Index Methodology



MSCI AC Asia Pacific Select High Dividend Index

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1 Introduction

The MSCI AC Asia Pacific Select High Dividend Index (the 'Index')¹ aims to represent the performance of a set of 100 companies from select markets in Asia Pacific that exhibit relatively high dividend yield. The Index uses constraints on single security weights and on GICS^{®2} sector weights to achieve diversification.

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 III for more details.

² GICS, the global industry classification standard jointly developed by MSCI and S&P Global Market Intelligence



2 Constructing the Index

The Index is constructed by selecting securities from the MSCI Hong Kong Listed Southbound Index, MSCI Australia Index and the MSCI Japan Index ('Parent Universe') using the steps below.

2.1 Eligible Universe

2.1.1 REITs Screening

All securities in the Parent Universe which are mapped to the Equity Real Estate Investment Trusts (REITs) or to the Mortgage Real Estate Investment Trusts (REITs) GICS sub-industries are excluded from the Eligible Universe.

The remaining securities are split into three components:

- Hong Kong Listed Southbound ex REITs
- Australia ex REITs
- Japan ex REITs

2.1.2 Liquidity Screening

Exclude securities in the bottom quintile of each of the three components defined in 2.1.1., ranked in descending order of their 12-month ADTV³ in USD. Securities with missing data on 12-month ADTV are excluded.

2.1.3 Price Performance Screening

Exclude securities in the bottom quintile of each of the three components defined in 2.1.1., ranked in descending order of their 6-month USD price return. Securities with missing data on 6-month USD price return are excluded.

2.1.4 Dividend Sustainability Screening

From all remaining securities, exclude securities whose dividend payout ratio⁴ is:

- a) missing, or
- b) less than 10% or,
- c) greater than 100%.

Further, exclude securities which have missing data on dividend per share (USD), in any of the past three years.

³ For details of calculation of 12-month ADTV, please refer to Appendix II

⁴ For definition of Dividend Payout Ratio, please refer to the MSCI Fundamental Data Methodology document at https://www.msci.com/index-methodology.



2.2 Selected Universe

All securities in the Eligible Universe are ranked in descending order of their average dividend yield⁵ over the past three years. In the event of tied ranks, the securities with higher float adjusted market cap in USD are ranked higher. The Selected Universe is constructed by selecting the top 100 securities from this ranking. If the number of securities in the Eligible Universe is less than 100, then all securities are included in the Selected Universe.

For ongoing rebalancing, a buffer selection rule is applied and has been detailed in section 3.1.1

2.3 Weighting

Securities in the Index are weighted by the product of their issuer market cap in USD and their Dividend Yield Score. Securities with missing Dividend Yield Score are excluded. The weights are then re-normalized to sum to 100%.

The Dividend Yield Score is calculated for each security in the Eligible Universe, using the following steps:

- First, a Z-score is derived from the trailing dividend yield of each security in the Eligible Universe and winsorized between +/-3.
- Next, the Dividend Yield Score is computed from the Z-score: Dividend Yield Score = (1 + Z), if $Z \ge 0$, or Dividend Yield Score = 1/(1 - Z), if Z < 0

where Z denotes the Z-score

2.3.1 Capping

The following constraints are applied at each Index Review:

- Security weight is capped at 15%.
- GICS sector weights are capped at 25%.
- Weight of each of the three component Indexes that constitute the Parent Universe is capped at 40%

In the event these constraints are not satisfied at the Index Review, they are relaxed in accordance with Appendix I.

⁵ For definition of Dividend Yield, please refer to the MSCI Fundamental Data Methodology document at <u>https://www.msci.com/index-methodology</u>. If dividend yield for any year/s is missing for a security, then the denominator for the average dividend yield calculation for that security is adjusted accordingly.



3 Maintaining the Index

3.1 Semi-Annual Index Review

The Index is reviewed on a semi-annual basis, as of the close of the last business day of February and August, coinciding with the February and August Index Reviews of the Parent Universe, and the changes are implemented at the end of February and August. In general, the pro forma Index is announced nine business days before the effective date of the Index Review.

In general, MSCI uses 12-month ATV, dividend payout ratio data and current dividend per share⁶ data in USD as of the end of the month preceding the rebalancing date of the Index Review. MSCI uses issuer market cap data as of one business day before the rebalancing date of the Index review.

In addition, MSCI uses current security prices for price performance screening as of one day before the rebalancing date of the Index review.

3.1.1 Security selection buffer rules

To reduce index turnover and enhance index stability, a buffer rule of 20% is applied during the ongoing semi-annual index reviews. For example, if the Index targets 60 securities, buffers are applied between rank 49 and 72. The securities in the ranked universe (as detailed in section 2.2) with a rank at or above 48 will be added to the Index on a priority basis. The existing constituents that have a rank between 49 and 72 are then successively added until the number of securities in the Index reaches 60. If the number of securities is below 60 after this step, the remaining securities in the ranked universe with the highest rank are added until the number of securities in the final index reaches 60.

3.2 Ongoing Event-Related Maintenance

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

⁶ For definition of Dividend Per Share, please refer to the MSCI Fundamental Data Methodology document at https://www.msci.com/index-methodology.



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.

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

EVENT TYPE

EVENT DETAILS

New additions to the Parent Universe	A new security added to the Parent Universe (such as IPO and other early inclusions) will not be added to the Index.	
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 addition 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 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.	
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 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.		

The MSCI Corporate Events methodology book is available at: <u>https://www.msci.com/index-methodology.</u>



Appendix I: Capping Methodology

The capping methodology is iteratively applied with the following steps:

- Find the most violating constraint from all given constraints in section 2.3.1
- For each group, within all constraints, the deviation ratio is calculated based on:
 - a) Ratio of current value to upper bound, in case of upper bound constraint
 - b) Ratio of lower bound to current value, in case of lower bound constraint
 - c) The most violating is the maximum of all deviation ratios
- The most violating constraint is adjusted first to the respective bound value
- The excess weight (difference of current value to the respective bound value), is distributed proportionally to all other constituents
- The iterative capping stops when the most violating constraint ratio (rounded off to 5 decimal places) 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 is repeated in more than 10 iterations, the capping methodology applies relaxation steps.

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 maximum weight allocated to each of the three component indexes that constitute the Parent Universe, in steps of 1% up to a maximum of 5 iterations
- Relax the maximum GICS® sector weight in steps 1% up to a maximum of 5 iterations
- Relax the maximum security weight in steps of 1% up to a maximum of 5 iterations

In the event that no solution is found after the above constraint relaxations are exhausted, the methodology would be subjected to exceptional relaxation of parameters (to be determined on a case-by-case basis).



Appendix II: Calculation of 12-Month Average Daily Traded Value (ADTV)

 $ADTV = \frac{ATV}{252}$

Where:

- ADTV = 12-month Average Daily Traded Value
- ATV = 12-month Annualized Traded Value
- For details on the calculation of ATV, please refer to the MSCI Index Calculation Methodology (<u>https://www.msci.com/index-methodology</u>)



Appendix III: 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 Fundamental Data Methodology www.msci.com/index/methodology/latest/FundData
- 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

The Methodology Set for the Index 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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