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# Index Guide
# as to
# 2X Short Index linked to Facebook Inc.
## (ISIN CH0242796289)

**Bank Vontobel AG**
Gotthardstrasse 43
8002 Zurich
Switzerland

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*.

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|---|---|
| Index Name: | 2X Short Index linked to Facebook Inc. (the "**Factor Index**") |
| Reference Instrument: | Facebook Inc., Registered share |
| Index Calculation Agent: | Bank Vontobel AG, Gotthardstrasse 43, 8002 Zurich, Switzerland |
| Information Page: | https://indices.vontobel.com |
| ISIN: | CH0242796289 |
| Valor: | 24279628 |

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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 decrease in the price of the *Reference Instrument* since the most recent calculation of an *Index Closing Value* results in a positive change of the *Factor Index* as compared to the previous price of the *Factor Index* and vice-versa. The *Factor Index* therefore reflects 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 adjustment) by 2% results in an decrease in the *Factor Index* by 2 x 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 x 2%.

***Financing component***

The financing component emulates the expenses and earnings that would arise in acquiring and selling the *Reference Instrument*, and the risk-free investments of the proceeds. Additionally, a fee charged by the *Index Calculation Agent* for the calculation and administration of the *Factor Index* is added (*Index Fee* which reduces the value of the index).

If the acquisition costs and the *Index Fee* exceed the interest income based on the relevant *Interest Rate* on one day, the value of the *Factor Index* is reduced on such a day.

## 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) capital increase by way of the issue of new shares in return for contributions in cash or in kind with the grant of a subscription right, capital increase from retained earnings, issue of securities with option or conversion rights into shares, distribution of special dividends, share split, subdivision, consolidation or reclassification of the shares;

(b) spin-off of a division of the company in such a manner that a new independent company is created or the division is absorbed by a third company;

(c) probable or definitive cessation of stock exchange trading in the shares as a result of a merger by absorption or new company formation or takeover of the company of the underlying by another company;

(d) 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 to be made.

"**Valuation Price**" of the *Reference Instrument* for an *Index Calculation Day* is – subject to an *Extraordinary Adjustment* to the calculation of the index in accordance with section D) – the closing price of the *Reference Instrument*, as determined and published for that day by the *Reference Exchange*. 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* at its due discretion.

"**Dividend**" shall mean the dividend of the company, exclusive of which the *Reference Instrument* is traded on the *Reference Exchange* on the *Ex-dividend Day*.

"**Dividend Tax Factor**" shall be 1.0 on the *Index Start Day*. The *Index Calculation Agent* may change the *Dividend Tax Factor* at its due discretion on any *Index Calculation Day* with prospective effect if the relevant tax law applicable to the *Index Calculation Agent* changes, resulting in a change in the amount of the – after tax – *Dividend* virtually accruing to it.

"**Ex-dividend Day**" is the *Trading Day* on which the *Reference Instrument* trades "ex-dividend" on the *Reference Exchange*.

"**Financing Spread**" reflects the current annual costs for acquiring the *Reference Instrument* as at the *Index Calculation Day* via a securities lending ("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 0.1% per annum.

"**Trading Day**" is any day on which the *Reference Instrument* is traded 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 *Factor* indicates that the Short *Factor Index* participates inversely in 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 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 30 April 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**" corresponds at any time during the trading period on the *Reference Exchange* the price of the *Reference Instrument* on the *Reference Exchange*, as determined by the *Index Calculation Agent*.

"**Reference Exchange**" is Nasdaq Global Select Market.

"**Reference Instrument**" is Facebook Inc..

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|---|---|
| Type: | Registered share |
| Currency: | USD |
| Company: | Facebook Inc., Menlo Park, California, USA |
| ISIN: | US30303M1027 |
| Bloomberg symbol: | FB UW Equity |

"**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 Chicago Board Options Exchange.

"**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* will be calculated for the first time on the *Index Start Day*. The initial Index value on the *Index Start Day* corresponds to the *Index Start Value*. For the period during which the *Reference Instrument* is traded on the *Reference Exchange*, the relevant current index level is calculated on a continuing basis on each *Index Calculation Day* by the *Index Calculation Agent*; it is rounded to two decimal points 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:

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

leverage component | financing component

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 |
| L | = | Factor: -2 |
| $R_t$ | = | Reference Instrument Price at time t |
| $R_{T-1}$ | = | Valuation Price on Index Calculation Day T-1 |
| divf | = | Dividend Tax Factor |
| div | = | Dividend on Index Calculation Day T. This amount is 0, except on the Ex-dividend Day |
| $IR_{T-1}$ | = | 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* (on an Ex-dividend Day plus *Dividend* multiplied by the *Dividend Tax Factor*: $R_s + divf \times div$) 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:

| | | |
|---|---|---|
| s | = | T, i.e. $IDX_{T-1}$ (new) = $IDX_s$ |
| $R_{T-1}$ (new) | = | $R_{T-1}$ (old) x 1.42 |
| d | = | 0 |

A new *Valuation Price* valid after time s ($R_{T-1}$ (new)) is calculated, whereby the previous *Valuation Price* ($R_{T-1}$ (old)) is multiplied by 1.42. If the *Index Calculation Day* is an *Ex-dividend Day* the net dividend will be deducted.

If the *Index Calculation Day* T is an *Ex-dividend Day* the newly simulated *Index Calculation Day* will not be treated as *Ex-dividend Day* any more, i.e. *Dividend* and *Dividend Tax Factor* will not be considered in the index calculation in section C) 1) on the newly simulated *Index Calculation Day*.

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

## D) Extraordinary Adjustment to 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 *In-*

*dex Calculation Agent* will – to the extent possible – endeavor to calculate the *leverage component* as if no *Extraordinary Adjustment Event* had occurred.

The *Index Calculation Agent* will generally modify the index calculation by correcting at its due discretion the relevant *Valuation Price* for the *Reference Instrument* on *Index Calculation Day* T-1 on the *Reference Date*, in order to factor into the index calculation the adjustments made on the *Futures Exchange* for futures and options linked to the *Reference Instrument* traded there.

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 account for differences between this *Factor Index* and the futures and options traded on the *Derivatives Exchange*. Such adjustments may in particular relate to the *Reference Instrument* being replaced by a basket of shares, securities representing shares or other dividend-bearing securities or in the event of a merger by an appropriate number of shares, securities representing shares or other dividend-bearing securities issued by the absorbing or newly formed company and where necessary stipulating a different Reference Exchange, Derivatives Exchange and Reference Instrument Price.

The list of *Extraordinary Adjustment Events* listed in section B) is not exhaustive. A deciding factor is whether the *Derivatives Exchange* considers it expedient to adjust the contract size, an underlying or involving the relevant *Reference Exchange* which determines 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 such a manner in which the *Derivatives Exchange* would do so if corresponding futures or options were traded there. If doubts arise in this event relating to the application of the modification 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.

In the event the company issuing the *Reference Instrument* underlying the *Factor Index* is liquidated or insolvency, winding-up or similar proceedings are instituted against the assets of the company or of the possibility that such proceedings will be opened becomes known, the price of the *Reference Instrument* will continue to be factored into the Index Calculation for as long as the price of the *Reference Instrument* continues to be determined on the Reference Exchange. However, if pricing in such a case is temporarily or permanently suspended, the leverage component remains unchanged and the Index Level will be determined solely on the basis of the other components of the index formula.

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

Adjustments to the *Factor Index* and all further measures set forth in this section will be published 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.