

# **MSCI QUALITY MIX INDEXES METHODOLOGY**

**August 2014**

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## **1 INTRODUCTION**

The MSCI Factor Indexes (Risk Premia) are designed to represent the performance of long-term risk factors such as quality, value and momentum. The historical performance of these indexes exhibits cyclicality and has varied significantly over time. Portfolios and index-linked products that combine factors aim to create diversification benefits and may have reduced turnover due to potential crossing opportunities among the individual factors. The MSCI Quality Mix Indexes, described in this methodology book, represent one specific example of combining individual MSCI Factor Indexes in a single index. The same methodology can be applied to create combinations of any underlying MSCI Factor Indexes.

## 2 CONSTRUCTING THE MSCI QUALITY MIX INDEXES

### 2.1 DETERMINING THE COMPONENTS OF THE MSCI QUALITY MIX INDEXES

MSCI Quality Mix Indexes are constructed as the combination of three MSCI Factor Indexes (“Component Indexes”).

1. MSCI Quality Index
2. MSCI Value Weighted Index
3. MSCI Minimum Volatility Index

For certain Parent Indexes where it may not be possible to construct the MSCI Minimum Volatility Index due to the concentrated nature of the market, MSCI will replace the MSCI Minimum Volatility Index with the MSCI Risk Weighted Index in the construction of the MSCI Quality Mix Index. The list of Indexes, for which this treatment is applied, is available in Appendix I. The MSCI Quality Mix Indexes can be made available with component index MSCI Minimum Volatility Index having different optimization currencies.

Each Component Index in the MSCI Quality Mix Index is attributed equal weight (1/3) at each rebalancing.

### 2.2 DETERMINING THE CONSTITUENTS OF THE MSCI QUALITY MIX INDEXES

All constituents of each Component Index are included in the MSCI Quality Mix Index.

### 2.3 DETERMINING THE WEIGHTS OF THE CONSTITUENTS OF THE MSCI QUALITY MIX INDEXES

The weight of each security in the MSCI Quality Mix Index is determined based on:

- the security’s weight in each underlying Component Index;
- the weight of each underlying Component Index in the MSCI Quality Mix Index.

The weight can be calculated as follows:

$$W_{Sec_i}^{QM} = \sum_{C_j} W_{C_j}^{QM} \times W_{Sec_i}^{C_j}$$

Where:

- $W_{Sec_i}^{QM}$  is the weight of security  $Sec_i$  in the MSCI Quality Mix Index

- $W_{C_j}^{QM}$  is the target weight of the Component Index  $C_j$  in the MSCI Quality Mix Index
- $W_{Sec_i}^{C_j}$  is the weight of security  $Sec_i$  in the Component Index  $C_j$

In addition, for the ongoing maintenance of the Quality Mix Index a Component Index Constraint Factor and a Full Market Cap Adjustment Factor is calculated for each Component Index and MSCI Quality Mix Index constituent respectively.

### 2.3.1 CALCULATION OF THE COMPONENT INDEX CONSTRAINT FACTOR

A Component Index Constraint Factor is calculated for each Component Index as follows:

$$CCF_{C_j}^{QM} = W_{C_j}^{QM} / \left( \frac{IndexMcap_{C_j}}{\sum_{C_j} IndexMcap_{C_j}} \right)$$

Where:

- $CCF_{C_j}^{QM}$  is the Component Index Constraint Factor of the Component Index  $C_j$
- $IndexMcap_{C_j}$  is the index market capitalization of the Component Index  $C_j$

### 2.3.2 CALCULATION OF THE SECURITY FULL MARKET CAP ADJUSTMENT FACTOR

The Full Market Cap Adjustment Factor for each security in the MSCI Quality Mix Index is then calculated as follows:

$$FMCAF_{Sec_i}^{QM} = \sum_{C_j} CCF_{C_j}^{QM} \times FMCAF_{Sec_i}^{C_j}$$

Where:

- $FMCAF_{Sec_i}^{QM}$  is the Full Market Cap Adjustment Factor of security  $Sec_i$  in the MSCI Quality Mix Index
- $FMCAF_{Sec_i}^{C_j}$  is the Full Market Cap Adjustment Factor of security  $Sec_i$  in the Component Index  $C_j$

### **3 MAINTAINING THE MSCI QUALITY MIX INDEXES**

#### **3.1 SEMI-ANNUAL INDEX REVIEWS FOR THE MSCI QUALITY MIX INDEXES**

The MSCI Quality Mix Indexes are rebalanced semi-annually, usually as of the close of the last business day of May and November, coinciding with the Semi-Annual Index Reviews of the MSCI Global Investable Market Indexes and of each Component Index.

The pro forma MSCI Quality Mix Indexes are announced nine business days before the effective date.

At each rebalancing of the MSCI Quality Mix Indexes the constituents and weights are determined as per Section 2, based on the underlying pro forma Component Indexes.

#### **3.2 ONGOING EVENT RELATED CHANGES**

The maintenance of the MSCI Quality Mix Indexes follows the maintenance of the Component Indexes. The Component Index Constraint Factor remains constant between Index Reviews. The Full Market Cap Adjustment Factor of each constituent is recalculated every day as per section 2.3.2. It remains constant between Index Reviews, except for changes in the Full Market Adjustment Factors applied to the security in the underlying Component Indexes, as per the maintenance methodology of the Component Index. Any change in number of shares applied in the MSCI Global Investable Market Indexes due to corporate events is also reflected in the MSCI Quality Mix Indexes.

Any security added to a Component Index is added simultaneously to the MSCI Quality Mix Index. The addition is included with the Component Index Constraint Factors determined at the previous Index Review for the relevant components. The Full Market Cap Adjustment Factor is then determined as per section 2.3.2.

Any security deleted from all Component Indexes is simultaneously deleted from the MSCI Quality Mix Index. Deletions from only some of the Component Indexes result in a change in the Full Market Cap Adjustment Factor as per section 2.3.2.

#### **3.3 DAILY TOTAL RETURN INDEXES**

Daily Total Return (DTR) Indexes for the MSCI Quality Mix Indexes are calculated based on the MSCI DTR Index Methodology. In particular, dividends from constituents of an MSCI Quality Mix Index are reinvested in the whole Index (as opposed to being reinvested only in the particular Component Indexes to which the constituent belongs).

## **APPENDIX I: LIST OF MSCI QUALITY MIX INDEXES CONSTRUCTED USING MSCI RISK WEIGHTED INDEX INSTEAD OF THE MSCI MINIMUM VOLATILITY INDEX**

1. MSCI Hong Kong Quality Mix Index
2. MSCI Italy Quality Mix Index
3. MSCI Mexico Quality Mix Index
4. MSCI Netherlands Quality Mix Index
5. MSCI Spain Quality Mix Index
6. MSCI Switzerland Quality Mix Index
7. MSCI Sweden Quality Mix Index

**The following sections have been modified since March 2014:**

2.1 Determining the Components of the MSCI Quality Mix Indexes

- Clarification of MSCI Quality Mix Indexes construction rules

Appendix 1. Existing MSCI Quality Mix Indexes

- Deletion

Appendix 1. (New) List of MSCI Quality Mix Indexes constructed using MSCI Risk Weighted Index instead of the MSCI Minimum Volatility Index

- Updates to list of Indexes

**The following sections have been modified since August 2014:**

Appendix 1. List of MSCI Quality Mix Indexes constructed using MSCI Risk Weighted Index instead of the MSCI Minimum Volatility Index

- Updates to list of Indexes



## 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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