

**METHODOLOGY BOOK FOR:
-MSCI WORLD SELECT HYDROGEN
TILTED INDEX
- MSCI WORLD SELECT HYDROGEN
TILTED 3.5% DECREMENT INDEX**

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1 Introduction

The MSCI World Select Hydrogen Tilted Index (“the Index”) is constructed by combining the MSCI World Index and the Hydrogen Subset¹ in fixed proportion of 80% and 20%² respectively.

The MSCI World Select Hydrogen Tilted 3.5% Decrement Index aims to represent net performance of the Index while applying a constant markdown (‘synthetic dividend’) of 3.5% on an annual basis, expressed as a percentage of net performance.

¹ Please refer to section 2.2 of this methodology for details on the index

² The weights of the Component Indexes prior to June 2020 Index review date are noted in Appendix 1

2 Constructing the Indexes

The Index is constructed by combining the following two components:

- MSCI World Index
- Hydrogen Subset

The Hydrogen Subset³ 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 Index⁴.

In addition to the above steps, MSCI Decrement Indexes Methodology⁵ is applied to the Index to construct the MSCI World Select Hydrogen Tilted 3.5% 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 weights⁶ to create MSCI World Select Hydrogen Tilted Index:

Component Index	Weight
Hydrogen Subset	20%
MSCI World Index ⁷	80%

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

³ Please refer to section 2.2 of this methodology for details on the index

⁴ Please refer to the methodology document at <http://www.msci.com/index-methodology>.

⁵ Please refer to the MSCI Decrement Indexes Methodology at <http://www.msci.com/index-methodology>.

⁶ The weights of the Component Indexes prior to June 2020 Index review date are noted in Appendix 1

⁷ 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.

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.

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

$$ADTV_{3M} = \frac{ATV_{3M}^8}{252}$$

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
- EMU⁹

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 Index¹⁰ while ensuring the maximum number of securities selected from Japan is capped at 8 securities¹¹.

⁸ MSCI Index Calculation Methodology at <https://www.msci.com/index-methodology>

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

⁹ 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>

¹⁰ In case two securities have the same weight in the Parent Index, the security with greater 3-month Average Traded Value is selected

¹¹ This is to ensure that maximum regional exposure to Japan is kept at 50%

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%
- Step 2: Sum of weight of securities belonging to Japan is capped at 50%¹². 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 methodology¹³ is applied on the Index to construct the MSCI World Select Hydrogen Tilted 3.5% Decrement Index. The parameters for the decrement index are noted in Appendix 2.

¹² If the security weights capping of Step 1 is breached after applying capping of Step 2, the weights are not capped again

¹³ 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 3.5% Decrement Index is computed by reducing the performance of the Index by a fixed percentage, on a daily basis using parameters detailed in Appendix 1.

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 Subset¹⁴.

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.

¹⁴ 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.

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 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: 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 ¹⁵	90%

¹⁵ 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 2: Parameters used for the MSCI World Select Hydrogen Tilted 3.5% Decrement Index

	MSCI World Select Hydrogen 3.5% 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	3.5%
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

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