

## **GUIDELINE**

# **Solactive Emerging Markets Consumer Technology Index (GTR)**

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This document contains the underlying principles and regulations regarding the structure and the operating of the Solactive Emerging Markets Consumer Technology Index (GTR). Solactive AG shall make every effort to implement regulations. Solactive AG does not offer any explicit or tacit guarantee or assurance, neither pertaining to the results from the use of the Index nor the Index value at any certain point in time nor in any other respect. The Index is 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 Index. The publication of the Index by Solactive AG is no 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 this Index.

# Introduction

This document is to be used as a guideline with regard to the composition, calculation and management of the Solactive Emerging Markets Consumer Technology Index (GTR). Any changes made to the guideline are initiated by the Committee specified in section 1.6. The Index is calculated and published by Solactive AG. The name “Solactive” is trademarked.

## 1 Index specifications

The Solactive Emerging Markets Consumer Technology Index (GTR) (the “Index”) is an Index of Solactive AG and is calculated and distributed by Solactive AG.

The Index is a Gross Total Return Index.

The Index is published in USD.

### 1.1 Short name and ISIN

The Index is distributed under ISIN DE000SLA3017; the WKN is SLA301. The Index is published in Reuters under the code .SOLEMCT and in Bloomberg under the code SOLEMCT Index.

### 1.2 Initial value

The Index is based on 100 at the close of trading on the start date, June 13<sup>th</sup>, 2012.

### 1.3 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 he will distribute/display the Index via his information systems.

### 1.4 Prices and calculation frequency

The price 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. Prices of Index Components not listed in the Index Currency are translated using spot foreign exchange rates quoted by Reuters. Should there be no current price available on Reuters, the most recent price or the Trading Price on Reuters for the preceding Trading Day is used in the calculation.

The Index is calculated every Business Day from 9:00am to 10:30pm, CET. In the event that data cannot be provided to Reuters or to the pricing services of Boerse Stuttgart AG the Index cannot be distributed.

## 1.5 Weighting

On each Adjustment Day, each Index Component of the Solactive Emerging Markets Consumer Technology Index (GTR) is ranked according to their Market Cap as of Selection Day. The companies are then divided into three groups and receive the following weights based on their ranks:

Rank	Weight
1 to 10	3.5%
11 to 30	2.5%
31 to 50	0.75%

If on any Adjustment Day, the number of components is below 50, weights are rescaled proportionally such that the sum of weights is 1.

A maximum weight of 40% per Country of top geographic revenue is applicable. If after the procedure above, the 40% cap is breached, the following steps will be taken: Stocks from the respective Country of top geographic revenue which have the smallest Market Capitalization values are removed until country weight is below or equal to 40%. To reach 50 companies in the index once again, companies from the eligible universe (excluding respective Country top geographic revenue) are selected based on highest Market Capitalization.

## 1.6 Decision-making bodies

A Committee composed of staff from Solactive AG 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"). The future composition of the Index is determined by the Committee on the Selection Days according to the procedure outlined in 2.1 of this document. The Committee shall also decide about the future composition of the Index, if any Extraordinary Events should occur and the implementation of any necessary adjustments.

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

## 1.7 Publication

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

## 1.8 Historical data

Historical data will be maintained from the launch of the Index on August 23<sup>rd</sup>, 2017.

## 1.9 Licensing

Licences to use the Index as the underlying value for derivative instruments are issued to stock exchanges, banks, financial services providers and investment houses by Solactive AG.

## 2 Composition of the Index

### 2.1 Selection of the Index Components

The initial composition of the Index as well as any ongoing adjustment is based on the following rules:

On the Selection Days, Solactive defines its Index Universe, a selection pool described in section 4. To be eligible for selection, stocks are screened as follows:

1. On the selection day, stocks should have a minimum 3 month ADV of 1 million USD
2. On the selection day, stocks should have a minimum Market Cap of 500 million USD

From the remaining stocks, the 50 largest companies according to Market Cap are selected to be in the index. Each stock is then weighted according to Market Cap, as described in section 1.5. If less than 50 companies are eligible, the index will be composed of the number of stocks that pass the above criteria.

### 2.2 Ordinary adjustment

The composition of the Index is adjusted quarterly. The composition of the Index is reviewed on the Selection Day and necessary changes are announced..

The first quarterly adjustment will be made in September 2017

Solactive AG shall publish any changes made to the Index composition on the Selection Day and consequently with sufficient notice before the Adjustment Day.

### 2.3 Extraordinary adjustment

An extraordinary adjustment, if applicable, is triggered and applied in compliance with the rules set forth in the [Guideline for Extraordinary Corporate Actions](#).

## 3 Calculation of the Index

### 3.1 Index formula

The Solactive Emerging Markets Consumer Technology Index (GTR) is an index whose value on a Business Day is equivalent to the sum overall Index Components of the products of (a) the Number of Shares of the Index Component and (b) the price of the Index Component at the respective Exchange.

As a formula:

$$Index_t = \sum_{i=1}^n x_{i,t} * p_{i,t}$$

With:

$x_{i,t}$  = Number of Shares of the Index Component i on Trading Day t

$p_{i,t}$  = Price of Index Component i on Trading Day t in Index Currency

### 3.2 Accuracy

The value of the Index will be rounded to two decimal places.

The Number of Shares of the Index Components will be rounded to six decimal places.

Trading Prices and foreign exchange rates will be rounded to six decimal places.

### 3.3 Adjustments

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

The Index is adjusted for distributions, capital increases, rights issues, splits, par value conversions and capital reductions.

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 Solactive AG.

Any delay in calculating the new Number of Shares of an Index Component would create problems. Therefore the procedure described above is the most appropriate.

### 3.4 Dividends and other distributions

Dividend payments and other distributions are included in the Index. They cause an adjustment of the Number of Shares of the corresponding Index Component. The new Number of Shares is calculated as follows:

$$x_{i,t} = x_{i,t-1} * \frac{p_{i,t-1}}{p_{i,t-1} - D_{i,t}}$$

With:

$x_{i,t}$  = Number of Shares of the Index Component i on Trading Day t

$D_{i,t}$  = Payment on Trading Day t

### 3.5 Corporate actions

#### 3.5.1 Principles

Following the announcement by a company included in the Index of the terms and conditions of a corporate action the Index Calculator determines whether such corporate action has a dilution, concentration or other effect on the price of the Index Component.

If this should be the case the Index Calculator shall make the necessary adjustments to the affected Index Component and/or the formula for calculating the Index and/or to other terms and conditions of this document that he deems appropriate in order to take into account the dilution, concentration or other effect and shall determine the date on which this adjustment shall come into effect.

Amongst other things the Index Calculator can 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 (from the company's own resources or through cash contributions) the new Numbers of Shares are calculated as follows:

$$x_{i,t} = x_{i,t-1} * \frac{p_{i,t-1}}{p_{i,t-1} - rB_{i,t-1}} \quad \text{with:} \quad rB_{i,t-1} = \frac{p_{i,t-1} - B - N}{BV + 1}$$

With:

$x_{i,t}$  = Number of Shares of Index Component i on the day of the distribution

$x_{i,t-1}$  = Number of Shares of Index Component i on the day prior to the distribution

$p_{i,t-1}$  = Closing price on the day prior to ex-date

$rB_{i,t-1}$  = Calculated value of rights issue



$B$	= Price of rights issue
$N$	= Dividend disadvantage
$BV$	= Subscription ratio

$B = 0$  if capital is increased from the company's own resources.

The last dividend paid or the announced dividend proposal is applied as the dividend disadvantage.

### 3.5.3 Capital reductions

In the case of capital reductions the new Number of Shares is determined as follows:

$$x_{i,t} = x_{i,t-1} * \frac{1}{H_{i,t}}$$

With:

$H_{i,t}$	= Reduction ratio of the company on day t
$x_{i,t}$	= Number of Shares of the affected Index Component on the day of the distribution
$x_{i,t-1}$	= Number of Shares of the affected Index Component on the day prior to the distribution

### 3.5.4 Share splits and par value conversions

In the case of share splits and par value conversions it is assumed that the prices change in ratio to the number of shares or to the par values. The new Number of Shares is calculated as follows:

$$x_{i,t} = x_{i,t-1} * \frac{N_{i,t-1}}{N_{i,t}}$$

With:

$N_{i,t-1}$	= Former par value of security class i (or new number of shares)
$N_{i,t}$	= New par value of security class i (or former number of shares)
$x_{i,t}$	= Number of Shares of the affected Index Component on the day of the distribution
$x_{i,t-1}$	= Number of Shares of the affected Index Component on the day prior to the distribution

## **3.6 Miscellaneous**

### **3.6.1 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](#).

### **3.6.2 Market Disruption**

In periods of market stress Solactive AG calculates its indices following predefined and exhaustive arrangements set out in its publicly available [Disruption Policy](#).

#### 4. Definitions

“Index Universe” in respect of a Selection Day are companies that fulfill the following criteria:

1. Top country of revenue in any of the emerging markets countries, classified according to the Solactive Country Classification Framework. The complete classification framework can be found under the following [link](#) .
2. Only the primary listing of a stock is eligible. If the stock is primarily listed in one of the following exchanges, it is not eligible: Shanghai, Shenzhen, OTC exchanges.
3. Stocks are only eligible if classified according to one or more of the following RBICS categories:

Level	Number	Name
Industry	1010151015	Administrative Software and Services
Industry	5520151515	Business Intelligence Software
Industry	5520102010	Colocation and Data Center Services
Industry	5520153510	Communications Infrastructure Software
Industry	5520103510	Consumer Content Providers
Industry	5515153515	Customer Premises Network Security Equipment
Industry	5520151525	Customer Relationship Management Software
Industry	5520152510	Educational Software
Industry	5515301510	Electronic Components Distributors
Industry	3030101530	Electronic Transaction Processing/Clearinghouses
Industry	5520151530	Enterprise Resource Planning Software
Industry	1510102020	Food Delivery Services
Industry	1510101515	Gaming Industries
Industry	5515153520	General Carrier Edge and Access Equipment
Industry	5515152510	General Communications Equipment
Industry	5520152515	Handheld and Smart Phone Software
Industry	5520152015	Handheld/Smart Phone Games Software
Industry	5520101010	Information and News Content Providers and Sites
Industry	5520102510	Internet Support Services
Industry	5010201515	Internet Pharmacies and Drug Retail
Industry	5520152525	Multi-Type Home and Office Software
Industry	5520153530	Network Infrastructure Software
Industry	5520152020	Online Game Websites and Software
Industry	5025101010	Other Educational Services
Industry	5520151540	Other Enterprise Management Software
Industry	1510103020	Travel Agencies
Industry	1515101520	Video Entertainment and Programming Providers
Industry	5520103515	Web-Related Content Providers
Subindustry	401010151015	Aerospace and Defense IT Services
Subindustry	101010101535	Online Marketing and Advertising Support Services
Subindustry	552010000000	Media Download and Streaming Digital Content Sites

3. Stocks are also eligible if classified under FactSet “Industries”:

Industry	3550	Internet Retail
Industry	3320	Internet Software/Services
Industry	3545	Catalog/Specialty Distribution

“**Index Component**” is each share currently included in the Index.

“**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.

“**Percentage Weight**” of an Index Component is the ratio of its Trading Price multiplied by its Number of Shares divided by the Index value.

“**Exchange**” is, in respect of Index and every Index Component, the respective primary exchange where the Index Component has its primary listing. The Committee may decide to declare a different stock exchange the “Exchange” for trading reasons, even if the company is only listed there via a Stock Substitute.

“**Stock Substitute**” includes in particular American Depository Receipts (ADR) and Global Depository Receipts (GDR).

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.

A “**Trading Day**” is in relation to the Index or an Index Component a Trading Day on the Exchange (or a day that would have been such a day if a market disruption had not occurred), excluding days on which trading may be ceased prior to the normal Exchange closing time. The Index Calculator is ultimately responsible as to whether a certain day is a Trading Day with regard to the Index or an Index Component or in any other connection relating to this document.

A “**Business Day**” is any day from Monday to Friday.

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

The “**Index Currency**” is USD.

“**Market Capitalization**” is with regard to each of the shares in the Index Universe on a Selection Day or 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.

“**Adjustment Day**” is the second Wednesday of March, June, September, December

“**Selection Day**” is the Business Day 10 Business Days before the Adjustment Days.

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.

## **5 Appendix**

### **5.1 Contact data**

#### **Information regarding the Index concept**

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### **5.2 Calculation of the Index – change 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, which he 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.