

INDEX GUIDELINE

RBC Tactical Equity Index Family

Version 1.0

06 February 2019

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INTRODUCTION

This document (the "Guideline") is to be used as a guideline with regard to the composition, calculation and maintenance of the Index Family. Any changes made to the Guideline are initiated by the Committee specified in Section 1.5. The Index Family is calculated and published by Solactive AG. The name "Solactive" is trademarked.

It contains the underlying principles and rules regarding the structure and operation of the RBC Tactical Equity Index Family (the "Indices"). Solactive AG shall make every effort to implement the applicable regulations. Solactive AG does not offer any explicit or tacit guarantee or assurance, neither pertaining to the results from the use of the Indices nor the Index values at any certain point in time nor in any other respect. The Indices are merely calculated and published by Solactive AG and it strives to the best of its ability to ensure the correctness of the calculation. There is no obligation for Solactive AG – irrespective of possible obligations to issuers – to advise third parties, including investors and/or financial intermediaries, of any errors in the Indices. The publication of the Indices by Solactive AG does not constitute a recommendation for capital investment and does not contain any assurance or opinion of Solactive AG regarding a possible investment in a financial instrument based on these Indices.



1 INDEX SPECIFICATIONS

- > The RBC Tactical Equity Index Family (the "Indices") are Indices of RBC Capital Markets and are calculated and distributed by Solactive AG.
- > RBC Tactical Equity Index Family is a multi-asset total return index family. The family of indices provides equity exposure through front month futures contracts. On a monthly basis, each of the indices has either of the 2 allocations below:
 - Corresponding front month futures contract and the US Federal Funds Effective Rate (equity – total return component), or;
 - US Federal Funds Effective Rate only (fixed income component)
- > The monthly allocation of each of the indices in the family is based on a Tactical Trigger, calculated based on the Moving Average of the futures contracts corresponding ETF. On a monthly basis, if the level of the corresponding ETF is greater than its Moving Average, the Tactical Equity Index will be allocated to the equity – total return component; otherwise, the Tactical Index will be allocated to the fixed income component. The days which are included on the calculation of the Moving Average are shown in Section 5.2.

1.1 SHORT NAME AND ISIN

The Indices are distributed under the identifiers stated in section 5.1.

1.2 INITIAL VALUE

The Indices will be based on 100 on the Base Date.

1.3 DISTRIBUTION

The Indices are 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 it will distribute/display the Indices via its information systems.

1.4 PRICES AND CALCULATION FREQUENCY

The price of each Index is calculated on each Trading Day based on the settlement prices on the respective Exchanges on which the respective Index Components are listed. The most recent settlement prices of all Index Components are used. Should there be no current settlement price available, the most recent settlement price on Reuters for the preceding Trading Day is used in the calculation.

The Index is calculated once a Business Day. In the event that data cannot be provided to the pricing services of Boerse Stuttgart AG the Indices cannot be distributed.



1.5 OVERSIGHT

A Committee composed of staff from Solactive AG (the “Committee” or the “Index Committee”) is responsible for decisions regarding the composition of the Indices as well as any amendments to the rules.

Members of the Committee can recommend changes to the Guideline and submit them to the Committee for approval.

1.6 PUBLICATION

All specifications and information relevant for calculating the Index are made available on the <http://www.solactive.com> web page and sub-pages.

1.7 HISTORICAL DATA

Historical data will be maintained from the Base Date of the Indices.

1.8 LICENSING

Licenses to use the Index as the underlying value for derivative instruments are issued to stock exchanges, banks, financial services providers and investment houses by RBC Capital Markets.

2 CALCULATION OF THE INDICES

2.1 TERMS AND NOTATIONS

$I(t)$ = Index Value on Trading Day t

$I(t - 1)$ = Index Value on the Trading Day immediately preceding Trading Day t

MDE = Market Disruption Event

$TR(t)$ = Most recent Target Weight Rebalancing Day before Trading Day t

$CM(t)$ = Month of Trading Day t

$NCM(t)$ = Month following the month of Trading Day t

$BD(t; m)$ = Trading Day Count of Trading Day t relative to calendar month m , for example:

$$BD(12/17/15; 12/15) = 13$$

$$BD(12/01/15; 12/15) = 1$$

$$BD(11/30/15; 12/15) = 0$$

$$BD(11/26/15; 12/15) = -2$$

HRP = Hedge Roll Period, defined as a set of consecutive Trading Days starting on the First Roll Day, on which the Lead Contract Month Future is rolled into the Next Contract Month Future. The number of Trading Days in the set is defined by the Hedge Roll Days.



HRD = Hedge Roll Days, defined as the number of Trading Days on which the Lead Contract Month Future is rolled into the Next Contract Month Future. The number of Trading Days in the set is defined by the Hedge Roll Days, i.e. 1.

FRD = First Roll Day, i.e. the second Trading Day before the third Friday of the month in which the Last Trading Day of the Lead Contract Month Future falls.

HRW(t) = Hedge Roll Weight on Trading Day t, defined as follows:

$$HRW(t) = \begin{cases} 1 & t \leq FRD \\ 0 & \text{else} \end{cases}$$

P(L, t) = Settlement Price of the Lead Contract Month Future on Trading Day t

P(N, t) = Settlement Price of the Next Contract Month Future on Trading Day t

ARW(t) = Actual Roll Weight on Trading Day t, defined as follows:

$$ARW(t) = \begin{cases} ARW(t-1) & \text{if MDE happens on } t \\ HRW(t) & \text{else} \end{cases}$$

DIF(L, t) = Daily Increment Factor of the Lead Futures Contract, defined as follows:

$$DIF(L, t) = \frac{TW(TR(t))}{P(L, t-1)}$$

DIF(N, t) = Daily Increment Factor of the Next Futures Contract, defined as follows:

$$DIF(N, t) = \frac{TW(TR(t))}{P(N, t-1)}$$

IR(t) = applicable Interest Rate on Trading Day t

DCF(t) = Number of calendar days between Trading Day t and Trading Day t-1, divided by 360

RI(t) = Reference ETF value on Trading Day t

WAC = The most recent Target Weight Calculation Day before Target Weight Rebalancing Day $TR(t)$

MA(i, t) = The i-day Moving Average of the Reference ETF closing values, calculated on Trading Day t, based on all published Reference ETF closing values. i is given in Section 5.2.

TW(TR(t)) = Target Weight on $TR(t)$

2.2 INDEX FORMULA

The Index Value on Trading Day t is calculated in accordance with the following formula:

$$I(t) = I(t-1) + I(t-1) * \{DIF(L, t) * ARW(t) * [P(L, t) - P(L, t-1)] + DIF(N, t) * (1 - ARW(t)) * [P(N, t) - P(N, t-1)] + IR(t-1) * DCF(t)\}$$



2.3 TARGET WEIGHT CALCULATION

On each Target Weight Rebalancing Day, the Target Weight is calculated as follows:

$$TW(TR(t)) = \begin{cases} 1 & \text{if } RI(WAC) > MA(i, WAC) \\ 0 & \text{otherwise} \end{cases}$$

2.4 ACCURACY

- > The value of the Index will be rounded to eight decimal places for the purpose of the calculation and rounded to two decimals for the purpose of publication.

2.3 MARKET DISRUPTION EVENT

From time to time, market disruption events may occur that will result in the postponement of an Index and/or the adjustment of the roll period. A Market Disruption Day will be deemed to have occurred if any of the following events occur:

- i. The Settlement Price of a Future Contract, currently included in the index or to be included on the next Trading Day, is not published by the Exchange on a Scheduled Trading Day;
- ii. The Settlement Price of a Future Contract, currently included in the index or to be included on the next Trading Day, is a Limit price (as defined by the applicable Exchange);

If any of these events occur on a non-Target Weight Rebalancing Day, no immediate action will be taken, but in case of missing Settlement Prices, if the applicable Exchange publishes a Settlement Price later, the Index will be restated for that particular Trading Day. If any of these events occur on a Target Weight Rebalancing Day, the Rebalancing of the corresponding Underlying Index to its Target Weight will be postponed to the next Trading Day where no Market Disruption have occurred.

If the Market Disruption Event 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 Prices 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.

If a Market Disruption Event happens in regards to one or more ETFs on the Target Weight Calculation Day, the Moving Average is calculated based on the i-th valid prices before the Target Weight Calculation Day, not including the prices on the Target Weight Calculation Day itself.

2.4 MISCELLANEOUS

2.4.1 Recalculation

Solactive AG makes the greatest possible efforts to accurately calculate and maintain its indices. However, the occurrence of errors in the index determination process cannot be ruled out. In such cases Solactive AG adheres to its publicly available [Correction Policy](#).



3 DEFINITIONS

"Trading Day" means any day in which the Exchange is open and publishes a Contract Settlement Price for the Designated Relevant Contracts.

"Target Weight Rebalancing Day" is the Trading Day two Trading Days preceding the third Friday of each month

"Target Weight Calculation Day" is the Trading Day two Trading Days preceding the Target Weight Rebalancing Day.

"Exchange" means the Chicago Mercantile Exchange (CME) and the Intercontinental Exchange (ICE).

"Extraordinary Event" is referring to the case if one or more contracts mentioned in the roll schedule under Section 4.4 are not listed anymore.

The "Index Calculator" is Solactive AG or any other appropriately appointed successor in this function.

The "Index Currency" is USD.

A "Market Disruption Event" is defined in Section 2.4.

The "Base Date" is the 16th December 2009.

"Interest Rate" means the Federal Funds Effective Rate.

"Lead Contract Month future" means the future contract with the earliest last trading day equal or greater than the current Trading Day.

"Next Contract Month future" means the future contract with the earliest last trading day equal or greater than the last trading day of the Lead Contract Month future.

4 CHANGES IN CALCULATION METHOD

The application by the Index Calculator of the method described in this document is final and binding. The Index Calculator shall apply the method described above for the composition and calculation of the Index. However, it cannot be excluded that the market environment, supervisory, legal, financial or tax reasons may require changes to be made to this method. The Index Calculator may also make changes to the terms and conditions of the Index and the method applied to calculate the Index that it deems to be necessary and desirable in order to prevent obvious or demonstrable error or to remedy, correct or supplement incorrect terms and conditions. The Index Calculator is not obliged to provide information on any such modifications or changes. Despite the modifications and changes, the Index Calculator will take the appropriate steps to ensure a calculation method is applied that is consistent with the method described above.



5 APPENDIX

5.1 Indices in the RBC Tactical Equity Index Family

Name	ISIN	Reuters-RIC
RBC Emerging Market Tactical Equity Total Return Index	DE000SLA6T89	.RBCEETUT
RBC International Developed Tactical Equity Total Return Index	DE000SLA6T97	.RBCEITUT
RBC Large Cap US Tactical Equity Total Return Index	DE000SLA6UA8	.RBCELTUT
RBC Small Cap US Tactical Equity Total Return Index	DE000SLA6UH3	.RBCESTUT

5.2 Index details

RIC	Future	Exchange	Reference ETF	Moving Average Days i
.RBCEETUT	MSCI Emerging Markets Future	ICE	iShares MSCI Emerging Markets ETF	100
.RBCEITUT	MSCI EAFE Future	ICE	iShares MSCI EAFE ETF	100
.RBCELTUT	E-mini S&P 500 Future	CME	SPDR S&P 500 ETF Trust	200
.RBCESTUT	E-mini Russell 2000 Future	CME	iShares Russell 2000 ETF	100

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