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Version 1

Index Guide
as to
5X Short Index linked to Bund Future
(ISIN CH0352883158)

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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: 5X Short Index linked to Bund Future (the "**Factor Index**")
Reference Instrument: Bund Future
Index Calculation Agent: Bank Vontobel AG, Gotthardstrasse 43, 8002 Zurich, Switzerland
Information Page: <https://indices.vontobel.com>
ISIN: CH0352883158
Valor: 35288315
WKN: A2BNP5

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A) Index description

The *Factor Index* reflects price movements in the *Reference Instrument* with a leverage factor of 5. A decrease 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 "short" strategy.

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

Leverage component

The leverage component inversely 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):

- 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 decrease in the *Factor Index* by $5 \times 2\%$;
- 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 an increase in the *Factor Index* by $5 \times 2\%$.

Financing component

The financing component reflects the income and costs that would be incurred in the event of a corresponding investment in the *Reference Instrument*.

Since an investment in futures does not involve the purchase of the reference asset underlying the future but simply consists of entering into a corresponding position in a futures contract, no expenditure is incurred for the acquisition of the reference asset underlying the future. Instead, the only requirement is to make a margin payment based on the position entered into in accordance with the rules and regulations of the *Reference Exchange*. The financing costs for the margin payment are reflected in the financing component.

The financing component also reflects the income that would be earned from a risk-free investment in line with the strategy of the leverage component and at the relevant *Interest Rate*.

Additionally, a fee charged by the *Index Calculation Agent* for the calculation and administration of the *Factor Index* is added (*Index Fee*).

If the costs of the margin payment and the *Index Fee* exceed the interest income based on 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 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) changes in the conditions on which the *Reference Instrument* is based or the principal features of the contract on the *Reference Exchange*,

(b) other changes relating to the *Reference Instrument* by or on the *Reference Exchange*.

"Valuation Price" of the *Current Reference Instrument* for an *Index Calculation Day* means – subject to an *Extraordinary Adjustment* of the index calculation pursuant to section D) – the settlement price of the *Current Reference Instrument* determined and published on the *Reference Exchange*. For the sake of clarity: following a *Rollover* (see below), the *Valuation Price* of the new *Current Reference Instrument* is applicable for the continuing calculation of the *Factor Index* in accordance with section C).

If an *Index Calculation Day* is not a *Trading Day*, the *Valuation Price* for the immediately preceding *Index Calculation Day* shall continue to apply (adjusted where necessary, in the reasonable discretion of the *Index Calculation Agent*, if and to the extent that a *Rollover* has taken place since the preceding *Index Calculation Day*). If no *Valuation Price* for the *Current 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 its due discretion.

"Financing Spread" represents (in the form of a premium over the applicable *Interest Rate*) the costs of the margin payment which may be incurred for investments in the *Reference Instrument* in line with the strategy replicated by the *Factor Index*.

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" is 1.25% per annum.

"Trading Day" means every day on which the *Current Reference Instrument* is traded on the *Reference Exchange*.

"Leverage" is -5. It describes the effect of a change in the *Reference Instrument* on the respective *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 *Current Reference Instrument*.

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

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

"Index Fee" is 1.0% 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 *Current Reference Instrument* for that *Index Calculation Day* and published in accordance with section E) of this index description.

"Index Start Date" means 12 January 2017.

"Index Start Value" is 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 EUR.

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

"Contract Months" means the expiry months March, June, September and December.

"**Reference Instrument Price**" means at any time during the trading period on the *Reference Exchange* the price of the *Current Reference Instrument* on the *Reference Exchange*, as determined by the *Index Calculation Agent*.

"**Reference Exchange**" means Eurex.

"**Reference Instrument**" means Bund Future.

Currency:	EUR
ISIN:	DE0009652644
Bloomberg symbol:	RX1 Comdty

"**Current Reference Instrument**" means the *Initial Reference Instrument* from the *Index Start Date* until the first *Rollover Date*. Once the *Index Closing Value* on the first *Rollover Date* has been calculated and determined, this *Reference Instrument* loses its validity and is replaced by the *Reference Instrument* contract for the *Contract Months* specified above next falling due on the *Reference Exchange*. On each subsequent *Rollover Date*, following the calculation and determination of the *Index Closing Value*, the *Current Reference Instrument* is replaced in turn by the *Reference Instrument* contract falling due on the *Reference Exchange* in the next following *Contract Month* (respectively a "**Rollover**").

Each *Rollover* is published by the *Index Calculation Agent* in accordance with section E).

"**Initial Reference Instrument**" means Bund Future March 2017.

"**Rollover Date**" is determined in each case by the *Index Calculation Agent* in its reasonable discretion and falls within a period of ten *Trading Days* prior to the last *Trading Day* of the *Current Reference Instrument* on the *Reference Exchange*. In the event that the first notice day of the *Current Reference Instrument* falls prior to its last *Trading Day* on the *Reference Exchange*, the period for the *Rollover Date* shall begin ten *Trading Days* before the first notice day and shall end with the last *Trading Day* of the *Current Reference Instrument*.

"**Barrier**" is 17%. It indicates the maximum permitted positive change in price of the *Current Reference Instrument* compared with its most recent *Valuation Price* before an *Intraday Index Adjustment* takes place.

"**Interest Rate**" means EONIA.

EONIA (Euro Over Night Index Average) is a weighted average interest rate for overnight interbank money calculated act/360 by the European Central Bank since 4 January 1999 on the basis of effective turnover.

If the *Interest Rate* is not set or 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:

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

where:

- T = current Index Calculation Day
- IDX_t = Index Value at time t on Index Calculation Day T
- IDX_{T-1} = Index Closing Value on Index Calculation Day T-1 which immediately precedes the current Index Calculation Day T
- L = Leverage (Factor): -5
- R_t = Reference Instrument Price of the *Current Reference Instrument* at time t
- R_{T-1} = Valuation Price of the *Current Reference Instrument* on Index Calculation Day T-1
- IR_{T-1} = Interest Rate on Index Calculation Day T-1
- FS_T = Financing Spread on Index Calculation Day T
- IG = Index Fee
- d = Number of calendar days between Index Calculation Days 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 *Current Reference Instrument* by more than 17% (*Barrier*), an "**Intraday Index Adjustment**" takes place, simulating a new day:

$$\begin{aligned} s &= T, \text{ i.e. } IDX_{T-1} (\text{new}) = IDX_s \\ R_{T-1} (\text{new}) &= R_{T-1} (\text{old}) \times 1.17 \\ d &= 0 \end{aligned}$$

A new *Valuation Price* valid after time s (R_{T-1} (new)) is calculated by multiplying the previous *Valuation Price* (R_{T-1} (old)) by 1.17. 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* or the *Current Reference Instrument*, respectively, the *Index Calculation Agent* will adjust the index calculation on the *Reference Date* (as defined below). In doing so, the *Index Calculation Agent* will endeavour – as far as possible – to calculate the *leverage component* as if no *Extraordinary Adjustment Event* had occurred.

The *Index Calculation Agent* will generally adjust the index calculation by correcting in its due discretion the relevant *Valuation Price* of the *Current Reference Instrument* on *Index Calculation Day T-1* on the *Reference Date*, in order to factor into the index calculation the adjustments relating to the (*Current*) *Reference Instrument* made on the *Reference Exchange*.

The *Index Calculation Agent* may adjust 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 *Reference Instrument* traded on the *Reference Exchange*. Adjustments of this nature may relate in particular to the replacement of the *Reference Instrument* by another comparable *Reference Instrument* on another *Reference Exchange* and, where relevant, to the designation of a different *Reference Exchange* and a different *Reference Instrument Price*.

The list of *Extraordinary Adjustment Events* cited in section B) is not exhaustive. The deciding factor is whether the *Reference Exchange* considers it necessary to adjust the contract size, the *Reference Instrument* or the designation of the relevant exchange for the determination of the price of the reference item of the *Reference Instrument*. In cases of doubt about the application of the adjustment rules, the *Index Calculation Agent* shall decide such questions in its reasonable discretion. The rules and regulations of the *Reference 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 *Reference Instruments* are traded on the *Reference Exchange* after taking the adjustment into account.

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 given for information purposes only and do not represent a precondition for legal effectiveness.