

## Index Guide for 10X Long Index linked to Silver (Troy Ounce) V4

ISIN CH0429831370

This Index Guide describes the composition and calculation of the *Factor Index* specified below. The *Index Calculation Agent* makes the *Index Guide* available on the *Information Page*. The *Index Guide* constitutes the basis for calculating and publishing the *Factor Index*.

Index Name:	10X Long Index linked to Silver (Troy Ounce) V4 (der " <b>Faktor-Index</b> ")
Reference Instrument	Silver (Troy Ounce)
Index Calculation Agent:	Bank Vontobel AG, Gotthardstrasse 43, 8002 Zürich, Schweiz
Information Page:	<a href="https://indices.vontobel.com">https://indices.vontobel.com</a>
Identifier:	ISIN: CH0429831370

This Index is part of the family of Vontobel Leveraged Long and Short indices ("**Faktor Indices**").

**The Factor Indices are not recognized financial indices but are customized indices conceived by Bank Vontobel AG in its capacity as Index Calculation Agent, their sole function being to act as underlying for this type of security (Factor Certificates).**

The Index Calculation Agent will perform the calculation and composition of the Factor Index with the utmost care. However, the Index Calculation Agent does not guarantee that the calculation of the indices or of any other parameters required for the composition and calculation, as in accordance with this Index Guide, will be free from error.

Decisions on the manner and method of calculation and composition of its indices are made by the Index Calculation Agent in good faith and based on its best knowledge available. The Index Calculation Agent is neither liable for any damages nor any losses resulting from or associated with the said decisions.

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The Index and the index family constitute the intellectual property of Bank Vontobel AG, Gotthardstrasse 43, 8002 Zurich, Switzerland, which reserves any and all rights in this respect.

The original version of the Index Guide is in German; foreign-language versions constitute non-binding translations.

The composition and calculation of the *Factor Index* specified above is described in the following. The *Index Calculation Agent* will make an index guide available on the *Information Page* for each *Factor Index*, containing this description together with the stipulations in the Final Terms. The index guide constitutes the basis for calculating and publishing the *Factor Index*.

## A) INDEX DESCRIPTION

The *Factor Index* reflects price movements in the *Reference Instrument* with a leverage factor of 10. An increase in the price of the *Reference Instrument* since the most recent calculation of an Index Closing Value results in a positive change in the *Factor Index* as compared to the previous price of the *Factor Index* and vice versa. The *Factor Index* therefore replicates a "long" strategy.

The *Factor Index* consists of a leverage component and a financing component.

### **Leverage component**

The leverage component tracks an investment in the *Reference Instrument*, whereby movements in the price of the *Reference Instrument* are multiplied by the *Leverage* (Factor). This leverage effect occurs with either positive or negative movements in the price of the *Reference Instrument*, having a disproportionate effect on the value of the *Factor Index*. For example (leaving aside the financing component):

1. An increase in the price of the *Reference Instrument* (as compared to the most recent *Valuation Price* of the *Reference Instrument*) by 2% results in an increase in the *Factor Index* by  $10 \times 2\%$ ;
2. A decrease in the price of the *Reference Instrument* (as compared to the most recent *Valuation Price* of the *Reference Instrument*) by 2% results in a decrease in the *Factor Index* by  $10 \times 2\%$ ;

### **Financing component**

The financing component tracks the capital costs that would be incurred in the event of a corresponding investment in the *Reference Instrument*. Additionally, a fee charged by the *Index Calculation Agent* for the calculation and administration of the *Factor Index* is added (*Index Fee*).

The financing component therefore reduces the value of the *Factor Index*.

## B) INDEX DEFINITIONS

The definitions below shall apply for the purposes of this index description:

**"Adjustment Date"** means the first *Index Calculation Day* of each calendar month.

**"Extraordinary Adjustment Event"** means any of the following events as they relate to the *Reference Instrument*:

- (a) a change in the quality, composition (e.g. a different degree of purity or different place of origin) or the standard unit of measurement by or on the *Reference Exchange* responsible for determining the *Valuation Price* of the *Reference Instrument*; or
- (b) any other event which in the reasonable discretion of the *Index Calculation Agent* would have a comparable or similar impact on the calculation of the *Factor Index* in the event that no adjustment were to be made.
- (c)
- (d)

**"Valuation Price"** of the *Reference Instrument* for an *Index Calculation Day* means – subject to an *Extraordinary Adjustment* of the index calculation pursuant to section D) – the price of the *Reference Instrument*, as determined for that day on the *Reference Exchange* as LBMA Silver Price.

If an *Index Calculation Day* falls on a day which is not a *Trading Day*, the *Valuation Price* of the immediately preceding *Index Calculation Day* shall continue to apply. If no *Valuation Price* for the *Reference Instrument* is determined or published on a *Trading Day*, the *Index Calculation Agent* shall determine the *Valuation Price* of the *Reference Instrument* for that day on the basis of the most recent prices set for the *Reference Instrument* in the international interbank market in its due discretion.

**"Financing Spread"** represents (in the form of a premium over the relevant *Interest Rate*) the financing costs which may be incurred if the long strategy tracked by the *Factor Index* is financed with debt.

The *Financing Spread* on the *Index Start Date* corresponds to the *Initial Financing Spread*. The *Index Calculation Agent* then adjusts the **"Current Financing Spread"** in its due discretion on each *Adjustment Date* to reflect current market conditions and publishes it in accordance with section E) of this index description. The adjusted *Financing Spread* shall apply immediately as from the relevant *Adjustment Date*.

**"Initial Financing Spread"** means 0.40% per annum.

**"Trading Day"** means every day on which a *Valuation Price* for the *Reference Instrument* is normally determined on the *Reference Exchange*.

**"Leverage"** means 10. It describes the effect of a change in the *Reference Instrument* on the respective *Factor Index*.

**"Index Calculation Agent"** means Bank Vontobel AG, Gotthardstrasse 43, 8002 Zurich, Switzerland.

**"Index Calculation Day"** means every day from Monday to Friday.

**"Index Calculation Period"** means from Monday 0:00 to Friday 21:00 (London time in each case).

**"Index Fee"** is 1.00% per annum. The *Index Fee* is charged each calendar day, beginning as of the *Index Start Date*. It is calculated on the basis of a 360-day year and the most recently calculated *Index Closing Value*.

**"Index Closing Value"** is calculated for each *Index Calculation Day* by the *Index Calculation Agent* in accordance with section C) 1) of this index description on the basis of the *Valuation Price* of the *Reference Instrument* for this *Index Calculation Day* and published in accordance with section E) of this index description.

**"Index Start Date"** means 24 August 2018.

**"Index Start Value"** means 1,000 index points and represents the *Index Closing Value* on *Index Calculation Day T=0* for the purposes of calculating the index in accordance with C).

**"Index Currency"** means USD.

**"Information Page"** means <https://indices.vontobel.com>.

**"Reference Instrument Price"** corresponds at any time during the trading period on the *Reference Exchange* to

**"Reference Exchange"** means ICE Benchmark Administration Limited .

**"Reference Instrument"** means Silver (Troy Ounce).

Unit of measurement:	Troy Ounce
Currency:	USD
ISIN:	XD0002747208

**"Barrier"** means -8%. It indicates the maximum permitted negative change in price of the Reference Instrument compared with its most recent Valuation Price before an Intraday Index Adjustment takes place.

**"Derivatives Exchange"** means COMEX (CME Globex).

**"Interest Rate"** means [tbd]. USD LIBOR O/N (overnight).

LIBOR stands for London InterBank Offered Rate. LIBOR is an average interest rate based on information submitted by the contributing banks. The panel banks indicate the interest rates at which they are able to refinance their own interbank activities in the relevant currency for the relevant term on an unsecured basis. To calculate the reference interest rate, the highest and lowest quartiles of these interest rates are eliminated, and the remaining interest rates are averaged. LIBOR is calculated for 7 different terms and 5 different currencies. The LIBOR interest rates (ICE Libor) are administered by ICE Benchmark Administration Limited (IBA) and determined each business day at 11 a.m. (London time). LIBOR O/N (overnight) stands for terms of 1 day.

If the Interest Rate is neither set nor published on an *Index Calculation Day*, the Interest Rate applied on the immediately preceding *Index Calculation Day* is used to calculate the Index in accordance with section C).

If the Interest Rate has neither been set nor published for ten consecutive *Index Calculation Days*, the *Index Calculation Agent* has the right and obligation to stipulate in its reasonable discretion an alternative relevant Interest Rate which has functions comparable to the previous Interest Rate.

## C) INDEX CALCULATION

The *Factor Index* shall be calculated for the first time on the *Index Start Date*. The initial level of the *Index* on the *Index Start Date* corresponds to the *Index Start Value*. The respective current index level is calculated by the *Index Calculation Agent* on a continuous basis during the trading period of the *Reference Instrument* on the *Reference Exchange* on each *Index Calculation Day*, rounded to two decimal places and published in accordance with section E).

One index point corresponds to one unit of the *Index Currency*.

### C) 1) Index Formula

The *Factor Index* is calculated for each time *t* during an *Index Calculation Day T* in accordance with the following formula:

$$IDX_t = IDX_{T-1} \cdot \underbrace{\left[ 1 + L \cdot \left( \frac{R_t}{R_{T-1}} - 1 \right) \right]}_{\text{leverage component}} - \underbrace{\left[ (L-1) \cdot \left( IR_{T-1} + FS_T \right) + IG \right]}_{\text{financing component}} \cdot \frac{d}{360}$$

where:

<b>T:</b>	current Index Calculation Day
<b>IDX<sub>t</sub>:</b>	Index Value at time t on Index Calculation Day T
<b>IDX<sub>T-1</sub>:</b>	Index Closing Value on Index Calculation Day T-1 which immediately precedes the current Index Calculation Day
<b>L:</b>	Leverage (Factor): 10
<b>R<sub>t</sub>:</b>	Reference Instrument Price at time t
<b>RT-1:</b>	Valuation Price on Index Calculation Day T-1
<b>IR<sub>T-1</sub>:</b>	Interest Rate on Index Calculation Day T-1
<b>FS<sub>T</sub>:</b>	Financing Spread on Index Calculation Day T
<b>IG:</b>	Index Fee
<b>d:</b>	Number of calendar days between Index Calculation Days T-1 and T

### **Intraday Index Adjustment**

If at time s on Index Calculation Day T the Reference Instrument Price falls below the most recent Valuation Price of the Reference Instrument by more than -8% (Barrier), an "Intraday Index Adjustment" takes place, simulating a new day:

$$s = T, \text{ i.e. } IDX_{T-1} (\text{new}) = IDX_s$$

$$RT-1 (\text{new}) = RT-1 (\text{old}) \times 1.08$$

$$d = 0$$

A new Valuation Price valid after time s (RT-1 (new)) is calculated by multiplying the previous Valuation Price (RT-1 (old)) by 1.08.

The financing component remains unchanged. No additional costs are incurred for the newly simulated day.

### **D) EXTRAORDINARY ADJUSTMENT OF THE INDEX CALCULATION**

In the event of an *Extraordinary Adjustment Event* occurring in relation to the Reference Instrument, the Index Calculation Agent will adjust the index calculation on the Reference Date (as defined below). The Index Calculation Agent will – to the extent possible – endeavour to calculate the leverage component as if no Extraordinary Adjustment Event had occurred.

The Index Calculation Agent will generally adjust the index calculation, in its due discretion, by correcting the relevant Valuation Price for the Reference Instrument on Index Calculation Day T-1 on the Reference Date. The Index Calculation Agent may, in exercising its discretion, base the timing and substance of the adjustment on the manner in which the Reference Exchange or the Derivatives Exchange, respectively, make corresponding adjustments to the Reference Instrument itself or to futures or options contracts on the Reference Instrument, but shall not be obliged to do so. In cases of doubt about the application of the adjustment rules of the Derivatives Exchange, the Index Calculation Agent shall decide such questions in its reasonable discretion.

The Index Calculation Agent may adjust the index calculation in some other manner if it deems such adjustment necessary in its due discretion in order to reflect differences between this Index and the futures and options traded on the Derivatives Exchange.

The list of Extraordinary Adjustment Events listed in section B) is not exhaustive. The deciding factor is whether the Derivatives Exchange deems an adjustment of the contract size, an underlying or the involvement of relevant Reference Exchange determining the price of the Reference Instrument to be necessary. If neither futures nor options linked to the Reference Instrument are traded on the Derivatives Exchange, the adjustment shall be made in a manner in which the Derivatives Exchange would do so if corresponding futures or options were traded there. In cases of doubt about the application of the adjustment rules of the Derivatives Exchange, the Index Calculation Agent shall decide such questions in its reasonable discretion. The rules and regulations of the Derivatives Exchange shall apply in addition to the provisions set out above.

"Reference Date" within the meaning of this index description means the first Index Calculation Day, on which the relevant futures or options are traded on the Derivatives Exchange after taking the adjustment into account, or would be so traded if corresponding futures or options were traded on the Derivatives Exchange.

Adjustments relating to the Factor Index and all other measures taken under this section will be published by the Index Calculation Agent in accordance with section E).

#### **E) NOTICES**

All notices pertaining to the *Factor Index* will be published on the *Information Page*. Such notices shall be deemed to have been given on the date on which they are first published.

Notices are made for informational purposes only and do not represent a precondition for legal effectiveness.