

MSCI EMERGING MARKETS SELECT VALUE FACTOR FOCUS INDEX METHODOLOGY

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1 INTRODUCTION

The MSCI Emerging Markets Select Value Factor Focus Index (herein, “the Index”) is a custom index designed to represent the performance of a strategy that seeks higher exposure to the Value style factor.

The MSCI Emerging Markets Select Value Factor Focus Index is an optimization-based index that is constructed from the stock-level upwards using individual stock exposures to the Value style factor while the index-level risk is unconstrained at the time of rebalancing. The optimization focuses on the maximization of the target factor exposure alone and evaluates potential constituents on that basis. The MSCI Emerging Markets Select Value Factor Focus Index is rebalanced on a semi-annual basis.

2 INDEX CONSTRUCTION METHODOLOGY

The applicable universe includes all the existing constituents of the underlying MSCI Emerging Markets Index (herein, the “Parent Index”). This approach aims to provide an opportunity set with sufficient liquidity and capacity.

The MSCI Emerging Markets Select Value Factor Focus Index (herein, “the Index”) is constructed based on an optimization process from the underlying Parent Index to maximize the index-level exposure to the targeted style factor.

The steps for constructing the MSCI Emerging Markets Select Value Factor Focus Index are described below.

2.1 ELIGIBLE UNIVERSE

All the securities from the Parent Index are included in the eligible universe.

2.2 CONSTITUENT IDENTIFICATION

The selection of constituents from the eligible universe is done using the optimization process. The optimization relies on the factor exposures for all the securities in the Parent Index and is performed using a base currency. The default currency is the US Dollar.

2.3 WEIGHTING SCHEME

The optimization objective is to maximize the index-level target factor score (representative of the exposures of potential constituents to the target factor and its components) at the time of rebalancing, subject to other optimization constraints.

2.3.1 CALCULATION OF THE ALPHA SCORE

The alpha score is calculated using the same steps used for calculating the sector-relative value z-score in section 2.2 (up to section 2.2.2) of the MSCI Enhanced Value Indexes Methodology (a summary is given in Appendix III). The scores range between +/- 3 after winsorization.

2.3.2 OPTIMIZATION CONSTRAINTS

At each Semi-Annual Index Review (SAIR), the following optimization constraints are employed, which aim to ensure investability while avoiding extreme exposures relative to the Parent Index.

- No risk constraint is applied and no stock-level risk information is directly used in index construction (except the use of risk exposures alone in the constraint)

definitions). Both the common factor risk aversion and the specific risk aversion parameters used in a risk-constrained optimization are set to zero so the optimization focuses on the maximization of the target factor exposure alone and evaluates potential constituents on that basis.

- The maximum weight of an index constituent will be restricted to the lower of (the weight of the security in the Parent Index + 2%) and 10 times the weight of the security in the Parent Index. The minimum weight of an index constituent will be restricted to the higher of the (weight of the security in the Parent Index - 2%) and 0.
- The exposure of the MSCI Emerging Markets Select Value Factor Focus Index to the non-target Barra style factors will be restricted to ± 0.25 standard deviations relative to the Parent Index. The factors are defined with the current optimization risk model (presently GEM LTL).
- The sector weights of the MSCI Emerging Markets Select Value Factor Focus Index will be restricted to $\pm 5\%$ from the sector weights of the Parent Index.
- For countries with weight greater than 2.5% in the Parent Index, the weight in the MSCI Emerging Markets Select Value Factor Focus Index will be restricted to $\pm 5\%$ from the country weight in the Parent Index.
- For countries with weight less than 2.5% in the Parent Index, the weight in the MSCI Emerging Markets Select Value Factor Focus Index will be capped at 3 times their weight in the Parent Index.
- The above country weight constraint will also apply on China A Stock Connect listings as a group separately in addition to the usual country weight constraint on China.
- The one-way turnover of the MSCI Emerging Markets Select Value Factor Focus Index is constrained to a maximum of 20% at each SAIR.

2.3.3 UNCONSTRAINED STYLE FACTORS

The factors (Book-to-Price and Earnings Yield) belonging to the Value factor group along with Dividend Yield and Long-Term Reversal from the current release of the Barra Equity Model (GEM LTL) are unconstrained in the optimization. The choice of factors used within each factor group is governed by the current model used for the optimization, which may change with a new release of the Barra Equity Model. The model data will be used from previous end-of-month, prior to the rebalancing date. For more detailed information on

individual factors in current optimization risk model GEMTL, please refer to <https://www.msci.com/portfolio-management>.

2.4 DETERMINING THE OPTIMIZED INDEX

The MSCI Emerging Markets Select Value Factor Focus Index is constructed using the Barra Open Optimizer in combination with the relevant Barra Equity Model¹ which is used to implement the style factor constraints only. The optimization uses the Parent Index as the universe of eligible securities and the specified optimization objective and constraints to determine the MSCI Emerging Markets Select Value Factor Focus Index.

¹ Please refer to Appendix II

3 MAINTAINING THE INDEXES

3.1 SEMI-ANNUAL INDEX REVIEWS

The MSCI Emerging Markets Select Value Factor Focus Index is 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. The Barra Equity Model data as of the end of April and October are used respectively. This approach aims to capture timely updates to the risk characteristics of the companies and coincide with the rebalancing frequency of the relevant Parent Index. The pro forma MSCI Emerging Markets Select Value Factor Focus Index is in general announced nine business days before the effective date.

3.2 ONGOING EVENT RELATED CHANGES

The general treatment of corporate events in the MSCI Emerging Markets Select Value Factor Focus 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.

Additionally, if the frequency of Index Reviews in the Parent Index is greater than the frequency of Index Reviews in the MSCI Emerging Markets Select Value Factor Focus Index, the changes made to the Parent Index during intermediate Index Reviews will be neutralized in the MSCI Emerging Markets Select Value Factor Focus Index.

The following section briefly describes the treatment of common corporate events within the MSCI Emerging Markets Select Value Factor Focus Index.

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

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.

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.

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 book under the sections detailing the treatment of events in Capped Weighted and Non-Market Capitalization Weighted indexes.

The MSCI Corporate Events methodology book is available at:
<https://www.msci.com/index-methodology>

APPENDIX I: HANDLING INFEASIBLE OPTIMIZATIONS

During the Semi-Annual Index Review, in the event that there is no optimal solution that satisfies all the optimization constraints defined in Section 2.3.2, the following constraints will be relaxed, until an optimal solution is found:

- Relax the turnover constraint in steps of 2%, up to a maximum of 30%
- Relax the maximum weight multiple in steps of 2 up to a maximum of 5 iterations based upon the following formula

$$wm_{i+1} = 2 + wm_i \text{ for } i = 0 - 4$$

Where wm_i = Maximum weight multiple

- The turnover constraint and the maximum weight multiple are alternately relaxed until a feasible solution is achieved.

In the event that no optimal solution is found after the above constraints have been relaxed over all iterations, the relevant MSCI Emerging Markets Select Value Factor Focus Index will not be rebalanced for that Semi-Annual Index Review.

APPENDIX II: NEW RELEASE OF BARRA® EQUITY MODEL OR BARRA® OPTIMIZER

The methodology presently uses MSCI Barra Global Equity Model for Long-Term Investors (“GEMTL”) for the optimization. A new release of the relevant Barra Equity Model or Barra Optimizer may replace the former version within a suitable timeframe.

APPENDIX III: TARGET FACTOR DEFINITION SUMMARY

The targeted factor in the MSCI Emerging Markets Select Value Factor Focus Index is computed as follows:

The value score for each security is currently based on earnings-based, asset-based and whole firm based valuation and is calculated using the same steps as in section 2.2 (up to section 2.2.2) of the MSCI Enhanced Value Indexes Methodology. The value score currently uses three valuation descriptors, Forward Price to Earnings, Price to Book Value and Enterprise Value/Operating Cash Flows (EV/CFO), calculated within sectors.

THE FOLLOWING SECTIONS HAVE BEEN MODIFIED SINCE APRIL 2018:

- Section 2.3.2 has been updated to reflect the additional constraint on China A Stock Connect listings

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