

MSCI CHINA A ECONOMY TRANSFORMATION SELECT INDEX

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1 Introduction

The MSCI China A Economy Transformation Select Index (the 'Index') aims to represent the performance of China A-shares associated with the development of new products and services related to cybersecurity, efficient energy, smart mobility, logistics and micromovement, battery technologies, senior care, clinical lab automation, advanced medical materials and devices, medical robotics, health and fitness, and clothing and apparel.

2 Constructing the Index

The Index is constructed by selecting stocks from the MSCI K-series China A Onshore Investable Market Index (IMI) ('Parent Index'¹) based on rules explained in the following sections.

The Index selects companies which are assessed to have high exposure to the following products and services:

- Cybersecurity
- Smart mobility
- Battery technologies, materials, electro-chemical energy storage technologies and companies mining metals used to manufacture
- Efficient energy
- Senior care housing facilities or assisted living facilities
- Health & fitness
- Clothing & apparel
- Medical robotics
- Clinical lab automation
- Advanced medical materials and devices
- Logistics and micromovement

2.1 The set of relevant words and phrases² used for constituent selection

MSCI uses a broad set of relevant words and phrases derived from the index objective which are important to describing the products and services of companies engaged in providing cybersecurity, efficient energy, smart mobility, logistics and micromovement, battery technologies, senior care, clinical lab automation, advanced medical materials and devices, medical robotics, health and fitness, and clothing and apparel.

¹Use of some indexes as Parent Indexes may result in a low number of constituents, which may affect replicability.

² For more details on the steps followed to generate the set of relevant words and phrases, please see <https://www.msci.com/www/research-paper/indexing-change-understanding/01647260939>.

2.2 Company level data used for assessing company exposure

The following data is used at the company level:

- Business segment information from company annual reports and vendor data sources: business segment names, assigned SIC codes³ and related revenue.
- English language summary description of the company's business activities from public sources is used.

2.3 Combined Universe

All stocks from the Parent Index and MSCI ACWI Investable Market Index (IMI)⁴ which satisfy any of the following criteria are selected in the Combined Universe.

2.3.1 Selection on Business Segments

Company identified Business Segment names are compared against the set of relevant words. Companies which include at least one relevant word in their business segment names are included in the Combined Universe.

2.3.2 Selection on company's summary description

The company's summary business description is compared against the set of relevant words. Companies which include at least two distinct relevant words in their summary description are included in the Combined Universe.

2.4 Selected Business Segments

Selected Business Segments are business segments which include at least one relevant word. These are the business segments based on which stocks are selected in section 2.3.1.

2.5 SIC code selection

Company business segments are mapped to a SIC code. The SIC code selection is a set of all the SIC codes which satisfy the following criteria

- The SIC code is mapped to at least one of the Selected Business Segments as described in section 2.4.

³ Companies' business segments are assigned with a specific SIC (Standard Industry Classification) description for products and services, used by official agencies within the US government. These descriptions provide additional information on the nature of the segment.

⁴ This universe is used in order to expand the pool of business segment and business description information.

- The SIC code is assigned to the business segments of at least two different stocks from the Combined Universe. The SIC code 9999 is not selected.

2.6 Calculating the Stock Relevance Score

A Relevance Score for all stocks in the Combined Universe is calculated. The Relevance Score for a company is calculated by taking into account the portion of company's revenue which is derived from the Selected Business Segments (as described in section 2.4) filtered via the SIC code selection (as described in section 2.5).

The Relevance Score is not an explicit measurement or estimate of the proportion of revenue that the company derives from business activities exposed to the theme.

2.6.1 Relevance Score Discount Factor

A stock level Relevance Score Discount Factor is calculated by normalizing the cumulative frequency of relevant words in the company's summary description relative to all companies selected on summary business descriptions as described in section 2.3.2.

At a company's business segment level, the Revenue Discount Factor is applied on revenue from each selected SIC code as described in section 2.5. The Revenue Discount Factor is 1 for revenue derived from Selected Business Segment.

2.6.2 Relevance Score

Relevance Score for stocks in the Combined Universe is calculated as follows:

Relevance score = [revenue from the Selected Business Segments (as described in section 2.4) + relevance score discount factor * revenue from the selected SIC code (as described in section 2.5)] / Total company revenue.

2.7 Eligible Universe

All stocks in the Combined Universe which are in the Parent Index and have a Relevance Score of 25% or more are included in the Eligible Universe. Further filtering is applied to these stocks as shown below.

2.7.1 GICS^{®5} sector and sub-industry filtering

Stocks which have a Relevance Score of 25% or more and are mapped to the following GICS[®] sub-industries are excluded from the Eligible Universe.

No.	GICS [®] Sector	GICS [®] Sub-Industries
1	Communication Services	<ul style="list-style-type: none"> Alternative Carriers
2	Financials	<ul style="list-style-type: none"> Financial Exchanges & Data
3	Utilities	<ul style="list-style-type: none"> Electric Utilities Independent Power Producers & Energy Traders

2.8 Selected Universe

For every issuer in the Eligible Universe, the local listed security (listed in onshore China) is deleted in favor of the Stock Connect⁶ listed security of the same issuer, where available. All other securities are dropped from the Eligible Universe to form the Selected Universe. Further filtering is applied to these stocks as shown below.

2.8.1 Liquidity Screening Criteria

Securities that have a 6-month average daily trading value (6M ADTV) less than 10 million USD are excluded from the Selected Universe. For the calculation of ADTV, please refer to Appendix 1.

⁵ GICS[®], the Global Industry Classification Standard jointly developed by MSCI and S&P Global.

⁶ For details of Stock Connect eligibility, please refer to Appendix XIV of the MSCI Global Investable Markets Indexes Methodology.

2.9 Weighting scheme

Stocks in the Selected Universe are weighted by the product of their Relevance Score and their full market capitalization adjusted by their Domestic Inclusion Factor (DIF).

2.10 Final Universe

The Top 60 securities ranked by their weight in Selected Universe (as described in Section 2.9) are selected for inclusion in the Index. The weights are then normalized to sum to 100%.

If the number of securities in Selected Universe is below 60, all securities are selected for inclusion in the Index.

2.11 Capping

Constituent weights are capped at the issuer level to mitigate concentration risk in the Index. The issuer weight in the Index is capped at 5% at each Semi-Annual Index Review.

3 Maintaining the Index

3.1 Semi-Annual Index Review

The Index is reviewed on a semi-annual basis in May and November to coincide with the May and November Semi-Annual Index Reviews of the Parent Index, and the changes are implemented at the end of May and November. In general, the pro forma Index is announced nine business days before the effective date.

During the Semi-Annual Index Review, the Combined Universe, the Eligible Universe and Selected Universe are updated.

In general, MSCI uses the company business segment names, business description and revenue data as of the rebalancing date for the Semi-Annual Index Review.

3.2 Annual Index Review

The set of relevant words (as described in section 2.1) are reviewed annually by MSCI during the May Semi-Annual Index Review. In general, MSCI completes this review of relevant words nine business days before the effective date of the May Semi-Annual Index Review.

3.3 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 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.

For details of ongoing event related changes for Stock Connect Eligibility, please refer to Appendix XIV of the MSCI Global Investable Markets Indexes Methodology. However, the treatment of ongoing events⁷ related to deletion of securities that are no longer accessible through the Stock Connect program is different for this Index

⁷ For rebalances up to 01-Dec-2021, the Stock Connect program buy-sell eligibility of securities is checked only on the semi-annual rebalance dates and not between rebalances. However, for ongoing calculations, Stock Connect program buy-sell eligibility will be checked on a daily basis and securities will be deleted with a notice period of two business days in the event of a change to eligibility, where possible.

and such securities will be deleted with a notice period of two business days, where possible.

No new securities will be added (except where noted below) to the Index between Index Reviews. 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	<p>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.</p> <p>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.</p>
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:

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

Appendix 1: Calculation of 6-Month Average Daily Traded Value (ADTV)

$$ADTV = ATV / 252$$

Where:

- ADTV = Average Daily Traded Value
- ATV = Annualized Traded Value

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

Contact us

clientservice@msci.com

AMERICAS

Americas	1 888 588 4567 *
Atlanta	+ 1 404 551 3212
Boston	+ 1 617 532 0920
Chicago	+ 1 312 675 0545
Monterrey	+ 52 81 1253 4020
New York	+ 1 212 804 3901
San Francisco	+ 1 415 836 8800
São Paulo	+ 55 11 3706 1360
Toronto	+ 1 416 628 1007

EUROPE, MIDDLE EAST & AFRICA

Cape Town	+ 27 21 673 0100
Frankfurt	+ 49 69 133 859 00
Geneva	+ 41 22 817 9777
London	+ 44 20 7618 2222
Milan	+ 39 02 5849 0415
Paris	0800 91 59 17 *

ASIA PACIFIC

China North	10800 852 1032 *
China South	10800 152 1032 *
Hong Kong	+ 852 2844 9333
Mumbai	+ 91 22 6784 9160
Seoul	00798 8521 3392 *
Singapore	800 852 3749 *
Sydney	+ 61 2 9033 9333
Taipei	008 0112 7513 *
Thailand	0018 0015 6207 7181 *
Tokyo	+ 81 3 5290 1555

* = toll free

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