25%, the MSCI World Select Hydrogen Tilted Index can have a lower weighted average relevance score than the MSCI World Index for hydrogen theme.

ADTV is defined as Average Daily Traded Value and is calculated as:

$$ADTV_{3M} = \frac{ATV_{3M}^9}{252}$$

Where ATV_{3M} is annualized 3-month Average Traded Value of the security

To avoid multiple securities of the same company in the final Hydrogen Subset, only the most liquid security for each issuer per its 3-month ADTV is eligible for inclusion in the Hydrogen Subset. For any issuer, should two securities have the same 3-month ADTV, the one with the higher weight in the Parent Index is included.

2.2.2 Region Screen

Securities from the Parent Index belonging to the below list of countries or regions are eligible for inclusion in the Hydrogen Subset:

- USA
- Japan
- Switzerland
- EMU¹⁰

2.2.3 Security Selection

From the securities remaining after applying the above screens, top 10 securities are selected, ranked in descending order of their weights in the Parent Index¹¹ while ensuring the maximum number of securities selected from Japan is capped at 8 securities¹².

If all the securities remaining after applying the above screens belong Japan, then the cap of selecting 8 securities to Japan will not be applied.

If the number of securities remaining after exclusions from above steps is less than 10, then all the securities remaining after exclusions are selected for inclusion in the Hydrogen Subset.

2.2.4 Security Weighting

At each Index Review, the securities selected for inclusion in the Hydrogen Subset are weighted in proportion to their weights in the Parent Index.

Additionally, constituent weights are capped as per below steps:

- Step 1: Security weights are capped at 25%. If at any Index review, the number of securities selected for inclusion is less than 4, security weight capping is relaxed to 50%

⁹ MSCI Index Calculation Methodology at <https://www.msci.com/index-methodology>

MSCI Global Investable Market Indexes Methodology at <https://www.msci.com/index-methodology>

¹⁰ EMU region includes all countries that are part of MSCI EMU IMI Index. Please refer to methodology document at <https://www.msci.com/index-methodology>

¹¹ In case two securities have the same weight in the Parent Index, the security with greater 3-month Average Traded Value is selected

¹² This is to ensure that maximum regional exposure to Japan is kept at 50%

- Step 2: Sum of weight of securities belonging to Japan is capped at 50%¹³. If at any Index review, all the securities selected for inclusion belong to Japan, sum of weight of securities belonging to Japan would be 100%.

2.3 Application of THE MSCI Decrement Indexes Methodology

The MSCI Decrement Indexes methodology¹⁴ is applied on the Index to construct the MSCI World Select Hydrogen Tilted 4.5% Decrement Index. The parameters for the decrement index are noted in Appendix 3.

¹³ If the security weights capping of Step 1 is breached after applying capping of Step 2, the weights are not capped again

¹⁴ Please refer to the MSCI Decrement Indexes Methodology at <http://www.msci.com/index-methodology>.

3 Maintaining the Index

3.1 Index Reviews

The Index is reviewed on a quarterly basis as per the steps described in Section 2, coinciding with the February, May, August, and November Index Reviews of the MSCI World Index.

The pro forma Index is in general announced nine business days before the effective date.

3.2 DAILY DECREMENT CALCULATION

The performance of the MSCI World Select Hydrogen Tilted 4.5% Decrement Index is computed by reducing the performance of the Index by a fixed percentage, on a daily basis using parameters detailed in Appendix 3.

3.3 Ongoing Event-Related Changes

The general treatment of corporate events in the non-market capitalization weighted indexes aims to minimize turnover outside of Index Reviews. The methodology aims to appropriately represent an investor's participation in an event based on relevant deal terms and pre-event weighting of the index constituents that are involved. Further, changes in index market capitalization that occur as a result of corporate event implementation will be offset by a corresponding change in the Variable Weighting Factor (VWF) of the constituent.

The following section briefly describes the treatment of common corporate events within the Hydrogen Subset¹⁵.

No new securities will be added (except where noted below) to the Hydrogen Subset between Index Reviews. For cases where additions are noted below, securities will be added to the Hydrogen Subset only if added to the Parent Index. Parent Index deletions will be reflected simultaneously.

EVENT TYPE	EVENT DETAILS
New additions to the Parent Index	A new security added to the Parent Index (such as IPO and other early inclusions) will not be added to the Hydrogen Subset.
Spin-Offs	All securities created as a result of the spin-off of an existing Index constituent will be added to the Index at the time of event implementation. Reevaluation for continued inclusion in the Index will occur at the subsequent Index Review.
Merger/Acquisition	For Mergers and Acquisitions, the acquirer's post event weight will account for the proportionate amount of shares involved in deal consideration, while

¹⁵ MSCI World Index follows its own methodology of corporate events treatment. The Index is derived from the underlying MSCI World Index and the Hydrogen Subset-Index. As a result, corporate events are reflected in the Index as they occur and as they are captured in the underlying indexes.

cash proceeds will be invested across the Hydrogen Subset.

If an existing Index constituent is acquired by a non-Index constituent, the existing constituent will be deleted from the Index and the acquiring non-constituent will not be added to the Hydrogen Subset.

Changes in Security Characteristics

A security will continue to be an Index constituent if there are changes in characteristics (country, sector, size segment, etc.) Reevaluation for continued inclusion in the Hydrogen Subset will occur at the subsequent Index Review.

Further detail and illustration regarding specific treatment of corporate events relevant to this Index can be found in the MSCI Corporate Events Methodology book under the sections detailing the treatment of events in Capped Weighted and Non-Market Capitalization Weighted indexes.

The MSCI Corporate Events methodology book is available at:

<https://www.msci.com/index-methodology>

Appendix 1: Methodology Set

The Index is governed by a set of methodology and policy documents (“Methodology Set”), including the present index methodology document as mentioned below:

- Description of methodology set – www.msci.com/index/methodology/latest/ReadMe
- MSCI Corporate Events Methodology – www.msci.com/index/methodology/latest/CE
- MSCI Index Calculation Methodology – www.msci.com/index/methodology/latest/IndexCalc
- MSCI Index Glossary of Terms – www.msci.com/index/methodology/latest/IndexGlossary
- MSCI Index Policies – www.msci.com/index/methodology/latest/IndexPolicy
- MSCI Global Industry Classification Standard (GICS) Methodology – www.msci.com/index/methodology/latest/GICS
- MSCI Global Investable Market Indexes Methodology – www.msci.com/index/methodology/latest/GIMI
- MSCI Decrement Indexes methodology – <https://www.msci.com/index/methodology/latest/Decrement>

The Methodology Set for the Indexes can also be accessed from MSCI’s webpage <https://www.msci.com/index-methodology> in the section ‘Search Methodology by Index Name or Index Code’.

Appendix 2: Weights of Component Indexes prior to June 2020 Index Review

To avoid concentration risk in the MSCI World Select Hydrogen Tilted Index, at each Index Review prior to June 2020, the Hydrogen Subset and MSCI World Index are combined based on following weights to create MSCI World Select Hydrogen Tilted Index:

Component Index	Weight
Hydrogen Subset	10%
MSCI World Index ¹⁶	90%

¹⁶ Note that the lowest weighted average relevance score of the Hydrogen Sub-Index would be 25%, hence if the weighted average relevance score of MSCI World Index is 0%, in such a case, the exposure of the MSCI World Select Hydrogen Tilted Index to the Hydrogen theme would be 2.5%. Additionally, in cases where the weighted average relevance score for the Hydrogen theme of the MSCI World Index is greater than 25%, the MSCI World Select Hydrogen Tilted Index can have a lower weighted average relevance score than the MSCI World Index for hydrogen theme.

Appendix 3: Parameters used for the MSCI World Select Hydrogen Tilted 4.5% Decrement Index

	MSCI World Select Hydrogen 4.5% Decrement Parameters	Parameters
1	Currency of Calculation	EUR
2	Return Variant of the MSCI World Select Hydrogen Tilted Index	Daily Net Total Return
3	Decrement Type	Fixed Percentage
4	Decrement Application	Geometric
5	Decrement Value	4.5%
6	Day-count Convention	Actual / 365
7	Index Floor	0
8	Decrement Frequency	Daily

The following sections have been modified since August 2023:

- Section 2.2.3: Security Selection
 - Footnote Addition: In case two securities have the same weight in the Parent Index, the security with greater 3-month Average Traded Value is selected

The following sections have been modified since June 2024:

- Appendix 1: Methodology Set
 - Added details on Methodology Set for the Index
- Decrement Update:
 - Decrement percent changed from 3.5% to 4.5% in Appendix 3
 - Branding updated to reflect the decrement change.

Contact us

[msci.com/contact-us](https://www.msci.com/contact-us)

AMERICAS

United States	+ 1 888 588 4567 *
Canada	+ 1 416 687 6270
Brazil	+ 55 11 4040 7830
Mexico	+ 52 81 1253 4020

EUROPE, MIDDLE EAST & AFRICA

South Africa	+ 27 21 673 0103
Germany	+ 49 69 133 859 00
Switzerland	+ 41 22 817 9777
United Kingdom	+ 44 20 7618 2222
Italy	+ 39 02 5849 0415
France	+ 33 17 6769 810

ASIA PACIFIC

China	+ 86 21 61326611
Hong Kong	+ 852 2844 9333
India	+ 91 22 6784 9160
Malaysia	1800818185 *
South Korea	+ 82 70 4769 4231
Singapore	+ 65 67011177
Australia	+ 612 9033 9333
Taiwan	008 0112 7513 *
Thailand	0018 0015 6207 7181 *
Japan	+ 81 3 4579 0333

* toll-free

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 is research for informational purposes only and is intended for institutional professionals with the analytical resources and tools necessary to interpret any performance information. Nothing herein is intended to promote or recommend any product, tool or service.

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 Providers") and is provided for informational purposes only. The Information may not be modified, reverse-engineered, reproduced or disseminated in whole or in part without prior written permission from MSCI. All rights in 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, TIMELINESS, NON-INFRINGEMENT, COMPLETENESS, MERCHANTABILITY AND FITNESS FOR A PARTICULAR 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 guarantee of any future performance, analysis, forecast or prediction. Past performance does not guarantee 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 of any MSCI index (collectively, "Index Linked Investments"). MSCI makes no assurance that any Index Linked Investments will accurately track index performance or provide positive investment returns. MSCI Inc. is not an investment adviser or fiduciary and MSCI makes no representation regarding the advisability of investing in any Index Linked Investments.

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 Index 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 constitute 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 climate ratings, research and data are produced by MSCI ESG Research LLC, a subsidiary of MSCI Inc. MSCI ESG Indexes, Analytics and Real Estate are products of MSCI Inc. that utilize information from MSCI ESG Research LLC. MSCI Indexes are administered by MSCI Limited (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 Inc. 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>.