



**Date: 11 December 2014**

**Version 1.1**

**Index Guide**  
**as to**  
**2X Short Index linked to Palladium (Troy Ounce)**  
**(ISIN CH0254849927)**

**Bank Vontobel AG**

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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: 2X Short Index linked to Palladium (Troy Ounce) (the "**Factor Index**")  
Reference Instrument: Palladium (Troy Ounce)  
Index Calculation Agent: Bank Vontobel AG, Gotthardstrasse 43, 8002 Zurich, Switzerland  
Information Page: <https://indices.vontobel.com>  
ISIN: CH0254849927  
Valor: 25484992

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

## A) Index description

The *Factor Index* reflects price movements of the *Reference Instrument* to a factor of 2. A fall 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* compared with the previous price of the *Factor Index* and vice versa. The *Factor Index* therefore replicates a "short" strategy.

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

### Leverage component

The leverage component tracks the inverse (i.e. opposite) of 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 *Reference Instrument*, having a disproportionate effect on the value of the *Factor Index*.

For example (leaving aside the financing component):

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

### Financing component

The financing component reflects the income and expenses that would arise from acquiring the *Reference Instrument*, selling it and investing the proceeds at the risk-free rate. To this is added (as a reduction in value) a fee charged by the *Index Calculation Agent* for the calculation and administration of the *Factor Index* (*Index Fee*).

If the acquisition costs and the *Index Fee* are higher than the interest income earned at the applicable *Interest Rate* on a particular day, the value of the *Factor Index* on that day is reduced.

## B) Index definitions

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

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

"**Extraordinary Adjustment Event**" is 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 the *Index Calculation Agent* may at its reasonable discretion deem to have a comparable or similar impact on the calculation of the *Factor Index* in the event no adjustment were made.

"**Valuation Price**" of the *Reference Instrument* for an *Index Calculation Date* 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 Palladium Price PM. If an *Index Calculation Date* falls on a day which is not a *Trading Day*, the *Valuation Price* of the immediately preceding *Index Calculation Date* 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**" reflects the current annual cost on an *Index Calculation Date* of acquiring the *Reference Instrument* via a securities lending and repurchase ("repo") transaction.

The *Financing Spread* on the *Index Start Day* corresponds to the *Initial Financing Spread*. The *Index Calculation Agent* then adjusts the "**Current Financing Spread**" at its due discretion on each *Adjustment Day* to reflect current market conditions and publishes it in accordance with section E) of this index description. The adjusted *Financing Spread* becomes applicable beginning immediately on each *Adjustment Day*.

"**Initial Financing Spread**" is 0.5% per annum.

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

"**Factor**" is -2. It describes the impact that a change in the price of the *Reference Instrument* has on the relevant *Factor Index*. The negative sign for the *Leverage* indicates that the *Short Factor Index* participates inversely in, i.e. in the opposite of, the performance of the *Reference Instrument*.

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

"**Index Calculation Day**" is 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 1.0% per annum. The *Index Fee* is charged each calendar day, beginning on the *Index Start Day*. It is calculated on the basis of a 360-day year and the most recently calculated *Index Closing Value*.

"**Index Closing Value**" is calculated 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 Day**" is 22 September 2014.

"**Index Start Value**" is 100 points and represents the *Index Closing Value* on the *Index Calculation Day* T=0 for purposes of index calculation in accordance with C).

"**Index Currency**" is USD.

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

"**Reference Instrument Price**" means at any time during the *Index Calculation Period* the price of the *Reference Instrument* in the international interbank market, as determined by the *Index Calculation Agent* in its reasonable discretion.

"**Reference Exchange**" is London Metal Exchange (LMEbullion).

"**Reference Instrument**" is Palladium (Troy Ounce).

Currency:	USD
ISIN:	XC0009665529 / XD0002876429

"Barrier" amounts to 42%. It represents the maximum allowable positive change in the price of the *Reference Instrument* as compared to its most recent *Valuation Price*, before an *Intraday Index Adjustment* is made.

"Futures Exchange" is NYMEX (CME Group).

"Interest Rate" is USD LIBOR O/N (overnight).

LIBOR stands for London InterBank Offered Rate. LIBOR is an average of submissions from LIBOR contributor banks. Contributor banks submit quotes at which they can obtain unsecured funding in the London interbank market for a given period, in a given currency. Every ICE LIBOR rate is calculated using a trimmed arithmetic mean. Once each submission is received, they are ranked in descending order and then the highest and lowest 25% of submissions are excluded. LIBOR is produced for five currencies with seven maturities. LIBOR interest rates (ICE LIBOR) are administered by ICE Benchmark Administration Limited (IBA) and determined on each business day at 11 am (London time). LIBOR O/N (overnight) stands for maturities of 1 day.

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

If the *Interest Rate* is not set or published for ten consecutive *Index Calculation Days*, the *Index Calculation Agent* has the right and obligation to stipulate at its due discretion a different relevant *Interest Rate* which functions similarly to the previous *Interest Rate*.

## C) Index calculation

The *Factor Index* is 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 *Index Calculation Period* on each *Index Calculation Date*, 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:

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

where:

- T = current Index Calculation Date
- IDX<sub>t</sub> = Index Value at time t on Index Calculation Date T
- IDX<sub>T-1</sub> = Index Closing Value on Index Calculation Date T-1 which immediately precedes the current Index Calculation Date T
- L = Factor: -2
- R<sub>t</sub> = Reference Instrument Price at time t
- R<sub>T-1</sub> = Valuation Price on Index Calculation Date T-1
- IR<sub>T-1</sub> = Interest Rate on Index Calculation Date T-1

$FS_T$	=	Financing Spread on Index Calculation Date T
$IG$	=	Index Fee
$d$	=	Number of calendar days between Index Calculation Dates T-1 and T

### C) 2) Intraday Index Adjustment

If at time  $s$  on *Index Calculation Day T* the *Reference Instrument Price* exceeds the most recent *Valuation Price* of the *Reference Instrument* by more than 42% (*Barrier*), an "**Intraday Index Adjustment**" takes place, simulating a new day:

$$\begin{aligned} s &= T, \text{ i.e. } \text{IDX}_{T-1}(\text{new}) = \text{IDX}_s \\ R_{T-1}(\text{new}) &= R_{T-1}(\text{old}) \times 1.42 \\ d &= 0 \end{aligned}$$

A new *Valuation Price* valid after time  $s$  ( $R_{T-1}(\text{new})$ ) is calculated, whereby the previous *Valuation Price* ( $R_{T-1}(\text{old})$ ) is multiplied by 1.42. The *financing component* remains unchanged. No additional costs are incurred for the newly simulated day.

### D) Extraordinary Adjustment to Index Calculation

The *Index Calculation Agent* will generally adjust the index calculation by correcting the relevant *Valuation Price* for the *Reference Instrument* on *Index Calculation Date T-1* on the *Reference Date*, in its due discretion. 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. If doubts arise relating to the application of the adjustment rules of the *Reference Exchange* or the *Derivatives Exchange*, the *Index Calculation Agent* shall decide such questions in its reasonable discretion.

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

The list of *Extraordinary Adjustment Events* cited in section B) is not exhaustive. The deciding factor is whether the *Derivatives Exchange* considers it necessary to adjust the contract size, an underlying or the designation of the relevant *Reference Exchange* for the determination of the price of the *Reference Instrument*. If neither futures nor options linked to the *Reference Instrument* are traded on the *Derivatives Exchange*, the adjustment shall be made in the manner in which the *Derivatives Exchange* would make the adjustment if corresponding futures or options were traded there. If doubts arise in this event relating to the application of the adjustment rules of the *Derivatives Exchange*, the *Index Calculation Agent* shall decide such questions in its due 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 Date* 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 to the *Factor Index* and all further measures set forth in this section will be announced by the *Index Calculation Agent* in accordance with section E).

### E) Announcements

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

Announcements are made purely for informational purposes and do not represent a precondition for legal effectiveness.