# Guideline relating to the AKTIONÄR Titan 20 Index (DAT20)

Version 1.0 dated February 14th, 2017

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This document contains the underlying principles and regulations regarding the structure and the operating of the AKTIONÄR Titan 20 Index (the "Index"), owned by Boersenmedien AG and calcuted by Solactive AG. 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 Index. 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 copyrighted.

# 1 Index specifications

The AKTIONÄR Titan 20 Index (the "**Index**") is an Index of Boersenmedien AG and is calculated and distributed by Solactive AG.

The Index is a net total return index, i.e. tax-adjusted dividends will be reinvested. The Index is published in EUR.

## 1.1 Short name and ISIN

The Index is distributed under ISIN DE000SLA1144; the WKN is SLA114. The Index is published in Reuters under the code < .DAT20TR > and in Bloomberg under the code < DAT20TR Index >.

#### 1.2 Initial value

The Index is based on 100 at the close of trading on February 17th, 2017.

### 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 daily Index Closing Level is calculated using the WMCO fixings as at 4pm London time.

The Index is calculated every Business Day from 9:00 am to 22:00 pm, 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. Any incorrect calculation is adjusted on a retrospective basis.

# 1.5 Weighting

On the close of each Adjustment Date the Index Components of the Index are equally weighted.

# 1.6 Decision-making bodies

A Committee composed of staff from Boersenmedien AG is responsible for decisions regarding the composition of 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 set by the Committee on the Selection Days by choosing from the Selection Pool. The Committee shall also decide about the future composition of the Index in the event that any Extraordinary Events occurs or any necessary adjustments are implemented by the Index Calculator.

Members of the Committee can recommend at any time changes to the composition of the Index or to the Index Manual 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 <a href="http://www.solactive.com">http://www.solactive.com</a> web page and sub-pages.

## 1.8 Historical data

Historical data will be maintained from the launch of the Index on February 20th, 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 is set by the Committee. The Selection Pool defines the share universe from which the Index Committee chooses 20 shares according to the following criteria: outstanding position in the market, unique product portfolio, high long-term growth prospects, strong cash flow. As of February 20th, 2017, shares issued by 20 companies (each an "Index Component") constitute the Index:

Company Name	RIC	Initial Weight*
APPLE INC	AAPL.OQ	5,00 %
ALLIANZ	ALVG.DE	5,00 %
AMAZON.COM INC	AMZN.OQ	5,00 %
BARRICK GOLD CORP	ABX.TO	5,00 %
BB BIOTECH AG	BION.S	5,00 %
CONTINENTAL	CONG.DE	5,00 %
DIAGEO PLC	DGE.L	5,00 %
WALT DISNEY CO/THE	DIS.N	5,00 %
DEUTSCHE TELEKOM	DTEGn.DE	5,00 %
ELECTRONIC ARTS INC	EA.OQ	5,00 %
EXPEDIA INC	EXPE.OQ	5,00 %
FACEBOOK INC	FB.OQ	5,00 %
ALPHABET INC C-SHARES	GOOG.OQ	5,00 %
ALTRIA GROUP INC	MO.N	5,00 %
MICROSOFT CORP	MSFT.OQ	5,00 %
NOVO NORDISK A/S	NOVOb.CO	5,00 %
NVIDIA CORP	NVDA.OQ	5,00 %
ROYAL DUTCH SHELL PLC-A		5,00 %
SHS	RDSa.AS	
SAP SE	SAPG.DE	5,00 %
VISA INC-CLASS A SHARES	V.N	5,00 %

<sup>\*</sup>values are rounded to 2 decimal places.

# 2.2 Ordinary adjustment

The composition of the Index is ordinarily adjusted four times a year. The Adjustment Day is five Business Days after the Selection Day.

The composition of the Index is reviewed by the Committee on the Selection Day, which is the fourth Friday of March, June, September and December of a year.

The first adjustment will be made in March 2017 based on the Trading Prices of the Index Components on the Adjustment Day.

Solactive AG shall publish any changes made to the Index composition with sufficient notice before the Adjustment Day publicly available on the Solactive webpage.

# 2.3 Extraordinary adjustment

The Committee may, but is under no obligation to, substitute an Index Component with a successor Index Component upon the occurrence of an Extraordinary Event as determined by Solactive AG. Any such successor Index Component shall be included in the Index after the close of business on the day when an Extraordinary Event has been determined by Solactive AG.

## 3 Calculation of the Index

## 3.1 Index formula

The Index is an index whose value on a Business Day is equivalent to the sum over all Index Components of the products of (a) the Number of Shares of the Index Component and (b) the price of the Index Component in the Index Currency at the respective Exchange. Further, a management fee is subtracted on a daily basis from the Index Value.

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 Business Day t, calculated according to the following formula:

If t-1 is an Adjustment Day R:

$$\mathbf{x}_{i,t} = \left(1 - \frac{\mathsf{MF}}{365} \ x \ \mathsf{DCF}\right) x \frac{\mathbf{w}_i \ x \ \mathsf{Index}_R}{\mathsf{p}_{i,R}}$$

If t-1 is not an Adjustment Day:

$$\mathbf{x}_{i,t} = \left(1 - \frac{MF}{365} \ x \ DCF\right) x \ \mathbf{x}_{i,t-1}$$

 $p_{i,t}$  = Closing Value of Index Component i on Trading Day t in the respective Index Currency

w<sub>i</sub> = Weight in percent of Index Component i on the Adjustment Day R immediately at the open of
Business Day t, as provided by the Index Sponsor

*MF* = Management fee in percent per annum, i.e. 1.2%

DCF = Day count fraction, number of calendar days between Business Day t-1 (excluded) and Business Day t (included)

## 3.2 Accuracy

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

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

Trading Prices will be rounded to four decimal places.

# 3.3 Adjustments

The Index is adjusted for distributions, capital increases, rights issues, splits, par value conversions and capital reductions. This requires the new Number of Index Shares of the affected Index Component to be calculated on an ex-ante basis.

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.

#### 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

 $x_{i,t-1}$  = Number of Shares of the Index Component i on Trading Day t-1

D<sub>i,t</sub> = Payment on Trading Day t multiplied by the Dividend Correction

Factor of the respective country

 $p_{i,t-1}$  = Price of Index Component i on Trading Day t-1 in Index Currency

## 3.5 Corporate actions

## 3.5.1 Principles

Following the announcement by an Index Component of the terms and conditions of a corporate action the Index Calculator determines whether such corporate action will result in a dilution, concentration or have any other effect on the price of that 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 it deems appropriate in order to take into account such

dilution, concentration or other effect and shall also 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:

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

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<sub>i,t</sub> = 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 Calculation of the Index in the event of a Market Disruption Event

In the event of a Market Disruption Event, Solactive AG calculates the Index Value, taking into account the market conditions prevailing at this point in time, the Trading Price prevailing in relation to each of the Index Components immediately prior to the Market Disruption Event as well as any other conditions that it deems relevant for calculating the Index Value.

#### 4. Definitions

- "Selection Pool" in respect of a Selection Day are those companies that fulfill the following conditions:
- (a) Member of the Stoxx Europe 600 Index (Bloomberg code: SXXP Index), the S&P 500 Index (Bloomberg code: SPX Index) or the Best of Gold Miners Index (Bloomberg code: GMINERS Index).
- (b) Market Capitalization of at least 1,000 million USD.
- (c) Average daily trading value of at least 3 million USD in the last three months.

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.

"Applicable Withholding Tax Rate" is, with respect to Index Component i, the tax rate as determined by the respective country of incorporation of such Index Component. The Applicable Witholding Tax Rate table is publicly available on the Solactive website and can be accessed using the following URL:

http://www.solactive.com/news/documents/

A "Business Day" is any weekday of the year other than Saturday and Sunday on which the Stuttgart Stock Exchange is open for trading.

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.

The "Selection Day" is defined as the fourth Friday of March, June, September and December.

The "Adjustment Day" is five Business Days after the Selection Day. For each security that is included or removed from the index the respective stock exchange must be open for trading. Otherwise the Adjustment Day will be moved to the next Business Day.

"Dividend Correction Factor" is calculated as 1 minus the Applicable Withholding Tax Rate and/or other applicable tax rate currently prevalent in the respective country. "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.

In particular an "Extraordinary Event" is

- (i) a Merger
- (ii) a Takeover bid
- (iii) a Delisting
- (iv) the Nationalisation of a company
- (iv) Insolvency
- (v) Tax Event

In case an Extraordinary Event comes into effect, the Trading Price for Index Component is the last quoted price on the Exchange that is available prior to such Extraordinary Event.

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 shares issued, but the shares in circulation directly prior to such an event (except for shares held and controlled by the legal person) represent in total less than 50% of the shares in circulation directly subsequent 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.

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 self-regulatory authorities or other information considered by the Index Calculator to be relevant.

An Index Component is "delisted" if the applicable Exchange announces pursuant to its 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, in a manner acceptable to the Index Calculator.

"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.

"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, bankruptcy, insolvency, dissolution

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 prohibited from transferring the shares.

In the event of the Insolvency of an issuer of an Index Component the Committee may decide to eliminate the respective Index Component from the index. 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.

"Tax Event" occurs when the applicable withholding tax relevant to the calculation of the Dividend Calculation Factor in relation to an Index Component(s) changes.

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 currency in which the Index is denominated and shall be Euro ("EUR").

A "Market Disruption Event" occurs if, in the opinion of the Index Calculator:

- 1. one of the following events occurs or exists on any Trading Day in relation to an Index Component, the applicable Exchange and/or Affiliate Exchange:
- A) trading is suspended or restricted (due to price movements that exceed the limits allowed by the Exchange or an Affiliated Exchange, or for other reasons):
- 1.1. across the whole Exchange; or
- 1.2. in options or futures contracts on, or with regard to, an Index Component or an Index Component that is itself quoted on an Affiliated Exchange; or
- 1.3. on an Exchange or in a trading or quotation system (as determined by the Index Calculator) in which an Index Component is listed or quoted; or
- B) an event that (in the assessment of the Index Calculator) generally disrupts and affects the opportunities of market participants to execute on the Exchange transactions in respect of an Index Component or to determine the Trading Price of an Index Component or to execute on an Affiliated Exchange transactions in options and futures contracts referencing such Index Component or to determine market values for such options or futures contracts; or
- 2. trading on the applicable Exchange and/or Affiliated Exchange is ceased prior to the Normal Exchange Closing Time (as defined below), unless the early cessation of trading is announced by the Exchange or Affiliated Exchange on this Trading Day at least one hour before:
  - 2.1 the actual closing time for normal trading on the Exchange or Affiliated Exchange on the Trading Day in question or, if earlier.

- 2.2 the closing time (if given) of the Exchange or Affiliated Exchange for the execution of orders at the time the quote is given.
- "Normal Exchange Closing Time" is the time at which the Exchange or an Affiliated Exchange is normally closed on working days without taking into account after-hours trading or other trading activities carried out outside the normal trading hours; or
- 3. a general moratorium is imposed on banking transactions in the country where the applicable Exchange is located;
- "Number of Index 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 on any date t (subject to no capital increases, no capital reductions, no share splits and no stock distributions) as the ratio of (A) the Percentage Weight of an Index Component multiplied by the Index Value and (B) its Trading Price in Index Currency.
- "Stock Substitute" includes in particular American Depository Receipts (ADR) and Global Depository Receipts (GDR).

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.

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.

# **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 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.