

MSCI EM 50 INDEX METHODOLOGY

August 2019

Contents

- 1 Introduction 3
- 2 Index Construction 4
 - 2.1 Defining the Selection Universe.....4
 - 2.2 Security Filters4
 - 2.3 Country Filters5
 - 2.4 Index Construction5
- 3 Index Maintenance 6
 - 3.1 Index Review 6
 - 3.1.1 Buffer Rules..... 6
 - 3.1.2 Cutoff Date for Prices Used for the Rebalancing 7
 - 3.1.3 Announcement Policy 7
 - 3.2 Ongoing Event-Related Maintenance 7
 - 3.2.1 Early Inclusions of Non-Index Constituents..... 8
 - 3.2.2 Early Deletions of Existing Constituents 8
 - 3.3 Market Reviews.....8
- 4 Index History Methodology..... 9
- Methodology Book Tracked Changes..... 10

1 Introduction

The MSCI EM 50 Index is based on the MSCI Emerging Markets Index (“Parent Index”) and includes 50 of its largest constituents, putting stronger emphasis on tradability compared to the Parent Index. To enhance index tradability, the MSCI EM 50 Index applies eligibility screens that exclude smaller emerging market countries and replaces constituent securities for selected markets with depositary receipts. The index is weighted by free float-adjusted market capitalization.

2 Index Construction

2.1 DEFINING THE SELECTION UNIVERSE

The selection universe of the MSCI EM 50 Index is based on the constituent securities of the MSCI Emerging Markets Index except for Brazil, India, Mexico and Russia¹. For these four markets the selection universe is limited to American Depositary Receipts (ADRs) and Global Depositary Receipts (GDRs) listed in New York and London of the underlying MSCI Emerging Markets Index².

Real Estate Investment Trusts (REITs) are excluded from the selection universe.

2.2 SECURITY FILTERS

Constituent securities in the MSCI EM 50 Index are subject to the liquidity requirements of the MSCI Global Investable Market Indexes³. For Brazilian, Indian, Mexican and Russian depository receipts, similar liquidity filters are applied to ensure their investability. Specifically, a depository receipt must have a 3-month Annualized Traded Value Ratio (ATVR) of at least 15%, a 12-month Annualized Traded Value Ratio (ATVR) of at least 15% and a 3-month frequency of trading of at least 80%⁴. The depository receipt must have started trading at least three months before the implementation of an index review.

Limited Investability Factors (LIFs) are applied in the MSCI Emerging Markets Index to securities with limited investability, for example in case of low foreign room for foreign investors⁵. Constituent securities of the MSCI Emerging Markets Index subject to a LIF are generally not eligible for the MSCI EM 50 Index. However, Brazilian, Indian, Mexican and Russian depository receipts remain eligible for the MSCI EM 50 Index in case a LIF is applied due to low foreign room to the underlying

¹ China A and B shares will be eligible for the selection universe starting from the May 2018 Semi-Annual Index Review.

² Only level II and level III American Depositary Receipts (ADRs) listed on the New York Stock Exchange or the NASDAQ, Global Depositary Receipts (GDRs) as well as ADRs listed on the London Stock Exchange are eligible for inclusion in the MSCI EM 50 Index.

³ Please refer to Sections 2.2.3 and 2.3.5 of the MSCI Global Investable Market Indexes Methodology for the liquidity requirements of the MSCI Global Investable Market Indexes.

⁴ In cases where the data used in the calculation of the 12-month ATVR is not available, the previous 6 months, 3 months or 1 month data will be used depending on data availability. For the 3-month ATVR and 3-month frequency of trading, 1 month data is used if 3 months data is not available.

⁵ Foreign room is defined as the proportion of shares still available to foreign investors relative to the maximum allowed.

constituent securities in the MSCI Emerging Markets Index. In such case the LIF is not applied to the depositary receipt in the MSCI EM 50 Index.

If a company has multiple share classes, only the largest security by free float-adjusted market capitalization is eligible for the MSCI EM 50 Index.

2.3 COUNTRY FILTERS

Country filters are applied in order to minimize the number of countries and currencies in the MSCI EM 50 Index. Only countries with more than three percent weight in the underlying MSCI Emerging Markets Index are included. Among the remaining countries, only countries with two or more securities ranking in the top 50 companies by free-float adjusted market capitalization are included.

2.4 INDEX CONSTRUCTION

After applying the security and country eligibility filters, the remaining securities in the eligible universe are ranked by free float-adjusted market capitalization in descending order and the largest 50 securities are identified to construct the MSCI EM 50 Index. The index is weighted by free float-adjusted market capitalization.

3 Index Maintenance

3.1 INDEX REVIEW

The composition of the MSCI EM 50 Index is fully reviewed on a quarterly basis to coincide with the regular index reviews (Semi-Annual Index Reviews in May and November and Quarterly Index Reviews in February and August) of the MSCI Global Investable Market Indexes. The changes are implemented at the end of February, May, August and November.

During the index reviews, MSCI will reassess the eligibility of constituent and non-constituent countries. Constituent countries for which the weights in the MSCI Emerging Markets Index fall below three percent but remain above two percent continue to be eligible for the MSCI EM 50 Index. Constituent countries in which there is at least one security continue to be included in the MSCI EM 50 Index. Non-constituent countries meeting the eligibility criteria described under section 2 will be included in the MSCI EM 50 Index, provided they have at least two securities eligible for addition to the MSCI EM 50 Index.

During the index reviews, the number of securities in the MSCI EM 50 Index will be restored to 50. Between the index reviews the number of index constituents may differ from 50 due to additions and deletions resulting from corporate events on existing constituents.

Index reviews may also result in changes in Foreign Inclusion Factors (FIF) and updates in number of shares for existing constituents.

If a security that is scheduled to be added to or deleted from the MSCI EM 50 Index is suspended from trading on the day before the effective implementation date of the index review, MSCI will cancel the implementation for the security. For index changes affecting number of shares or foreign inclusion factors, the implementation will be aligned with the underlying MSCI Emerging Markets Index. When the implementation of a deletion from a Parent Index is postponed, the implementation of the deletion from the indexes derived from that Parent Index will also be postponed. When the deletion is implemented in the Parent Index after the security resumes trading, the security will be simultaneously deleted from the derived index.

3.1.1 BUFFER RULES

To minimize index turnover, buffer rules will be applied to the MSCI EM 50 Index.

Brazilian, Indian, Mexican and Russian depository receipts that are constituents of the MSCI EM 50 Index remain eligible if they fail the liquidity requirements described in section 2.2⁶ but have:

- A 12-month ATVR of at least 10%
- A 3-month ATVR of at least 10%
- A 3-month frequency of trading of at least 70%

Non-constituents that satisfy all eligibility criteria and rank 35th or above in the selection universe will be added to the MSCI EM 50 Index and existing constituents that rank below 65th in the selection universe will be deleted from the MSCI EM 50 Index. If the number of securities differs from 50 after the buffer rules are applied, the lowest ranked securities within the index will be deleted, or the next highest ranked securities will be added to the MSCI EM 50 Index to restore the number of constituents to 50.

3.1.2 CUTOFF DATE FOR PRICES USED FOR THE REBALANCING

The cutoff date for prices used for the rebalancing of the MSCI EM 50 Index is the close of the 9th business day prior to the February, May, August and November quarterly index review implementation dates.

3.1.3 ANNOUNCEMENT POLICY

The results of the rebalancing are announced nine business days before the effective date of each Quarterly Index Review.

3.2 ONGOING EVENT-RELATED MAINTENANCE

With the exception of the treatment as described below, the MSCI EM 50 Index follows the event maintenance of the Parent Index. Details regarding the treatment of corporate events not covered below can be found in the MSCI Corporate Events Methodology Book, available at:

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

⁶ For liquidity buffer rules applied to current constituents of the MSCI EM 50 Index other than depository receipts, please refer to Section 3.1.2.3 of the MSCI Global Investable Market Indexes Methodology.

3.2.1 EARLY INCLUSIONS OF NON-INDEX CONSTITUENTS

A spun-off security that qualifies for immediate inclusion in the underlying MSCI Emerging Markets Index will generally be eligible for immediate inclusion to the MSCI EM 50 Index. In the event that a spun-off security that is not added to the MSCI Emerging Markets Index does not trade on the ex-date, it will remain in the MSCI EM 50 Index until it is effectively deleted from the MSCI Emerging Markets Index.

There will be no early inclusion for IPOs. Securities that are added to the underlying MSCI Emerging Markets Index between index reviews will only be considered for inclusion in the MSCI EM 50 Index during the next index review, with the exception of spun-off securities as described above.

3.2.2 EARLY DELETIONS OF EXISTING CONSTITUENTS

If a security is deleted from the underlying MSCI Emerging Markets Index due to corporate events, it will be automatically removed from the MSCI EM 50 Index. Examples are securities of companies that are acquired, file for bankruptcy, companies that file for protection from their creditors and/or are suspended and for which a return to normal business activity and trading is unlikely in the near future.

When the number of securities in the MSCI EM 50 Index falls below or rises above 50 due to corporate events, no additions or deletions will be made to restore the number of securities to 50 until the next index review.

3.3 MARKET REVIEWS

MSCI reviews on an annual basis the list of markets for which the eligible universe is restricted to depositary receipts as defined in sub-section 2.1. Changes resulting from this annual review will be implemented coinciding with the May Semi-Annual Index Review

4 Index History Methodology

The methodology used for the MSCI EM 50 Index history is identical to the ongoing methodology with the following exception:

In the index history, all securities with Foreign Ownership Limits (FOL) have been considered as non-eligible, while in the ongoing methodology only securities to which a Limited Investability Factor (LIF) is being applied in the underlying MSCI Emerging Markets Index are generally excluded. This is explained by the lack of historical data on Foreign Room, which is the main driver of the application of LIFs in the ongoing methodology.

Methodology Book Tracked Changes

The following sections have been modified since November 2012:

Section 3.1: Quarterly Index Review

- Clarification on implementation of suspended securities

The following sections have been modified since August 2017:

Section 2.2: Security Filters

- Clarification on liquidity data used during index reviews

Section 3.1.2: Cutoff Date for Prices Used for the Rebalancing

- Added new section

Section 3.1.3: Announcement policy

- Added new section

Section 3.2: Ongoing Event-Related Changes

- Added clarification

The following sections have been modified since September 2017:

Section 2.1: Selection Universe

- Updates to this section

Section 2.4: Index Construction

- Updates to this section

The following section has been modified since March 2018:

Appendix I: Inclusion of Argentinian, Saudi Arabian and China A Shares starting from the May 2019 SAIR

- Added new appendix in the context of the inclusion of Saudi Arabian securities and the weight increase of China A shares in the MSCI Emerging Markets Indexes

Appendix I: Inclusion of Argentinian, Saudi Arabian and China A Shares starting from the May 2019 SAIR

- Section removed

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 * |
| Thailand | 0018 0015 6207 7181 * |
| Tokyo | + 81 3 5290 1555 |

* = toll free

ABOUT MSCI

MSCI is a leader provider of critical decision support tools and services for the global investment community. With over 45 years of expertise in research, data and technology, we power better investment decisions by enabling clients to understand and analyze key drivers of risk and return and confidently build more effective portfolios. We create industry-leading research-enhanced solutions that clients use to gain insight into and improve transparency across the investment process.

To learn more, please visit www.msci.com.

Notice and disclaimer

This document and all of the information contained in it, including without limitation all text, data, graphs, charts (collectively, the "Information") is the property of MSCI Inc. or its subsidiaries (collectively, "MSCI"), or MSCI's licensors, direct or indirect suppliers or any third party involved in making or compiling any Information (collectively, with MSCI, the "Information Providers") and is provided for informational purposes only. The Information may not be modified, reverse-engineered, reproduced or disseminated in whole or in part without prior written permission from MSCI.

The Information may not be used to create derivative works or to verify or correct other data or information. For example (but without limitation), the Information may not be used to create indexes, databases, risk models, analytics, software, or in connection with the issuing, offering, sponsoring, managing or marketing of any securities, portfolios, financial products or other investment vehicles utilizing or based on, linked to, tracking or otherwise derived from the Information or any other MSCI data, information, products or services.

The user of the Information assumes the entire risk of any use it may make or permit to be made of the Information. NONE OF THE INFORMATION PROVIDERS MAKES ANY EXPRESS OR IMPLIED WARRANTIES OR REPRESENTATIONS WITH RESPECT TO THE INFORMATION (OR THE RESULTS TO BE OBTAINED BY THE USE THEREOF), AND TO THE MAXIMUM EXTENT PERMITTED BY APPLICABLE LAW, EACH INFORMATION PROVIDER EXPRESSLY DISCLAIMS ALL IMPLIED WARRANTIES (INCLUDING, WITHOUT LIMITATION, ANY IMPLIED WARRANTIES OF ORIGINALITY, ACCURACY, TIMELINESS, NON-INFRINGEMENT, COMPLETENESS, MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE) WITH RESPECT TO ANY OF THE INFORMATION.

Without limiting any of the foregoing and to the maximum extent permitted by applicable law, in no event shall any Information Provider have any liability regarding any of the Information for any direct, indirect, special, punitive, consequential (including lost profits) or any other damages even if notified of the possibility of such damages. The foregoing shall not exclude or limit any liability that may not by applicable law be excluded or limited, including without limitation (as applicable), any liability for death or personal injury to the extent that such injury results from the negligence or willful default of itself, its servants, agents or sub-contractors.

Information containing any historical information, data or analysis should not be taken as an indication or guarantee of any future performance, analysis, forecast or prediction. Past performance does not guarantee future results.

The Information should not be relied on and is not a substitute for the skill, judgment and experience of the user, its management, employees, advisors and/or clients when making investment and other business decisions. All Information is impersonal and not tailored to the needs of any person, entity or group of persons.

None of the Information constitutes an offer to sell (or a solicitation of an offer to buy), any security, financial product or other investment vehicle or any trading strategy.

It is not possible to invest directly in an index. Exposure to an asset class or trading strategy or other category represented by an index is only available through third party investable instruments (if any) based on that index. MSCI does not issue, sponsor, endorse, market, offer, review or otherwise express any opinion regarding any fund, ETF, derivative or other security, investment, financial product or trading strategy that is based on, linked to or seeks to provide an investment return related to the performance of any MSCI index (collectively, "Index Linked Investments"). MSCI makes no assurance that any Index Linked Investments will accurately track index performance or provide positive investment returns. MSCI Inc. is not an investment adviser or fiduciary and MSCI makes no representation regarding the advisability of investing in any Index Linked Investments.

Index returns do not represent the results of actual trading of investable assets/securities. MSCI maintains and calculates indexes, but does not manage actual assets. Index returns do not reflect payment of any sales charges or fees an investor may pay to purchase the securities underlying the index or Index Linked Investments. The imposition of these fees and charges would cause the performance of an Index Linked Investment to be different than the MSCI index performance.

The Information may contain back tested data. Back-tested performance is not actual performance, but is hypothetical. There are frequently material differences between back tested performance results and actual results subsequently achieved by any investment strategy.

Constituents of MSCI equity indexes are listed companies, which are included in or excluded from the indexes according to the application of the relevant index methodologies. Accordingly, constituents in MSCI equity indexes may include MSCI Inc., clients of MSCI or suppliers to MSCI. Inclusion of a security within an MSCI index is not a recommendation by MSCI to buy, sell, or hold such security, nor is it considered to be investment advice.

Data and information produced by various affiliates of MSCI Inc., including MSCI ESG Research LLC and Barra LLC, may be used in calculating certain MSCI indexes. More information can be found in the relevant index methodologies on www.msci.com.

MSCI receives compensation in connection with licensing its indexes to third parties. MSCI Inc.'s revenue includes fees based on assets in Index Linked Investments. Information can be found in MSCI Inc.'s company filings on the Investor Relations section of www.msci.com.

MSCI ESG Research LLC is a Registered Investment Adviser under the Investment Advisers Act of 1940 and a subsidiary of MSCI Inc. Except with respect to any applicable products or services from MSCI ESG Research, neither MSCI nor any of its products or services recommends, endorses, approves or otherwise expresses any opinion regarding any issuer, securities, financial products or instruments or trading strategies and MSCI's products or services are not intended to constitute investment advice or a recommendation to make (or refrain from making) any kind of investment decision and may not be relied on as such. Issuers mentioned or included in any MSCI ESG Research materials may include MSCI Inc., clients of MSCI or suppliers to MSCI, and may also purchase research or other products or services from MSCI ESG Research. MSCI ESG Research materials, including materials utilized in any MSCI ESG Indexes or other products, have not been submitted to, nor received approval from, the United States Securities and Exchange Commission or any other regulatory body.

Any use of or access to products, services or information of MSCI requires a license from MSCI. MSCI, Barra, RiskMetrics, IPD and other MSCI brands and product names are the trademarks, service marks, or registered trademarks of MSCI or its subsidiaries in the United States and other jurisdictions. The Global Industry Classification Standard (GICS) was developed by and is the exclusive property of MSCI and Standard & Poor's. "Global Industry Classification Standard (GICS)" is a service mark of MSCI and Standard & Poor's.

MIFID2/MIFIR notice: MSCI ESG Research LLC does not distribute or act as an intermediary for financial instruments or structured deposits, nor does it deal on its own account, provide execution services for others or manage client accounts. No MSCI ESG Research product or service supports, promotes or is intended to support or promote any such activity. MSCI ESG Research is an independent provider of ESG data, reports and ratings based on published methodologies and available to clients on a subscription basis. We do not provide custom or one-off ratings or recommendations of securities or other financial instruments upon request.

Privacy notice: For information about how MSCI ESG Research LLC collects and uses personal data concerning officers and directors, please refer to our Privacy Notice at <https://www.msci.com/privacy-pledge>.