THOMSON REUTERS ACTIVE INDICES CALCULATION METHODOLOGY

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Thomson Reuters Lipper’s Active Indices are the first active classification benchmarks available in the marketplace. They represent the various Lipper classification styles such as large-cap growth, small-cap value, or emerging markets as well as selected country specific trade group schemas (IMA). The Active Indices help fund companies fill the analytical void that has existed in explaining individual fund performance versus a given investment objective or classification (peer groups). This is done by aggregating peer group level holdings into a portfolio that allows investment professionals to understand the current and historical sector, industry, country, and security positions taken by their actively managed peers.

Constructing the Active Indices is a process that takes place each month coinciding with the frequency of portfolio collection at Lipper. The nature of Lipper’s comprehensive portfolio collection process makes it possible to construct Active Indices with a 50-day lag from the snapshot month-end date. However, Lipper creates the UK Active Indices with a 15-day lag from the snapshot month-end date. Once the batch data is completely clean and stored, two days are spent creating and testing the Active Index component mix to ensure it represents the corresponding peer group. Active Indices are created at the peer group level. Figure 1 lists the Active Index modules and the available Active Indices within each module.

Figure 1: Active Index Modules and Indices

<table>
<thead>
<tr>
<th>US Domiciled Fund Active Index Modules</th>
<th>International Classification</th>
</tr>
</thead>
<tbody>
<tr>
<td>Large-Cap Core (LCCE)</td>
<td>Real Estate (RE)</td>
</tr>
<tr>
<td>Large-Cap Growth (LCGE)</td>
<td>Natural Resources (NR)</td>
</tr>
<tr>
<td>Large-Cap Value (LCVE)</td>
<td>Health/Biotech (H)</td>
</tr>
<tr>
<td>Mid-Cap Core (MCCE)</td>
<td>Utility (UT)</td>
</tr>
<tr>
<td>Mid-Cap Growth (MCGE)</td>
<td>Financial Services (FS)</td>
</tr>
<tr>
<td>Mid-Cap Value (MCVE)</td>
<td>Science &amp; Tech (TK)</td>
</tr>
<tr>
<td>Small-Cap Core (SCCE)</td>
<td>Precious Metal Equity Funds (AU)</td>
</tr>
<tr>
<td>Small-Cap Growth (SCGE)</td>
<td>Consumer Services Funds (CS)</td>
</tr>
<tr>
<td>Small-Cap Value (SCVE)</td>
<td>Industrial Funds (ID)</td>
</tr>
<tr>
<td>Multi-Cap Core (MLCE)</td>
<td>Intl Investment Objective</td>
</tr>
<tr>
<td>Multi-Cap Growth (MLGE)</td>
<td>Global (GL)</td>
</tr>
<tr>
<td>Multi-Cap Value (MLVE)</td>
<td>International GL</td>
</tr>
<tr>
<td>Equity Income (EIEI)</td>
<td>International (IF)</td>
</tr>
<tr>
<td>International Small Cap (IS)</td>
<td>International Small/Mid Cap Core (ISMC)</td>
</tr>
<tr>
<td>European Region (EU)</td>
<td>International Small/Mid Cap Growth (ISMG)</td>
</tr>
<tr>
<td>Emerging Markets (EM)</td>
<td>International Small/Mid Cap Value (ISMV)</td>
</tr>
<tr>
<td>Pacific Region (PC)</td>
<td>International Sector</td>
</tr>
<tr>
<td>China Region (CH)</td>
<td>International Real Estate (GRE)</td>
</tr>
<tr>
<td>Pacific ex Japan (XJ)</td>
<td>Global Natural Resources (GNR)</td>
</tr>
<tr>
<td></td>
<td>International Real Estate (IRE)</td>
</tr>
</tbody>
</table>

1 Investment objectives are based on prospectus language and classifications are based on full fund holdings.
Each classification Active Index is constructed using the portfolios collected from the latest month-end date. Not all fund companies report portfolio holdings to Lipper on a monthly basis, so the Active Indices are created from the sample of funds that do. E.g., if a fund reports on a monthly basis, their holdings would be included in all monthly indices and if a fund reports on a quarterly basis, their holdings would be included in four monthly indices. Coverage (i.e., number of portfolios used to create an Active Index) for any given peer group fluctuates somewhat from month to month.

Lipper’s objective is to create active benchmarks that closely mimic the performance movements of their respective peer groups. Since portfolio coverage varies from month to month, the Active Index is tested on how well its performance matches with that of the peer group average total return gross of expenses. Gross peer group return is calculated using Lipper’s standard gross return calculation stored in the global calculation database. Active Index should maintain an extremely tight tracking error with its peer group performance over corresponding time periods. The annualized tracking error threshold for US diversified equity funds is 1% and 1.5% for all other peer groups.  

Equally important in constructing an Active Index is the fact that portfolio data is secure and impossible to trace to particular funds. In addition, fund size doesn’t matter. Active Index component weights are aggregated based on each security’s percentage of total assets in the portfolio. Using security percent of total assets to determine component weights is a unique method that allows us to create fund benchmarks where the funds are equally weighted and the component securities are market weighted. This helps to preserve continuity across portfolios with various amounts of assets under management and at the same time provides a representative, market weighted security benchmark. This process should be communicated to clients in an effort to reduce embargo periods.

All securities including the cash portion of the Active Index represent a simple average of the percent of total net assets held in each security across the portfolios used to build the index. Market values are determined for each security based on the product of aggregated weight (percent of total net assets) multiplied to the constant index market value of $10 billion. Security market values are then divided by the corresponding month-end prices to get share values.

**INCLUSION CRITERIA**

**Fund Classification Methodologies for Active Indices**

- Lipper Global Equity Classifications, IMA and ABI Equity and Mixed Asset Classifications.

**Portfolio Inclusion Criteria for the Current Month**

- 30 days delivery time plus 10 days to pass internal quality assurance – where a universe delivers more timely data, the system will run on exceptions.
- After portfolio holdings disclosure embargoes have been applied.
- Historical portfolios inclusion: all available portfolios in the system meeting the Active Indices maintenance requirements (see below).

**Fund Type Inclusion Criteria**

- Funds eligible to be used in Active Indices include: Open-end funds in the Mutual Fund database. UK unit trusts for the ABIAI’s.
Fund Type Exclusion Criteria
The following types of funds are not eligible to be used in Active Indices: Index funds (Index Tracker Attribute), exchange traded funds and fund of funds (FoF External and Internal attribute). iii

Eligible Securities
The following security types are eligible to be used in an Active Index portfolio: Common stocks, preferred stocks, depository receipts, cash (including cash equivalents) and ETFs with no look-through. All securities must have a minimum market capitalization of $100 million USD. iv

ACTIVE INDICES CREATION AND MAINTENANCE REQUIREMENTS
In order to maintain statistically representative classification indices, the following Active Indices creation and maintenance hurdles will be applied. v

<table>
<thead>
<tr>
<th>Launch</th>
<th>Maintenance</th>
</tr>
</thead>
<tbody>
<tr>
<td>Sector/Classification portfolio count</td>
<td>Minimum 5 unique</td>
</tr>
<tr>
<td>Portfolio available for AI Counts (Holdings in production ready to go)</td>
<td>Minimum 5 unique</td>
</tr>
<tr>
<td>AND</td>
<td></td>
</tr>
<tr>
<td>Portfolio Coverage</td>
<td>Average number of portfolios &gt;= 30% over the last 12 months and no less than 20% in the current month</td>
</tr>
<tr>
<td>AND</td>
<td></td>
</tr>
<tr>
<td>TNA Coverage</td>
<td>Average TNA coverage &gt;= 15% over the last 12 months and no less than 10% in the current month</td>
</tr>
</tbody>
</table>

INDEX CREATION PROCESS
1. Calculate Average Security Weights Including Cash
1.1 Rules for Creating Average Percent of TNA Values
First, Lipper groups all funds by peer group and portfolio date. Only one unique instance of each security (including cash) will appear as a component in the final list (i.e., Active Index portfolio). Because many securities have multiple share classes and/or trade on multiple exchanges, each with a unique identifier, Lipper conducts an aggregation process (1.2).

1.2 Aggregation
Aggregate securities including ADRs (adjusted by the ADR-to-share ratio) and foreign listings by parent company (key is the primary RIC maintained by Reuters vi). Cash equivalents must be identified and included in the cash weighting for each portfolio prior to calculating averages. vii

1.3 Calculate Averages
Generate an average of the percent of TNA values for each security including cash across the portfolios of the particular peer group by using the following equation: a/n where:

a = the sum of all of the percent of TNA values for every instance of a particular security or cash. n = all portfolios in a given peer group for a given month used to create the Active Index.

For example, if within the large-cap value AI for 31.12.2005, after the prior two steps, we know that MSFT (Microsoft) has a combined weight of 2.5% and there were 41 total portfolios used to create the AI. So we divide .025/41 = .00061 to derive the average weight.
The value .00061 is the initial “weight” that will be assigned to MSFT for the large-cap value AI for 30.12.2005. Later on, this initial weight will be used to calculate a market value, a new weight, and finally a simulated shares value for that component in the index.

1.4 Exclude Securities with an Aggregated Weight of Zero

1.5 Create Cash Row and Column Data – Prepare to add cash as rows to table

Because cash is a component security in each index, the cash data as calculated above is coupled with a peer group code, identifier and price. Cash should be referenced in the currency assigned to the index. The currency assigned to the index is the primary currency for the sector itself.

For example all US AI’s will use the following reference for cash:

<table>
<thead>
<tr>
<th>ID</th>
<th>Price</th>
</tr>
</thead>
<tbody>
<tr>
<td>CASH_USD</td>
<td>$1</td>
</tr>
</tbody>
</table>

2. Trim the Index Constituents List

First, scale the weights including cash. Do this by calculating a sum of the market values. Divide each individual security’s market value by the sum of the index market value to create the revised weight. After this revision, the sum of the market cap weights will now sum to 1.

2.1 Trim Smallest 1% of Weights Excluding Cash

Sort the weights created above in descending order (includes cash). In a column next to the weights, begin to sum the weights. The first row of data in this new column is the weight of the first security. The second row is the sum of the second security’s weight plus the weight in row 1 of the new column as seen in the table below under the heading “sum of weights.” When the exercise is complete for all securities in the index including cash, the sum of weights will be one. The purpose of this step is to manage the list of securities while still maintaining the integrity of the index.

Note: Due to a legacy issue and a lack of developing resources, the code itself multiplies the weights by US$10 Bil prior to the sort. This does not change results but needs to be recognized during testing.

<table>
<thead>
<tr>
<th>Micro Obj</th>
<th>Portfolio Date</th>
<th>Cusip</th>
<th>Symbol</th>
<th>Holding Name</th>
<th>Shares</th>
<th>Price</th>
<th>Market Value</th>
<th>Weight</th>
<th>Sum of Weights</th>
</tr>
</thead>
<tbody>
<tr>
<td>LCVE</td>
<td>1/31/00</td>
<td>94974610</td>
<td>WFC</td>
<td>Wells Fargo</td>
<td>5002164.03</td>
<td>454</td>
<td>2270982470</td>
<td>0.43623115</td>
<td>0.436231155</td>
</tr>
<tr>
<td>LCVE</td>
<td>1/31/00</td>
<td>45900101</td>
<td>IBM</td>
<td>Intl Busine</td>
<td>2516339.08</td>
<td>854</td>
<td>1645685758</td>
<td>0.316118424</td>
<td>0.75259879</td>
</tr>
<tr>
<td>LCVE</td>
<td>1/31/00</td>
<td>00000000</td>
<td>CASH_USD</td>
<td>CASH_USD</td>
<td>568000000</td>
<td>1</td>
<td>568000000</td>
<td>0.109106623</td>
<td>0.861456232</td>
</tr>
<tr>
<td>LCVE</td>
<td>1/31/00</td>
<td>61744644</td>
<td>MWD</td>
<td>Morgan St</td>
<td>3530013.63</td>
<td>77</td>
<td>271811049.5</td>
<td>0.052211961</td>
<td>0.91368193</td>
</tr>
<tr>
<td>LCVE</td>
<td>1/31/00</td>
<td>44181510</td>
<td>HI</td>
<td>Household</td>
<td>5519979.09</td>
<td>43</td>
<td>237359100.9</td>
<td>0.045594114</td>
<td>0.954523807</td>
</tr>
<tr>
<td>LCVE</td>
<td>1/31/00</td>
<td>88020810</td>
<td>TXN</td>
<td>Texas Instr</td>
<td>2502894.74</td>
<td>84</td>
<td>160185263.4</td>
<td>0.030769855</td>
<td>0.969230183</td>
</tr>
<tr>
<td>LCVE</td>
<td>1/31/00</td>
<td>25816101</td>
<td>AXP</td>
<td>American E</td>
<td>2076008.84</td>
<td>24</td>
<td>49886607.36</td>
<td>0.009582877</td>
<td>0.990417223</td>
</tr>
<tr>
<td>LCVE</td>
<td>1/31/00</td>
<td>70387G10</td>
<td>SBC</td>
<td>SBC Commu</td>
<td>486550.2</td>
<td>4</td>
<td>2005100000</td>
<td>0.00038516</td>
<td>1</td>
</tr>
</tbody>
</table>

2.2 Remove the securities representing less than 1% of the index

Identify the security in which the sum of weights exceeds 1%. Remove all securities starting from zero to the first security identified with a sum of weights in excess of 1%.

3. Reweigh Index with Remaining Securities Including Cash

Now that the securities representing the bottom 1% of weights has been trimmed, revised market values are created. For the remaining securities including cash in each index, sum the market values.

Divide each individual security’s market value by the sum of the index market value to create the revised weight. After this revision, the sum of the market cap weights will now sum to 1.
4. Create Index Market Values
Initial market values are created by multiplying the percent of TNA weights for each security and cash by $10 billion.

5. Final Data Table
5.1 Create Share values in various currencies
Shares are calculated by dividing the security market values by their respective price in the primary currency for a given sector. At this point, we no longer need the market value column for client delivery. However, the market value column is valuable for testing, and client queries therefore should be stored.

Final table content and specifications:
investment objective/classification code
portfolio date
identifier
name
shares
price USD
market value USD
price EUR
market value EUR
price GBP
market value GBP
price CHF
market value CHF
price JPY
market value JPY

5.2 Update Portfolio Dates to Trade Dates
The final step is to convert the portfolio dates from month-end dates to last trading day of the month dates.

ADDITIONAL SPECIFICATIONS
Pricing Source
Lipper uses prices from the Reuters Ratios and Statistics File RAS. The price field used within the RAS file is NPRICE and the pricing date field is PDATE.

Frequency
The Active Indices are created once every month. The indices are based on portfolio data that has a 50-day lag except UK, where there is only a 15-day lag.

Portfolio Dates
Group funds with a portfolio date within three calendar days (inclusive) of the month-end date. Give these funds a new portfolio date (for the purpose of the AIs) of the last trading day of the month. For example, all fund holdings files delivered to Lipper with a portfolio date of 27.09.2001, 28.09.2001, 29.09.2001, or 30.09.2001 should be grouped together and given a "new" portfolio date of 28.09.2001.

Date format is dd.mm.yyyy. Funds with a portfolio date NOT within three calendar days (inclusive) of the month-end date should be disregarded.
Treatment of Short Positions

Short positions are netted against long positions and net short positions are allowed even if unlikely to occur.

Asset Allocation Requirements

Asset allocation requirements are based on the Lipper fund classification definitions (see above Fund classification methodologies for Active Indices). Active Indices for Mixed Asset classifications will only be calculated on their respective equity and cash portion.

Index Suspension

When an index does not anymore meet the minimum maintenance requirements, the index will be suspended. In order for the index to be reestablished, the minimum launch requirements must be met again. Once the launch requirements are met, and if the intervening months meet a minimum of 20% portfolio coverage and 10% TNA coverage, then where possible the missing months will be calculated. If the historical minimums can not be met or it is not feasible to calculate the missing data, then an index is relaunched with a price of 100. Lipper will store the old index as obsolete for future reference.

Custom Active Indices

Custom Active Indices can be created with a specific list of target funds from a single Lipper fund classification. General index creation and maintenance requirements will apply as defined above (see Active Indices Creation and Maintenance Requirements section on page 5) depending on delivery method. Meaning if Lipper produces the index, it must meet requirements; however, if the calculation is used in desktop applications, the maintenance requirements may not apply. The funding list may contain more than one classification in which case the creation and maintenance requirements apply for each classification.

Further detail around custom indices will follow based on future product enhancements.

Third-Party Attribution Providers

Lipper strives to work with its partners in order to recognize 99.5% of the securities in an active index.