MSCI USA Factor Switch Select Index

December 2023
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1 Introduction

The MSCI USA Factor Switch Select Index ("the Index") aims to represent the performance of equal weighted set of Factor Indexes, selected from a universe of six MSCI USA Factor Indexes, based on Index specific signals calculated for each of the following six MSCI USA Factor Indexes ("the Component Indexes").

- MSCI USA Value Index
- MSCI USA Growth Index
- MSCI USA Equal Weighted Index
- MSCI USA High Dividend Yield Index
- MSCI USA Quality Index
- MSCI USA Momentum Index

1 Please refer to MSCI Factor Indexes methodologies at https://www.msci.com/index-methodology for more details on each of the six Component Indexes.
2 Constructing the Index

The Index is constructed by selecting securities that belong to MSCI USA Index (“the Parent Index”). At each Monthly Index Review and at initial construction, signal values are calculated for each of the six Component Indexes as follows:

<table>
<thead>
<tr>
<th>Component Index</th>
<th>Indicator(^2)</th>
<th>Signal</th>
<th>Signal Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>MSCI USA Value Index</td>
<td>P/E MSCI USA Value Index – P/E MSCI USA Index</td>
<td>Current Month Indicator Value(^3) – Average Indicator Value(^4)</td>
<td>If Signal &gt; 0, then ‘1’ Else ‘0’</td>
</tr>
<tr>
<td>MSCI USA Growth Index</td>
<td>Spread of “P/E – P/E Fwd” MSCI USA Growth Index – Spread of “P/E – P/E Fwd” MSCI USA Index</td>
<td>Current Month Indicator Value – Average Indicator Value</td>
<td>If Signal &gt; 0, then ‘1’ Else ‘0’</td>
</tr>
<tr>
<td>MSCI USA Equal Weighted Index</td>
<td>NOC / ENOC of the MSCI USA Index</td>
<td>Average Indicator Value – Current Month Indicator Value</td>
<td>If Signal &gt; 0, then ‘1’ Else ‘0’</td>
</tr>
<tr>
<td>MSCI USA High Dividend Yield Index</td>
<td>YIELD of the MSCI USA HDY Index – YIELD of the MSCI USA Index</td>
<td>Average Indicator Value – Current Month Indicator Value</td>
<td>If Signal &gt; 0, then ‘1’ Else ‘0’</td>
</tr>
<tr>
<td>MSCI USA Quality Index</td>
<td>One-month return of MSCI USA Quality Index – One-month return of MSCI USA Index</td>
<td>Current Month Indicator Value – Average Indicator Value</td>
<td>If Signal &gt; 0, then ‘1’ Else ‘0’</td>
</tr>
<tr>
<td>MSCI USA Momentum Index</td>
<td>Three-month return of MSCI USA Index – Three-month return of MSCI USA Index</td>
<td>Current Month Indicator Value – Average Indicator Value</td>
<td>If Signal &gt; 0, then ‘1’ Else ‘0’</td>
</tr>
</tbody>
</table>

The Index allocates weight to securities of each of the six Component Indexes, as calculated below:

\(^2\) Please refer to Appendix 1 for more details on variables used in the indicator calculation namely P/E, P/E Fwd, NOC, ENOC, YIELD, One-Month Return and Three-Month Return

\(^3\) Current Indicator is the latest value of Indicator calculated as of last end of month.

\(^4\) Average Indicator is the average value of Current indicator calculated over last 6 months.
\[ W_{C_j} = \frac{SV_{C_j}}{\sum_i SV_{C_j}} \]

where:

- \( W_{C_j} \) is the target weight of the Component Index \( C_j \)
- \( SV_{C_j} \) is the signal value (0 or 1) for Component Index \( C_j \)
- \( C_j \) is one of the six component indexes as defined above

In the event, none of the Component Indexes have a signal value \( = 1 \), the Index allocates 100% weight to all the securities in MSCI USA Index i.e., the Index selects all the securities of MSCI USA index.

### 2.1 Security Weighting

At each Index Review and at initial construction, the securities selected for inclusion in the Index are assigned the weights \( W_{Sec}^{CI} \) and the weights are subsequently normalized to sum to 100%.

The weight of each security after combining the Component Indexes is calculated as follows:

\[ W_{Sec_i}^{CI} = \sum_j W_{C_j} W_{Sec_i}^{C_j} \]

where:

- \( W_{Sec_i}^{CI} \) is the weight of security \( Sec_i \) in the Index
- \( W_{C_j} \) is the target weight of the Component Index \( C_j \)
- \( W_{Sec_i}^{C_j} \) is the weight of security \( Sec_i \) in the Component Index \( C_j \)
- \( Sec_i \) refers to securities within corresponding component index \( C_j \)
3 Maintaining the Index

3.1 Monthly Index Reviews

The Index is reviewed on a monthly basis and rebalanced at the 4th business day of each month. The pro forma Index is announced three business days before the effective date.

3.2 Ongoing Event Related Changes

The following section briefly describes the treatment of common corporate events within the Index. Changes in index market capitalization that occur because of corporate event implementation will be offset by a corresponding change in the Variable Weighting Factor (VWF) of the constituent.

No new securities will be added (except where noted below) to the Index between Index Reviews. For cases where additions are noted below, securities will be added to the Index only if added to the Parent Index. Parent Index deletions will be reflected simultaneously.

<table>
<thead>
<tr>
<th>EVENT TYPE</th>
<th>EVENT DETAILS</th>
</tr>
</thead>
<tbody>
<tr>
<td>New additions to the Parent Index</td>
<td>A new security added to the Parent Index (such as IPO and other early inclusions) will not be added to the index.</td>
</tr>
<tr>
<td>Spin-Offs</td>
<td>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.</td>
</tr>
<tr>
<td>Merger/Acquisition</td>
<td>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.</td>
</tr>
<tr>
<td>Changes in Security Characteristics</td>
<td>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.</td>
</tr>
</tbody>
</table>

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:
Appendix 1: Variables used in Signal Value Calculation

The variables used in signal value calculation mentioned in Section 2 are as follows:

- **P/E**
  - P/E refers to Price to Earnings Ratio of the given Component Index as of last end of month. For more details on P/E, please refer to the MSCI Fundamental Data Methodology at [https://www.msci.com/index-methodology](https://www.msci.com/index-methodology)

- **P/E Fwd**
  - P/E Fwd refers to Price to Earnings Forward Ratio of the given Component Index as of last end of month. For more details on P/E Fwd, please refer to the MSCI Fundamental Data Methodology at [https://www.msci.com/index-methodology](https://www.msci.com/index-methodology)

- **YIELD**
  - YIELD refers to Dividend Yield of the given Component Index as of last end of month. For more details on YIELD, please refer to the MSCI Fundamental Data Methodology at [https://www.msci.com/index-methodology](https://www.msci.com/index-methodology)

- **NOC**
  - NOC refers to Number of constituents in a given Index as on last end of month

- **ENOC**
  - ENOC refers to Effective Number of Constituents of a given Index as on last end of month. It is calculated as the Inverse of the Herfindahl–Hirschman index (HHI) using Security Closing Weights of the Index as of last end of month. Herfindahl–Hirschman index (HHI) is calculated as follows:

  \[
  HHI = \sum_{i} (W_{sec_i} * W_{sec_i})
  \]

  where:

  \(W_{sec_i}\) is the closing weight of constituents as of last end of month

- **One-Month Return**
  - One-Month Return of a given index is calculated as follows:

  \[
  \text{One-Month Return} = (P_{T-1}/P_{T-2}) - 1
  \]

  where:
\( P_{T-1} \) is the Index Level of the Net return variant of a component index as of last end of month

\( P_{T-2} \) is the Index Level of the Net return variant of a component index as of month end prior to last end of month

- **Three-Month Return**
  - Three-Month Return of a given index is calculated as follows:

\[
\text{Three-Month Return} = \left( \frac{P_{T-1}}{P_{T-4}} \right) - 1
\]

where:

\( P_{T-1} \) is the Index Level of the Net return variant of a component index as of last end of month

\( P_{T-4} \) is the Index Level of the Net return variant of a component index as of month end three months prior to last end of month
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