

# **MSCI PRIME VALUE INDEXES METHODOLOGY**

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## 1 INTRODUCTION

The MSCI Prime Value Indexes are designed to represent the performance of companies that exhibit relatively higher value exposure with high Quality scores within the parent universe of securities. The selection of value companies is made from a universe of companies that has undergone Quality screening. The relevant Parent Index would be any MSCI Regional or Country Index.

MSCI categorizes the MSCI Prime Value Indexes as part of the family of MSCI Factor Indexes, which are designed to reflect the systematic elements of particular investment styles or strategies. While capitalization weighted indexes aim to represent the broad market beta, additional sources of systematic return associated with particular investment styles and strategies, such as value, momentum, volatility, etc. could be represented through alternatively weighted indexes.

## 2 INDEX CONSTRUCTION METHODOLOGY

### 2.1 APPLICABLE UNIVERSE

The applicable universe includes all the existing constituents of an underlying MSCI parent index (herein, a “Parent Index”). This approach aims to provide an opportunity set with sufficient liquidity and capacity. The relevant Parent Index would be any MSCI Regional or Country Index.

### 2.2 QUALITY SCREENING

Quality scores are calculated using the standard MSCI Quality methodology for all Parent Index constituents. The Quality Z-scores are calculated using fundamental variables such as Return on Equity, Earnings Variability and Debt to Equity. For the details on computation of the Quality Z-score, please refer to the section 2.2.3 of MSCI Quality Indexes Methodology ([http://www.msci.com/eqb/methodology/meth\\_docs/MSCI\\_Quality\\_Indexes\\_Meth\\_Au\\_g14.pdf](http://www.msci.com/eqb/methodology/meth_docs/MSCI_Quality_Indexes_Meth_Au_g14.pdf))

The securities are sorted in descending order of the quality scores. As the MSCI Prime Value Indexes are constructed with a ‘fixed number of securities’ approach, twice the number of securities ultimately required for the MSCI Prime Value Index are included at the quality screening stage with an aim to yield a universe of companies with high Quality Z-Scores (herein, the “Quality Parent Index”).

### 2.3 DETERMINATION OF THE VALUE SCORE

The Prime Value score for each security in the Quality Parent Universe is calculated by combining the z-scores of four value descriptors, namely Trailing Price to Earnings (P/E), Price to Book Value (P/B), Price to Sales (P/S) and Price to Cash Earnings (P/CE).

#### 2.3.1 CALCULATING THE Z-SCORE FOR EACH INDIVIDUAL VARIABLE

The z-score for each of the four variables for each security is calculated using the mean and standard deviation of the inverse of the corresponding variable. The z-score for each individual variable is computed within the Quality Parent Universe. The variables used are as follows:

1. P/E, P/B, P/S and P/CE for all securities except for “Financials” (Sector “40” of the Global Industry Classification Standard (GICS®))
2. P/E and P/B for all securities in the GICS Financials Sector

The latest available data at the time of rebalancing is used for the individual value descriptors.

The z-scores are winsorized at +/-3.

### 2.3.2 CALCULATING THE FINAL VALUE Z-SCORE

After calculating individual variable z-scores, a final value z-score for each security is computed by taking the weighted average of individual variable z-scores for each security. Each individual variable z-score is assigned an equal weight (e.g. 1/4 weight is assigned when 4 variables are used).

## 2.4 SECURITY INCLUSION

The MSCI Prime Value Indexes are constructed with a ‘fixed number of securities’ approach. All the relevant Quality Parent Universe securities are ranked based on their final value scores. If multiple securities have the same final value scores, then the security having a higher weight in the Parent Index is given a higher rank. Rules for arriving at a fixed number of constituents at initial construction are explained in Appendix II. The fixed number for security selection determined at initial construction is evaluated at every Semi-Annual Index Review (SAIR). Rules for evaluating the fixed number of constituents at every SAIR are also explained in Appendix II.

## 2.5 WEIGHTING SCHEME

The securities selected in the previous step are value weighted as per MSCI Value Weighted Indexes Methodology ([http://www.msci.com/eqb/methodology/meth\\_docs/MSCI Value Weighted Index Methodology Book Aug2012.pdf](http://www.msci.com/eqb/methodology/meth_docs/MSCI_Value_Weighted_Index_Methodology_Book_Aug2012.pdf))

The constituents of the MSCI Prime Value Indexes are first weighted as described above, and are then capped at the issuer level in order to mitigate concentration risk. The excess weight of such issuers is distributed among the remaining constituents in proportion to their free float market capitalization. The issuer level capping is applied only at Semi-Annual Index Reviews.

- Issuers in the MSCI Prime Value Indexes based on broad parent MSCI Indexes (e.g. MSCI World Index, MSCI Emerging Markets Index etc.) will be capped at 5%
- Issuers in the MSCI Prime Value Indexes based on narrow parent MSCI Indexes will be capped at the maximum weight in the Parent Index.

MSCI defines Narrow Parent Indexes as those indexes where the largest capitalization weight in the Index is more than 10%.

Note that the capping of the issuer weight is done for the pro forma index as of the effective date, based on the closing prices as of the Index Review announcement date. In cases where any issuer weight breaches the cap as a result of market price movements or corporate events between the announcement date and the effective date, the capping is not applied again.

Similarly, even if any issuer weight breaches the cap as a result of market price movements or corporate events between two Semi-Annual Index Reviews, no capping is applied.

### **3 MAINTAINING THE INDEXES**

#### **3.1 SEMI-ANNUAL INDEX REVIEWS**

The MSCI Prime Value Indexes are rebalanced on a semi-annual basis, usually as of the close of the last business day of May and November, coinciding with the May and November Semi-Annual Index Reviews (SAIRs) of the MSCI Global Investable Market Indexes. Fundamental variables as of the end of April and October are used respectively. This approach aims to capture timely updates to the Value characteristics of the companies and coincide with the rebalancing frequency of the relevant Parent Index. The pro forma MSCI Prime Value Indexes are announced nine business days before the effective date.

To reduce Index turnover and enhance index stability, buffer rules are applied. A security selection buffer of 50% is applied during the on-going Index Review.

For example, the MSCI World Prime Value Index targets 400 securities and the buffers are applied to securities ranked between 201 and 600. The securities in the Quality Parent Universe with a value score rank at or above 200 will be added to the MSCI World Prime Value Index on a priority basis. The existing constituents that have a final value score rank between 201 and 600 are then successively added until the number of securities in the MSCI World Prime Value Index reaches 400. If the number of securities is below 400 after this step, the remaining securities in the Quality Parent Universe with the highest final value score are added until the number of securities in the MSCI World Prime Value Index reaches 400.

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

In general, the MSCI Prime Value 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 Prime Value Index SAIR, 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 Parent Index following a corporate event will be simultaneously deleted from the MSCI Prime Value Index.

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

## APPENDIX I: FINAL VALUE Z-SCORE COMPUTATION

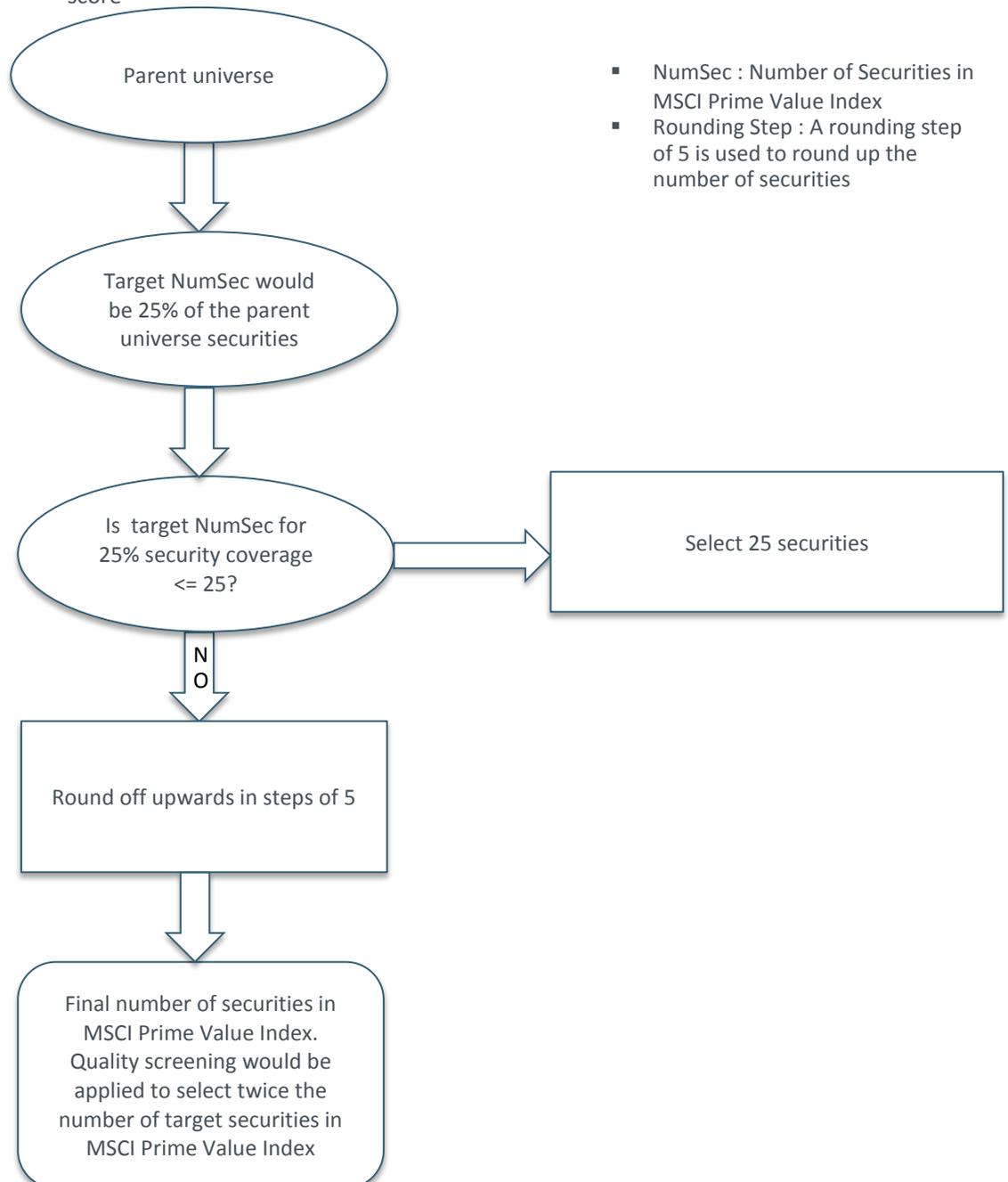
The final value z-score is computed as mentioned in the table below. Here z1, z2, z3 & z4 represent the individual variable z-scores

Case	Detail	Action
<u>Case 1</u>	Security does not belong to “Financials” sector and all variables are available	Value z-score = $(1/4)*z1 + (1/4)*z2 + (1/4)*z3 + (1/4)*z4$
<u>Case 2</u>	Security does not belong to “Financials” sector and one variable (e.g., z4) is missing	Value z-score = $(1/4)*z1 + (1/4)*z2 + (1/4)*z3$
<u>Case 3</u>	Security does not belong to “Financials” sector and two variables (e.g., z3 & z4) are missing	Value z-score = $(1/4)*z1 + (1/4)*z2$
<u>Case 4</u>	Security does not belong to “Financials” sector and three variables (e.g., z2, z3 & z4) are missing	Value z-score = $(1/4)*z1$
<u>Case 5</u>	Security belongs to “Financials” sector and all variables are available	Value z-score = $0.5*z1 + 0.5*z2$
<u>Case 6</u>	Security belongs to “Financials” sector and one variable(e.g., z2) is missing	Value z-score = $0.5*z1$
<u>Case 7</u>	All four variables are missing (for non-Financials) Both variables are missing (for Financials)	Value z-score = -3

## APPENDIX II: RULES TO DETERMINE FIXED NUMBER OF SECURITIES AT INITIAL CONSTRUCTION AND IN ONGOING REBALANCING

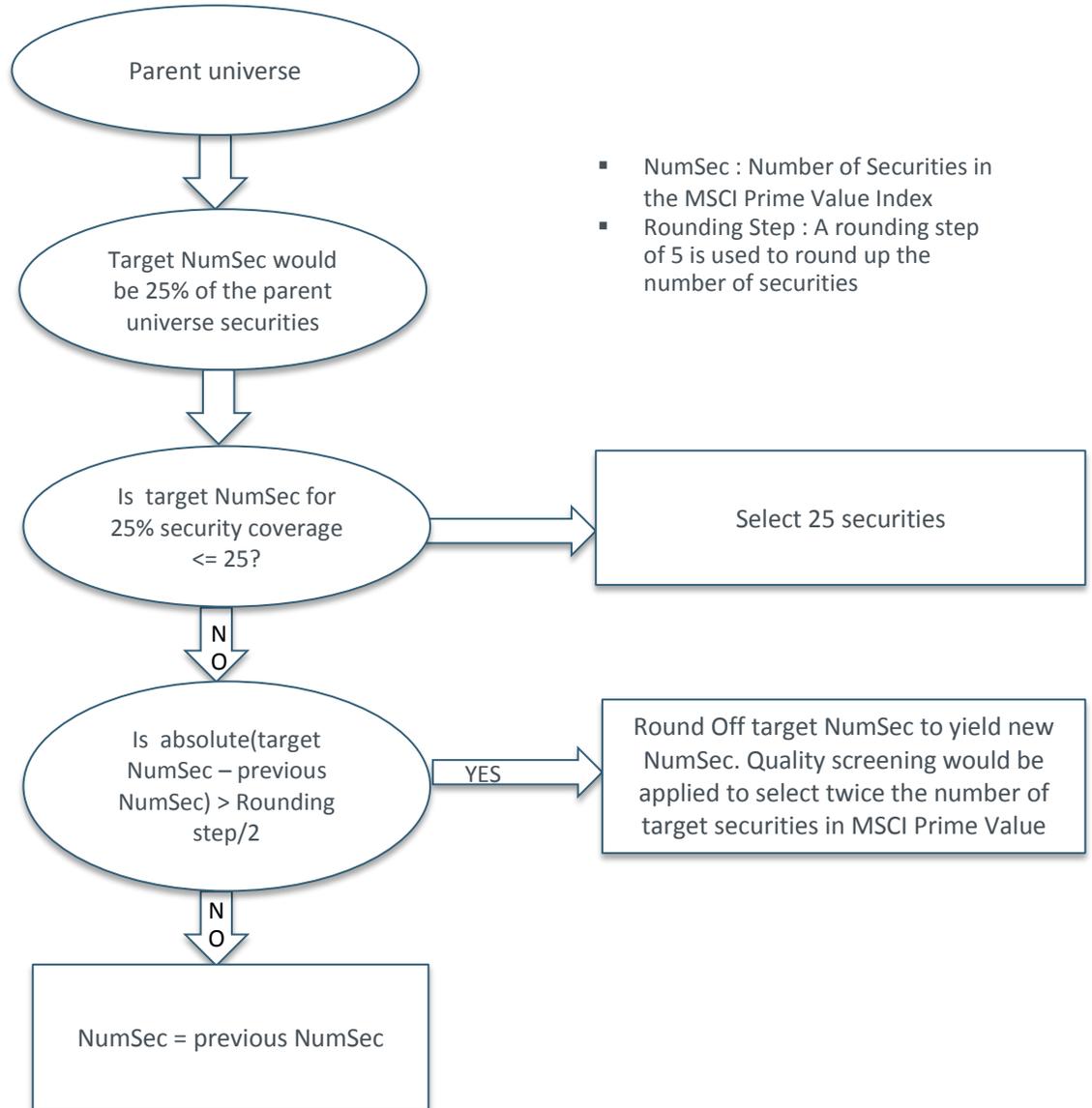
### Algorithm to Determine Fixed Number of Securities at Initial Construction

Rank the securities in the proforma parent universe in the descending order of final value score



- NumSec : Number of Securities in MSCI Prime Value Index
- Rounding Step : A rounding step of 5 is used to round up the number of securities

**Algorithm to reevaluate Fixed Number of Securities at Semi Annual Rebalancing**



- NumSec : Number of Securities in the MSCI Prime Value Index
- Rounding Step : A rounding step of 5 is used to round up the number of securities

### APPENDIX III: 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.msci.com/products/indexes/size/standard/methodology.html>

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

Event Type	Event details	Action
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

**THE FOLLOWING SECTIONS HAVE BEEN MODIFIED SINCE APRIL 2015:**

Section 3.2.2: Additions And Deletions Due To Corporate Events and Appendix IV: Corporate Events Treatment

- Clarification of corporate event maintenance rules applicable to these Indexes

Appendix II: Value Z-Score Computation

- Clarification of treatment of missing variables (Case 3 and Case 7)

## 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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