

MSCI ADAPTIVE CAPPED INDEXES METHODOLOGY

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1 INTRODUCTION

The MSCI Adaptive Capped Indexes are the members of the family of MSCI Capped Indexes. The MSCI Adaptive Capped Indexes follow a capping approach where a fixed cap level on the constituent weight is not pre-specified but is instead a function of a client-defined parent index weight multiplier to be used for the uncapped constituents of the index. This approach to the capping aims to make the index methodology scalable for wide range of indexes in different size-segments without having to pre-determine the appropriate cap level. The level of the cap for a given parent index may change whenever the underlying parent index is rebalanced as the capping approach adapts to the new cap profile of the index.

This document describes the methodology that MSCI uses to calculate the MSCI Adaptive Capped Indexes by applying the weight constraints set forth herein to the non-constrained, free-float adjusted market capitalization weighted MSCI Equity Indexes.

2 INDEX CONSTRUCTION METHODOLOGY

The methodology for constructing the MSCI Adaptive Capped Indexes from underlying uncapped indexes aims to generate a capped index with high replicability and low turnover with a pre-defined maximum constraint factor for the uncapped constituents of the index.

2.1 APPLICABLE UNIVERSE

The applicable universe includes all the existing constituents of an underlying MSCI parent index (herein, a “Parent Index”). The relevant Parent Index could be any MSCI Regional or Country Index.

2.2 SECURITY SELECTION

There is no active security selection involved in the methodology. All the constituents of the Parent Index become the constituents of the MSCI Adaptive Capped Index.

2.3 WEIGHTING SCHEME

The methodology uses a fixed multiplier (“L”) for the uncapped constituents of the index. The weights are assigned as follows:

- Sort the Parent Index universe in the ascending order of the constituent weights in the Parent Index
- Assign the rank of 1 to N starting from the smallest stock in the universe, where N is the total number of stocks in the universe.
- For each n^{th} stock in turn, compute the cumulative weight $W_{\text{sum},n}$ such that,

$$W_{\text{sum},n} = \sum_{i=1}^n w_i + (N-n) \cdot w_n$$

Where w_i = weight of the i^{th} stock in the Parent Index

N = total number of stocks in the universe

- Identify the first position n_b such that $W_{\text{sum},n_b} \geq 1/L$
 - *Adjust w_{n_b} such that the constituent weights will add to 100¹*
- Cap the weight for all stocks ranked from n_b to N at $(\text{adjusted})w_{n_b} * L$
- Assign weight for all stocks ranked from 1 to n_b-1 as $w_i * L$

¹ The unscaled capping weight w_{n_b} is adjusted such that all the MSCI Adaptive Capping Index weights sum up to 100% as follows:

$$(\text{adjusted}) w_{n_b} = (\text{original}) w_{n_b} - (W_{\text{sum},n_b} - 1/L) / (N - n_b + 1)$$

3 MAINTAINING THE INDEXES

The methodology for constructing the MSCI Adaptive Capped Indexes from underlying uncapped indexes aims to generate a capped index with high replicability and low turnover.

3.1 INDEX REVIEWS

The MSCI Adaptive Capped Indexes are rebalanced with the same frequency as the Parent Index.

3.2 ONGOING EVENT RELATED CHANGES

In general, the MSCI Adaptive Capped Indexes follow the event maintenance of the Parent Index.

3.2.1 IPOs AND OTHER EARLY INCLUSIONS

IPOs and other newly listed securities will only be considered for inclusion at the next MSCI Adaptive Capped Index Review, even if they qualify for early inclusion in the Parent Index.

3.2.2 ADDITIONS AND DELETIONS DUE TO CORPORATE EVENTS

A constituent deleted from the Parent Index following a corporate event will be simultaneously deleted from the MSCI Adaptive Capped Index.

Please refer to Appendix I for more details on the treatment of corporate events.

APPENDIX I: CORPORATE EVENTS TREATMENT

This appendix describes the treatment of the most common corporate events in the MSCI Indexes. Details regarding the treatment of all other corporate events not covered in this appendix can be found in the MSCI Corporate Events Methodology book, available at

http://www.mscibarra.com/products/indexes/international_equity_indexes/gimi/stdIndex/methodology.html

Event Type	Event details	Action
Acquisition	Adaptive Capped Index constituent acquires another Adaptive Capped Index constituent	Maintain acquiring company and remove acquired company
	Adaptive Capped Index constituent acquires non Adaptive Capped Index constituent	Maintain acquiring company
	Non Adaptive Capped Index constituent acquires Adaptive Capped Index constituent	Remove acquired company without adding acquiring company
Merger	Adaptive Capped Index constituent merges with Adaptive Capped Index constituent	Add new company with a constraint factor that is the weighted average of the two constituents
	Adaptive Capped Index constituent merges with non Adaptive Capped Index constituent	Add new company if MSCI links its price history to the Adaptive Capped Index constituent. New company not added if price history is linked to the non Adaptive Capped Index constituent
IPO	IPO added to Parent Index	Security will be considered for inclusion in the Adaptive Capped Index at the next index Review
Spin-off	Adaptive Capped Index constituent spins off security	Add spun-off security to the Adaptive Capped Index with the constraint factor of the spinning security, if it is included in the Parent Index
Conversion	Security A converted to B, A deleted from Parent Index, B added	B inherits constraint factors from A
Country Reclassification	Domicile of company reviewed: Security A deleted from country A, security B	B inherits constraint factors from A if it is added to the Parent Index

Event Type	Event details	Action
	added to country B	
Stock exchange reclassification	Stock exchange (price source) of company reviewed: Security A deleted, security B added	B inherits constraint factors from A if it is added to the Parent Index
Other Events Resulting in Changes in Number of Shares and FIFs	Changes in number of shares and subsequent FIF resulting from other events such as share placements and offerings, and debt-to-equity-swaps	No change in Constraint Factor

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
Sao 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 *
Tokyo	+ 81 3 5290 1555

* = toll free

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