

# **MSCI Japan IMI High Free Cash Flow Yield 50 Select Index Methodology**

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## 1 Introduction

The MSCI Japan IMI High Free Cash Flow Yield 50 Select Index<sup>1</sup> (herein, ‘the Index’) is designed to represent the performance of a strategy that seeks exposure to top 50 securities with high Free Cash Flow Yield<sup>2</sup> (herein, ‘FCF Yield’).

The Index selects top 50 securities from the MSCI Japan Investable Market Index (IMI) (herein, ‘the Parent Index’)<sup>3</sup> with higher FCF Yield, excluding securities with lower liquidity and excluding securities from select GICS<sup>®4</sup> sectors as defined in section 2.2. Additionally, the constituent weights and sector weights are capped to mitigate the concentration in the Index.

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

<sup>2</sup> Free Cash Flow Yield is calculated as Free Cash Flow per Share / Price for the company as of fiscal year where, Free Cash Flow is calculated as Net Cash Flow from Operations – Capital Expenditure.

<sup>3</sup> For details about the MSCI Japan Investable Market Index, please refer to the MSCI Global Investable Market Indexes methodology at: <https://www.msci.com/index-methodology>

<sup>4</sup> GICS, the Global Industry Classification Standard, jointly developed by MSCI Inc. and S&P Global Market Intelligence

## 2 Index Construction Methodology

The Index is constructed based on the rules explained in the following sections.

### 2.1 Applicable Universe

The Applicable Universe includes all the constituents of the Parent Index. This approach aims to provide an opportunity set with sufficient liquidity and capacity.

### 2.2 Eligible Universe

The Eligible Universe is constructed in following steps:

First, the top 500 largest securities from the Applicable Universe based on their free float-adjusted market capitalization are selected. In case the Applicable Universe has less than 500 securities, then all securities of the Applicable Universe are selected. Then, securities with 3-month Annualized Traded Value<sup>5</sup> (ATV) of less than JPY 126 billion are excluded.

Securities belonging to the Financials GICS sector and Real Estate GICS sectors are not eligible for inclusion in the Index. Securities with negative FCF Yield values are also not eligible for inclusion in the Index.

### 2.3 Security Selection

The Index selects top 50 securities from the Eligible Universe with the highest FCF Yield values. If two securities have the same FCF Yield value, then the security with higher weight in the Parent Index is selected first.

### 2.4 Security Weighting

The selected securities are assigned weights in the proportion of their free float-adjusted market capitalization. The weights are normalized to 100%.

#### 2.4.1 Defining the Sector Reference Index

Top 500 largest securities from the Parent Index based on their free float-adjusted market capitalization are selected first. Further, if any of the sectors from the Parent Index are not represented in the selection as per section 2.3, then securities belonging to such sectors are not selected in the Sector Reference Index.

The remaining securities are then weighted based on their free float-adjusted market capitalization in the Sector Reference Index.

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<sup>5</sup> For details on the calculation of ATV, please refer to the MSCI Index Calculation Methodology (<https://www.msci.com/index-methodology>)

### 2.4.2 Capping Constituent Weights and Sector Weights

These normalized weights of the selected securities are then adjusted to implement active sector bound of 20%, i.e. the weight of each sector in the Index should be within +/- 20% with the weight of that sector in the Sector Reference Index at the time of rebalancing. Additionally, constituent weights are capped at 5% at issuer level to mitigate concentration risk. Please refer to Appendix I for more details on capping.

## 3 Maintaining the Index

### 3.1 Semi-Annual Index Reviews

The Index is rebalanced on a semi-annual basis, usually as of the close of the last business day of May and November, coinciding with the May and November Index Reviews of the MSCI Global Investable Market Indexes. Fundamental variables as of the last end of month from rebalancing date are used.

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

### 3.2 Buffer Rules

To reduce turnover and enhance stability in the Index, buffer rules are applied while selecting top 50 securities based on the highest FCF Yield, as defined in section 2.3.

Buffers are applied between rank 31 and 70. The securities in the Eligible Universe, with a rank at or above 30 will be added to the Index on a priority basis. The existing constituents that have a rank between 31 and 70 are then successively added until the total number of securities in the Index reaches 50. If the total number of securities is below 50 after this step, the remaining securities in the Eligible Universe with the highest rank are added until the number of securities in the Index reaches 50.

### 3.3 Ongoing Event Related Changes

The general treatment of corporate events in the Index 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 Index and in the Sector Reference Index.

No new securities will be added (except where noted below) to the Index between Index Reviews. Parent Index deletions will be reflected simultaneously in the Index.

Event Type	Event Details
<b>New additions to the Parent Index</b>	A new security added to the Parent Index (such as IPO and other early inclusion) will not be added to the Index.
<b>Spin-Offs</b>	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.
<b>Merger/Acquisition</b>	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 Index.  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 Index.
<b>Changes in Security Characteristics</b>	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 Index 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/latest/CE>

## Appendix I: Capping Methodology

### Parameters for Capping

- The maximum weight of an Index constituent at an issuer level will be restricted to 5%.
- The maximum GICS sector weights in the Index will be within +/-20% of the sector weights in the Sector Reference Index.

### Initial Relaxation Parameters

- For each sector, if the aggregated upper bound weight of all the issuers within that sector is lower than their sector lower bound weight constraint, then the lower bound weight of that sector is relaxed to the aggregated upper bound weight value of all the issuers within that sector.

### Capping Methodology

The Capping methodology is applied iteratively with the following steps:

- First find the most violating constraint from all the given constraints (sector minimum bound, sector maximum bound and issuer maximum bound).
- For each group (for example, Energy sector) within all the constraints, the deviation ratio is calculated based on:
  - Ratio of current value (for example, issuer 'A' weight in the Index) to upper bound (for example, issuer 'A' upper bound value), in case of upper bound constraint.
  - Ratio of lower bound value (for example, Energy sector lower bound value) to current value (for example, Energy sector weight in the Index), in case of lower bound constraint.
- The most violating constraint is the maximum of all the deviation ratios.
- The most violating constraint is adjusted first to the respective bound value.
- The excess weight (difference between current value to the respective bound value) is distributed proportionally to all the other constituents.
- The iterative capping stops when the most violating constraint ratio (rounded off to 5 decimals) is less than or equal to 1 or it has reached the maximum iteration count. In case of maximum iteration count, the capping steps will return the solution found till this maximum iteration step.
- If the most violating constraint ratio value for each group (for example, Energy sector in sector minimum bound) is repeated in more than 10 iterations, the capping methodology goes into relaxation as described below.



### Relaxation Steps

The following conditions are alternatively relaxed until the most violating constraint ratio (rounded off to 5 decimals) is less than or equal to 1 or it has met the maximum iteration criteria of 2000 steps:

- Relax the minimum active weight for sectors in steps of -1% up to a maximum of 5 iterations.
- Relax the maximum active weight for sectors in steps of 1% up to a maximum of 5 iterations.

At each step of relaxation, if the most violating constraint ratio value for each group is repeated more than 10 times, the next step of relaxation is initiated.

## Appendix II: 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](http://www.msci.com/index/methodology/latest/ReadMe)
- MSCI Corporate Events Methodology – [www.msci.com/index/methodology/latest/CE](http://www.msci.com/index/methodology/latest/CE)
- MSCI Fundamental Data Methodology – [www.msci.com/index/methodology/latest/FundData](http://www.msci.com/index/methodology/latest/FundData)
- MSCI Index Calculation Methodology – [www.msci.com/index/methodology/latest/IndexCalc](http://www.msci.com/index/methodology/latest/IndexCalc)
- MSCI Index Glossary of Terms – [www.msci.com/index/methodology/latest/IndexGlossary](http://www.msci.com/index/methodology/latest/IndexGlossary)
- MSCI Index Policies – [www.msci.com/index/methodology/latest/IndexPolicy](http://www.msci.com/index/methodology/latest/IndexPolicy)
- MSCI Global Industry Classification Standard (GICS) Methodology – [www.msci.com/index/methodology/latest/GICS](http://www.msci.com/index/methodology/latest/GICS)
- MSCI Global Investable Market Indexes Methodology – [www.msci.com/index/methodology/latest/GIMI](http://www.msci.com/index/methodology/latest/GIMI)

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’.

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