

MSCI AC Asia Pacific Select Megatrend Sentiment Index Methodology

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1 Introduction

The MSCI AC Asia Pacific Select Megatrend Sentiment Index (the ‘Index’) aims to represent the performance of the four highest ranked MSCI Thematic Indexes, selected monthly from a set of MSCI Thematic Indexes, based on theme specific media sentiment score (MediaStats Megatrend Scores) calculated for each of the respective themes by MKT MediaStats¹.

¹ MKT MediaStats is a big-data information technology company specializing in financial markets which generates theme level Megatrend Scores on a monthly basis <https://www.mktmediastats.com/>. Please refer to Appendix 1 for details.

2 Index Construction

The Index is constructed from the MSCI ACWI IMI Index (the ‘Parent Index’). The following steps are applied at initial construction and at each Index Review of the Index:

- Determine the Applicable Universe
- Eligible Universe Screening
- Security Weighting

2.1 Applicable Universe

The Applicable Universe for the Index is constructed from a set of the MSCI Thematic Indexes² (the ‘Component Indexes’).

At each monthly Index Review and at initial construction, the Component Indexes are ranked³ in descending order of the MediaStats Megatrend Scores for each corresponding theme. The top four Component Indexes are selected and a weight of 25% is allocated to each of the selected Component Indexes.

The weight of each security after combining the four Component Indexes can be calculated as follows:

$$W_{Sec_i}^{CI} = \sum_j W_{C_j} W_{Sec_i}^{C_j}$$

Where:

$W_{Sec_i}^{CI}$ is the weight of security Sec_i in the combined index CI

W_{C_j} is the target weight of the Component Index C_j

$W_{Sec_i}^{C_j}$ is the weight of security Sec_i in the Component Index C_j

C_j is the selected Component Index

2.2 Eligible Universe Screening

2.2.1 Security Selection

From the Applicable Universe the securities that belong to the MSCI AC Asia Pacific IMI Index are selected for inclusion in the Index.

² Please refer to Appendix 2 for details.

³ Please note that in the ranking of themes above, we do not apply any special treatment for instances where the normalized score may differ by less than 0.1. In case two themes have the same MediaStats Megatrend score, then the theme with the higher momentum score will be selected. Please refer to Section 3 for momentum score calculation details.

2.2.2 Liquidity Criteria

Securities with 3-month ADTV (Average Daily Traded Value) greater than or equal to USD 10 Million are eligible for inclusion in the Index.

ADTV is calculated as:

$$ADTV_{3M} = \frac{ATV_{3M}^4}{252}$$

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

To avoid multiple securities of the same company in the final Index, only the most liquid security for each issuer per its 3-month ADTV, is eligible for inclusion in the Index.

2.3 Security Weighting

At each Index Review and at initial construction, the securities selected for inclusion in the Index are assigned the weights $W_{Sec_i}^{CI}$ from the Section 2.1 and are normalized to sum to 100%.

Additionally, the constituent weights are capped to mitigate concentration risk in the Index. The individual security weights in the Index are capped at 5%.

⁴ MSCI Index Calculation Methodology at <https://www.msci.com/index-methodology>

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

3 Input Data Fallback Mechanism

If, at an Index Review, the MediaStats Megatrend Scores required for the Index rebalance are not available from MKT MediaStats dated as of the month-end prior to the Index Review, then the latest available MediaStats Megatrend Scores prior to the Index Review date will be used.

If, at an Index Review, MSCI determines that the primary source data from MKT is stale for the last 4 or more months or is not reflective of current market conditions, the Component Indexes then will be ranked in descending order of their 3-month momentum score and the four highest ranked Component Indexes would be selected. In the case that two Component Indexes have same 3-month momentum score, the Component Index with higher 6-month momentum score will be selected.

The 3-month momentum score and 6-month momentum score will be calculated as follows:

At each index review date, the 3-month momentum score will be calculated by dividing the last 3-month return of the individual Component Index as of Index review date by standard deviation of the daily returns of the Component Index over the same period. The 6-month momentum score will be calculated by dividing the last 6-month return of the individual Component Index as of Index review date by standard deviation of the daily returns of the Component Index over the same period.

Subsequently, a review of alternative data for the MediaStats Megatrend Scores would be conducted. The adoption of an alternative data source and any amendments to the methodology to reflect this will be announced to all clients simultaneously. MSCI may consult with clients to gather their feedback on the choice of alternative sources in line with MSCI Index Consultation Policy⁵.

⁵ Please refer to MSCI Index Policies document at: <https://www.msci.com/index-methodology>

4 Maintenance of the Index

4.1 Monthly Index Reviews

The Index is reviewed on a monthly basis and rebalanced at the beginning of each month. The pro forma Index is announced nine business days before the effective date.

4.2 Ongoing Event Related Changes

The following section briefly describes the treatment of common corporate events within the Index. Changes in index market capitalization that occur because of corporate event implementation will be offset by a corresponding change in the Variable Weighting Factor (VWF) of the constituent.

No new securities will be added (except where noted below) to the Index between Index Reviews. For cases where additions are noted below, securities will be added to the Index 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 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 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 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 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: MediaStats Megatrend Scores

The MediaStats Megatrend Score is calculated by MKT MediaStats for each thematic Index at the end of every calendar month.

For each thematic index, MKT MediaStats uses the business descriptions from each of the indexes methodology document to capture time series⁶ and cross-sectional shifts of investor attention and sentiment towards megatrends by analyzing media articles sourced from approximately 100 thousand individual sources. The MediaStats Megatrend Score⁷ is calculated based on an average positive sentiment intensity change over the most recent three months period compared to the preceding three months.

Historically, the Mediastats Megatrend Score was between -4 and 4. If for a month, for a theme the score range is beyond 5 and -5, MSCI will clarify the value with MKT MediaStats

For further details on the calculation methodology, please refer to:

<https://www.mktmediastats.com/post/dynamic-megatrend-rotation>.

⁶ The business descriptions of some of the Thematic Indexes may overlap. For example, the descriptive terms of the MSCI ACWI IMI Robotics Index are also part of the descriptive terms for the MSCI ACWI IMI Autonomous Technology & Industrial Innovation Index. Consequently, a fraction of the articles covering these two themes are also shared. The overlap in articles can potentially lead to correlated MediaStats Megatrend Scores.

⁷MediaStat Megatrend Scores may behave differently for broader themes that include narrower themes in comparison to separate narrow themes. The relative change in positive intensity for a broader theme that may cover more articles in general could be lower than for a narrow theme that may cover less articles. For instance, an absolute change of 1 article would be a 100% change for a theme that had 1 article in the previous period and 1% change for the theme that had 100 articles in the previous period.

Appendix 2: Component Indexes

The Applicable Universe for the Index is constructed from the following twelve MSCI Thematic Indexes⁸ (the 'Component Indexes'):

1. MSCI ACWI IMI Ageing Society Opportunities Index
2. MSCI ACWI IMI Autonomous Technology & Industrial Innovation Index
3. MSCI ACWI IMI Efficient Energy Index
4. MSCI ACWI IMI Future Mobility Index
5. MSCI ACWI IMI Millennials
6. MSCI ACWI IMI Next Generation Internet Innovation Index
7. MSCI ACWI IMI Robotics Index
8. MSCI ACWI IMI Smart Cities Index
9. MSCI ACWI IMI Clean Energy Infrastructure Index
10. MSCI ACWI IMI Natural Resources Stewardship Index
11. MSCI ACWI IMI Renewables and Energy Efficiency Index
12. MSCI ACWI IMI Sharing Economy Index

⁸ Please refer to <https://www.msci.com/index-methodology> for the methodology of the Component Indexes.

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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>.

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