## GUIDELINE

## CIBC U.S. TRENDLEADERS INDEX

Version 2.0 dated June, 2017

## Introduction

This document is to be used as a guideline with regard to the composition, calculation, and management of the CIBC U.S. TrendLeaders Index (the "Index"). Any changes made to the guideline are initiated by the Committee specified in section 1.3. The Index is calculated and published by the Index Calculator.

The Index employs a mechanical trend model designed to produce an objective and systematic multifactor driven share allocation for the Index. The Index is initially linked to the performance of an equally weighted basket (the "Underlying Portfolio") of 50 shares (the "Index Components") that meet the screening criteria described below.

The Underlying Portfolio is re-screened on each Monthly Rescreening Date, which may lead to substitutions in the Underlying Portfolio on the Rebalance Dates.

## 1 Index Specifications

The constituents of the Index are selected by a proprietary quantitative trend model developed by the Index Sponsor, which selects a portfolio of U.S. listed stocks using monthly rankings generated by the methodology of the Index. The Index was launched June 2017. The Index is owned by CIBC. The Index employs a proprietary trend valuation methodology that is designed to systematically and objectively select and rank stocks based on the duration and longevity of the underlying trend-strengths of the stocks. The methodology of the Index assumes that stock prices tend to trend and that trends tend to persist over time. The Index is designed to filter eligible stocks for the best trend-continuation/acceleration stocks. The Index rebalances monthly in order to remove the weakening (or stagnating) trend-scoring stocks and replace them with a new set of higher trend-scoring candidates for the next month. The Index is published in U.S. dollars. Other than as described in Section 2.4 - Fallback Event below, Exchange traded funds will not be included in the Index.

### 1.1 Distribution

The Index is published via the price marketing services of Boerse Stuttgart AG and is distributed to all affiliated vendors. Each vendor decides on an individual basis as to whether the vendor will distribute/display the Index via the vendor's information systems.

### 1.2 Prices and Calculation Frequency

The value of the Index is calculated on each Business Day based on the prices on the respective Exchanges on which the Index Components are listed. The most recent prices of all Index Components are used.

The Index is calculated once every Business Day at $4: 55$ pm, EST. In the event that data cannot be provided to Reuters or to the pricing services of Boerse Stuttgart AG the Index cannot be distributed.

Any incorrect calculation is adjusted on a retrospective basis.

### 1.3 Decision-Making Bodies

A Committee, composed of members of the Index Sponsor is responsible for decisions regarding the composition of the Index as well as any amendments to the rules (in this document referred to as the "Committee" or the "Index Committee").

### 1.4 Publication

All specific and information relevant for calculating the Index are made available on the webpage of the Index Calculator (http://www.solactive.com)

### 1.5 Licensing

Licenses, if any, to use the Index as the underlying value/index for index funds, exchange traded funds, or derivative instruments are issued to stock exchanges, banks, financial services providers, and investment houses by the Index Sponsor.

## 2 Composition of the Index

### 2.1 Eligible Stocks

The stocks that are eligible for inclusion in the Index are all actively-traded shares in the Solactive US Large Cap Index and the constituents of the Solactive US Large \& Mid Cap Index which are not constituents of the Solactive US Large Cap Index (the "Solactive US Mid Cap Subgroup"), which in each case have a 4 -week average daily traded dollar value volume of at least US $\$ 5,000,000$ as of the inception of the Index. The Index will exclude any shares where, in the determination of the Index Calculator, there is a reasonable expectation that there may be a material reduction in the liquidity of a share as a consequence of an impending corporate action, regulatory action, delisting or other material event affecting a share. The average daily traded dollar value volume threshold is indexed to the prevailing Solactive US Large Cap Index level for the Index calculations subsequent to the launch of the Index.

### 2.2 Monthly Rebalancing

The Index selects the stocks at the close of the last Exchange Day of each month (the "Monthly Rescreening Date"). The Index is then rebalanced at the market close on the second Trading Day following the Monthly Rescreening Date (the "Rebalance Date"), moving to the new stock selections following each Monthly Rescreening Date.
If the Solactive US Large Cap Index and the Solactive US Mid Cap Subgroup, as applicable, is closed on a day that would ordinarily be an Exchange Day, pricing and volume data are carried over from the previous Exchange Day.

### 2.3 Monthly Rescreening

The Index Sponsor uses the methodology of the Index to determine the composition of the Index on the last Exchange Day of each month. The Index applies 12 trend factors to each of the eligible stocks. Five factors have both an absolute measure, where the factor is applied only to the share price, and a relative measure, where the factor is applied to the ratio of the share price and the level of the S\&P 500® Index (share price divided by the S\&P $500 ®$ Index level). There are two additional factors with an absolute measure applied to the share price only.
A factor score is determined by one or more formulae. For each eligible share, the formulae are applied to calculate a moving average over various specified periods, from 14 days to up to 350 days. For example, for the Relative Strength Index ("RSI") factor, a formula is applied to calculate a 14-day, 30-day and 63day moving average. Depending on the results of these calculations, the eligible share will be assigned a specified positive, negative, or nil score for that factor. For example, for the RSI factor, if the formula produces a result $>60$ for the 14-day moving average, the share will be assigned a positive score of 0.17 . This process is followed for each of the 12 factors for each of the eligible stocks. The possible positive scores for the 12 factors range from +0.06 to +1.14 and the possible negative scores for the 12 factors range from -0.06 to -1.14 . All of the positive, negative and nil scores for a stock are then added to produce a total score for the stock of between +10 and -10 . The Index Sponsor will periodically review and readjust the numeric weight assigned to each factor.
After a total score has been calculated for each of the eligible stocks, the stocks are further filtered and ranked by applying additional formulae comprising select components of the total scores which capture further trend factors, respectively among the stocks that are constituents of the Solactive US Large Cap Index and the Solactive US Mid Cap Subgroup. The Index is composed of the 30 highest ranking stocks of the Solactive US Large Cap Index and the 20 highest ranking stocks of the Solactive US Mid Cap Subgroup. The Index is then rebalanced to the new stock selections in the manner described above.
The 12 factors are as follows:
Relative Strength Index - RSI is like a momentum indicator that compares the magnitude and speed of price movements. It compares price gains of the stock on days that close above the previous day's close
to price losses on days that close below previous day's close. In a trending environment RSI should remain elevated. RSI attempts to determine overbought and oversold conditions of a stock.
Relative Strength Index (Relative) - A moving average RSI is calculated over different timeframes for the ratio of the price of the stock and the level of the S\&P $500 ®$ Index (stock price $\div$ S\&P $500 ®$ Index level). In a trending environment RSI for the ratio should remain elevated.

Moving Average - Moving Average ("MA") is an average of a stock's closing price over a specific period. When a price crosses above the MA from below, it provides a bullish signal and when a price crosses below the MA from above, it provides a bearish signal.
Moving Average (Relative) - A MA is calculated over different timeframes for the ratio of price of the stock and the level of the S\&P 500® Index (stock price $\div$ S\&P 500® Index level). When the ratio crosses above the MA from below, it provides a bullish signal and when the ratio crosses below the MA from above, it provides a bearish signal.
Moving Average Convergence-Divergence - Moving Average Convergence-Divergence ("MACD") is another measure of trend and momentum that shows the difference between two exponential moving averages (EMA) of the closing prices of a stock. A signal line is then formed. MACD can be used in a few ways as a trend indicator. Firstly, zero-line crossovers imply a growing divergence between shorter-term and longer-term EMAs and can be used as a signal for increasing momentum. Secondly, signal line crossovers can be used as a bullish signal, when MACD crosses above the signal line, or as a bearish signal, when MACD crosses below the signal line. Finally, divergences, when the stock price is heading in the opposite direction to the direction of the MACD, can be used as a warning of a potential trend reversal.
Moving Average Convergence-Divergence (Relative) - A back-tested MACD is used to calculate two exponential moving averages of the closing value of the ratio of the stock performance relative to the performance of the S\&P 500® Index over different timeframes. Positive or negative values are generated on the crossover points.
Directional Movement Index - Directional Movement Index ("DMI") is another trend indicator that measures the strength of a directional move (up or down) using today's high and low prices relative to the previous day's high and low prices. DMI, similar to RSI, is based on the theory that an uptrend sees higher highs, and a downtrend sees lower lows. A derivative of DMI, the Average Directional Movement Index (ADX), is used in conjunction with DMI and is a technical indicator which identifies a trend and measures its strength.
Stochastics - The Stochastic indicator compares a stock's closing price to its price range over a specific period of time. As an upward trend matures, prices tend to close further away from their high; as a downward trend matures, prices tend to close away from their low. The Stochastic indicator attempts to determine when prices start to cluster around their low of the day in an up-trending market, and cluster around their high in a downtrend, indicating that a trend reversal is starting to occur.
Stochastics (Relative) - The Stochastic indicator for the relative performance compares the ratio of the stock performance relative to the performance of the S\&P 500® Index to its range over a specific period of time. As an upward trend matures, the relative performance readings tend to close further away from their high; as a downward trend matures, ratio readings tend to close away from their low.
On Balance Volume \& Chaikin Moneyflow - On Balance Volume is an indicator which measures accumulation/distribution forces. It determines whether volume is flowing in or out of a given stock by adding volume on up days and subtracting volume on down days from a running total of the measure. Chaikin Moneyflow ("MF") is an indicator which measures buying and selling pressure for a given period of time for a specific stock. Instead of simply relying on the volume reading as a measure of accumulation or distribution, MF adjusts the volume based on the strength of price move during the day.

Rate of Change - Rate of Change ("ROC") is a measure of momentum, calculating the strength of a price move over a specific time period. ROC oscillates and often centers around the zero line as the ROC moves from positive to negative, with the obvious assumption for no upper limit but bounded by $-100 \%$ on the lower side.

Rate of Change (Relative) - This is a measure for the relative performance velocity or momentum, calculating the outperformance or underperformance of stock price relative to the S\&P $500 ®$ Index over different timeframes.

### 2.4 Fallback Event

In the event that the filtering of the eligible stocks described above result in numbers of eligible stocks falling below the required minimum of 30 from the Solactive US Large Cap Index and 20 from the Solactive US Mid Cap Subgroup, the Index in the following Month will be linked to the performance of an equally weighted basket of SPDR S\&P 500 Trust ETF, iShares iBoxx \$ Investment Grade Corporate Bond ETF and SPDR Gold Shares (the "Fallback Portfolio").

### 2.5 Adjustments

The Index will be adjusted for distributions, capital increases and stock splits, as determined by the Index Sponsor. Dividends and other distributions are included in the Index on their ex-dividend dates. If a stock in the Index is subject to the occurrence of certain events, including events that may have a diluting or concentrating effect on the theoretical value of the stock, or events that prevent the Exchange from providing closing prices for a stock, such as the termination, suspension or prolonged interruption of trading for a stock on the Exchange, the Index Sponsor may take certain actions specified in the Index methodology, including adjustments to the price of the stock in the Index or the formula for calculating the return of the stock, or the determination of interim closing prices for the stock or the removal of the stock from the Index.

The Index Calculator will calculate the closing level of the Index on each Exchange Day based on the closing prices of the stocks in the Index on each such Exchange Day and post the Index level no later than 9:00 pm (New York time) on each Exchange Day on Reuters and a webpage administered by the Index Calculator. The Index Calculator will use Reuters in determining the closing prices of the stocks included in the Index.

### 2.6 Accuracy

The value of the Index will be rounded to 2 decimal places.
The Number of Index Shares of the Index Components will be rounded to integers.
Trading Prices will be rounded to six decimal places.
Divisors will be rounded to six decimal places.

### 2.7 Adjustments

Indices need to be adjusted for systematic changes in prices once these become effective. This requires the new Number of Index Shares of the affected Index Component and the Divisor to be calculated on an ex-ante basis.

Following the Calculation Agent's decision the Index is adjusted for distributions, capital increases and stock splits.

This procedure ensures that the first ex quote can be properly reflected in the calculation of the Index. This ex-ante procedure assumes the general acceptance of the Index calculation formula as well as open access to the parameter values used. The calculation parameters are provided by the Index Calculator.

### 2.8 Dividends and other distributions

Dividend payments and other distributions are included in the Index. They cause an adjustment of the Divisor. The new Divisor is calculated as follows:
$\left.D_{t+1}=D_{t} * \frac{\sum_{i=1}^{n}\left(p_{i, t} \quad * \quad x_{i, t}\right)-\left(\begin{array}{llll}x_{i, t} & * & g_{i, t}\end{array}\right)}{\sum_{i=1}^{n}\left(p_{i, t} *\right.} \quad * x_{i, t}\right) \quad$,
With
$p_{i, t} \quad=$ Price of Index Component i on Trading Day t
$x_{i, t} \quad=$ Number of Index Shares of the Index Component i on Trading Day t
$y_{i, t} \quad=$ Distribution of Index Component i with ex-date $t+1$ multiplied by the Dividend Correction Factor
$D_{t} \quad=$ Divisor on Trading Day t
$D_{t+1} \quad=$ Divisor on Trading Day $t+1$

In case of the price return Index version, only special cash dividends are redistributed across the Index in the above way, meanwhile the total return version of the Index incorporates all (regular and special) cash distributions in its performance.

### 2.9 Corporate actions

### 3.5.1 Principles

Following the announcement by an Index Component issuer of the terms and conditions of a corporate action the Index Sponsor will determine whether such corporate action has a dilutive, concentrative or similar effect on the price of the respective Index Component.

If this should be the case, the Index Sponsor shall make the necessary adjustments that are deemed appropriate in order to take into account the dilutive, concentrative or similar effect and shall determine the date on which this adjustment shall come into effect for the Index.

The Index Calculator may take into account the adjustment made by an Affiliated Exchange as a result of the corporate action with regard to option and futures contracts on the respective share traded on this Affiliated Exchange.

### 3.5.2 Capital increases

In the case of capital increases with ex-date $t+1$ the Index is adjusted as follows:

$$
x_{i, t+1}=x_{i} * \frac{1+B}{1} \quad \text { with: }
$$

$$
\mathrm{x}_{\mathrm{i}, \mathrm{t}+1} \quad=\text { Number of Index Shares of Index Component } i \text { on Trading Day } \mathrm{t}+1
$$

$$
\mathrm{x}_{\mathrm{i}, \mathrm{t}} \quad=\text { Number of Index Shares of Index Component } \mathrm{i} \text { on Trading Day } \mathrm{t}
$$

$$
\text { B } \quad=\text { Shares received for every share held }
$$

$$
p_{i, t+1}=\frac{p_{i, t}+s^{*} B}{1+B} \quad \text { with: }
$$

$$
\mathrm{p}_{\mathrm{i}, \mathrm{t}} \quad=\text { Price of Index Component } \mathrm{i} \text { on Trading Day } \mathrm{t}
$$

$$
p_{i, t+1}=\text { Hypothetical Price of Index Component } i \text { on Trading Day } t+1
$$

$$
\text { s } \quad=\text { Subscription Price in the Index Component currency }
$$

$$
\begin{aligned}
& D_{t+1}=D_{t} * \frac{\sum_{i=1}^{n}\left(\begin{array}{lll}
p_{i, t} & * & \left.\left.x_{i, t}\right)+\sum_{i=1}^{n}\left[\begin{array}{lll}
x_{i, t+1} & \left.* p_{i, t+1}\right)
\end{array}\right)-\left(\begin{array}{lll}
x_{i, t} & * p_{i, t}
\end{array}\right)\right] \\
\sum_{i=1}^{n}\left(\begin{array}{lll}
p_{i, t} & * & x_{i, t}
\end{array}\right) \\
\text { with } \\
p_{i, t} & =\text { Price of Index Component i on Trading Day t } \\
x_{i, t} & =\text { Number of Index Shares of the Index Component i on Trading Day } \mathrm{t} \\
p_{i, t+1} & =\text { Hypothetical price of Index Component i on Trading Day t+1 } \\
x_{i, t+1} & =\text { Number of Index Shares of the Index Component i on Trading Day } \mathrm{t}+1
\end{array}\right.}{D_{t} \quad=\text { Divisor on Trading Day t }} \\
& D_{t+1} \quad=\text { Divisor on Trading Day t+1 }
\end{aligned}
$$

### 3.5.3 Share splits

In the case of share splits with ex-date on Trading Day $t+1$ it is assumed that the prices change in ratio of the terms of the split. The new Number of Index Shares is calculated as follows:
$\mathrm{x}_{\mathrm{i}, \mathrm{t}} \quad=$ Number of Index Shares of the affected Index Component on Trading Day t
$\mathrm{x}_{\mathrm{i}, \mathrm{t}+1} \quad=$ Number of Index Shares of the affected Index Component on Trading Day $\mathrm{t}+1$
B = Shares after the share split for every share held before the split

### 3.5.4 Stock distributions

In the case of stock distributions with ex-date on Trading Day $t+1$ it is assumed that the prices change according to the terms of the distribution. The new Number of Index Shares is calculated as follows:
$x_{i, t+1}=x_{i, t} *(1+B)$
$\mathrm{x}_{\mathrm{i}, \mathrm{t}} \quad=$ Number of Index Shares of the affected Index Component on Trading Day t
$\mathrm{X}_{\mathrm{i}, \mathrm{t}+1}=$ Number of Index Shares of the affected Index Component on Trading Day $\mathrm{t}+1$
B = Shares received for every share held

### 2.10 Calculation of the Index in the event of a Market Disruption Event

The Index is not calculated in the event of a Market Disruption Event or in the event of force majeure. If the Market Disruption Event or the event of force majeure continues over a period of eight Trading Days, then the Committee will determine the necessary action (including but not limited to taking into account the market conditions prevailing at this point in time, the last quoted Trading Price for each of the Index Components as well as any other conditions that it deems relevant for calculating the Index value) such that the affected securities resulting from the Market Disruption Event are no longer causing such disruption to occur.

## 3 Definitions

An "Affiliated Exchange" is with regard to an Index Component an exchange, a trading or quotation system on which options and futures contracts on the Index Component in question are traded, as specified by the Index Calculator.
"Business Day" means a day on which the New York Stock Exchange is open.
An Index Component is "Delisted" if the Exchange announces pursuant to the Exchange regulations that the listing of, the trading in or the issuing of public quotes on the Index Component at the Exchange has ceased immediately or will cease at a later date, for whatever reason (provided delisting is not because of a Merger or a Takeover bid), and the Index Component is not immediately listed, traded or quoted again on an exchange, trading or listing system, acceptable to the Index Calculator.
"Exchange" means the exchange or trading system from which prices of securities are used from time to time in the computation of the closing level of the Index, subject to Market Disruption Event.

## An "Extraordinary Event" is

- a Merger
- a Takeover bid
- a delisting
- a change in domiciled country
- the Nationalisation of a company
- Insolvency

The Trading Price for this Index Component on the day the event came into effect is the last available market price for this Index Component quoted on the Exchange on the day the event came into effect (or, if a market price is not available for the day the event came into effect, the last available market price quoted on the Exchange on a day specified as appropriate by the Index Calculator), as determined by the Index Calculator, and this price is used as the Trading Price of the particular Index Component until the end of the day on which the composition of the Index is next set.

In the event of the Insolvency of an issuer of an Index Component the Index Component shall remain in the Index until the next Adjustment Day. As long as a market price for the affected Index Component is available on a Business Day, this shall be applied as the Trading Price for this Index Component on the relevant Business Day, as determined in each case by the Index Calculator. If a market price is not available on a Business Day the Trading Price for this Index Component is set to zero. The Committee may also decide to eliminate the respective Index Component at an earlier point in time prior to the next Adjustment Day. The procedure in this case is identical to an elimination due to and Extraordinary Event.

The "Index Calculator" is Solactive AG or any other appropriately appointed successor in this function.
"Index Component" is each share currently included in the Index.
The "Index Currency" is the U.S. dollar.
"Index Sponsor" means CIBC World Markets Inc.
"Insolvency" occurs with regard to an Index Component if (A) all shares of the respective issuer must be transferred to a trustee, liquidator, insolvency administrator or a similar public officer as result of a voluntary or compulsory liquidation, insolvency or winding-up proceedings or comparable proceedings affecting the issuer of the Index Components or (B) the holders of the shares of this issuer are legally enjoined from transferring the shares.
"Market Capitalization" is with regard to each of the shares in the Index on a Rescreening Day or Ordinary Adjustment Day the value published as the Market Capitalization for this day. As at the date of this document Market Capitalization is defined as the value of a company calculated by multiplying the number of shares outstanding of the company by its share price.

A "Market Disruption Event" is defined as a Business Day where the Index Component is not published.

With regard to an Index Component a "Merger" is
(i) a change in the security class or a conversion of this share class that results in a transfer or an ultimate definite obligation to transfer all the shares in circulation to another legal person,
(ii) a merger (either by acquisition or through forming a new structure) or a binding obligation on the part of the issuer to exchange shares with another legal person (except in a merger or share exchange under which the issuer of this Index Component is the acquiring or remaining company and which does not involve a change in security class or a conversion of all the shares in circulation),
(iii) a takeover offer, exchange offer, other offer or another act of a legal person for the purposes of acquiring or otherwise obtaining from the issuer $100 \%$ of the shares issued that entails a transfer or the irrevocable obligation to transfer all shares (with the exception of shares which are held and controlled by the legal person), or
(iv) a merger (either by acquisition or through forming a new structure) or a binding obligation on the part of the issuer of the share or its subsidiaries to exchange shares with another legal person, whereby the issuer of the share is the acquiring or remaining company and it does not involve a change in the class or a conversion of the all shares issued, but the shares in circulation directly prior to such an event

The "Merger Date" is the date on which a Merger is concluded or the date specified by the Index Calculator if such a date cannot be determined under the law applicable to the Merger.
"Nationalisation" is a process whereby all shares or the majority of the assets of the issuer of the shares are nationalised or are expropriated or otherwise must be transferred to public bodies, authorities or institutions.
"Number of Shares" is in respect of an Index Component and any given Business Day the number or fraction of shares included in the Index. It is calculated for any Index Component as the ratio of (A) the Percentage Weight of an Index Component multiplied by the Index value and $(B)$ its Trading Price.
"Ordinary Adjustment Date" is the second Trading Day of each month.
"Percentage Weight" of an Index Component is the ratio of its Trading Price multiplied by its Number of Shares divided by the Index value.
"Stock Substitute" includes in particular American Depository Receipts (ADR) and Global Depository Receipts (GDR).

A "Takeover bid" is a bid to acquire, an exchange offer or any other offer or act of a legal person that results in the related legal person acquiring as part of an exchange or otherwise more than $10 \%$ and less than $100 \%$ of the voting shares in circulation from the issuer of the Index Component or the right to acquire these shares, as determined by the Index Calculator based on notices submitted to public or selfregulatory authorities or other information considered by the Index Calculator to be relevant.
"Trading Day" means a day on which the New York Stock Exchange is open.
With regard to an Index component (subject to the provisions given above under "Extraordinary Events") the "Trading Price" in respect of a Trading Day is the closing price on this Trading Day determined in accordance with the Exchange regulations. If the Exchange has no closing price for an Index Component, the Index Calculator shall determine the Trading Price and the time of the quote for the share in question in a manner that appears reasonable to him.

