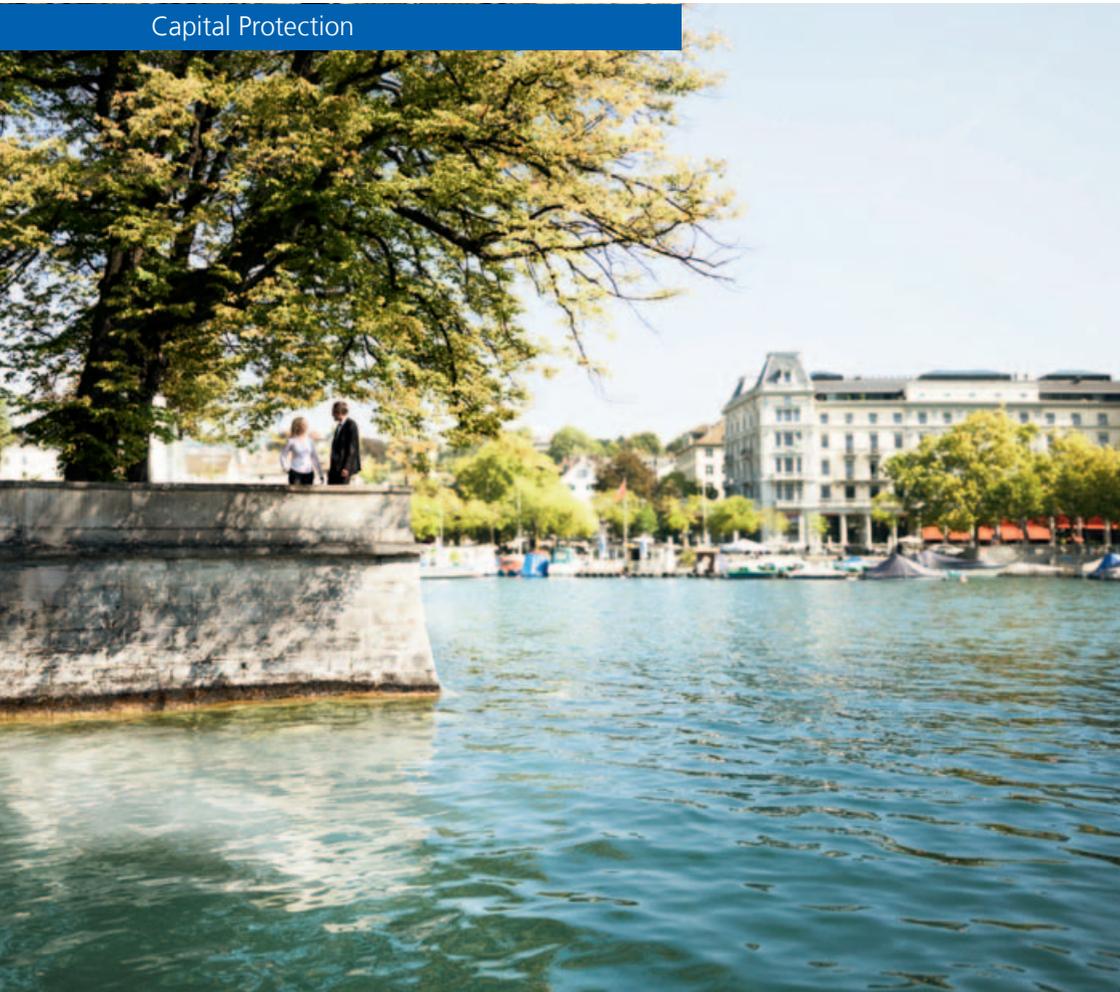


# ZKB Investment Building Block – Structured Product with Capital Protection on the ZKB Dynamic Asset Class Index

Capital Protection



# Content

Introduction	4
ZKB Dynamic Asset Class Index	6
Investment Solution	11
Redemption	12
Opportunities and Risks	16
Contact	18
Annex – Index Guidelines	19

These products constitute Structured Products in Switzerland. They do not constitute collective investment schemes in the meaning of the Swiss Federal Act on Collective Investment Schemes (CISA). They are not subject to an authorisation or supervision by the FINMA and investors do not benefit from protection under the CISA.

# Introductions

## Key Data

The ZKB Investment Building Block is a Structured Product on the ZKB Dynamic Asset Class Index.

1. Minimum repayment for example of 90% of the Denomination at expiry, guaranteed by Zürcher Kantonalbank (Rating S&P: AAA, Moody's: Aaa, Fitch: AAA)
2. Participation in the ZKB Dynamic Asset Class Index offers:
  - Diversification
  - Trend following
  - Risk control
3. Maturities from 5 to 40 years are possible
4. Flexible product, suitable in any life phase

## What does asset allocation stand for?

The active allocation of investments across different asset classes is known as asset allocation. Typically, assets like equities, bonds, real estate and currencies are chosen to build an investment portfolio. Next to different risk/reward profiles, these assets differ with regard to liquidity, accessibility, transaction- and management costs. Equities, for example, can be bought and sold in the same quality every day at the stock exchange. The handling takes place in a securities account and is fast and efficient. Accessibility, purchase and sale of real estate on the other hand, follow a different pattern.

The selection of the asset class is considered to be the most important success factor. The decision whether to invest in bonds or equities is more important than choosing stock A over stock B.

## What are the different approaches?

The different approaches to asset allocation differ for example by the determination of the weights for each asset class. The weights can either be determined by a quantitative, computer-supported model, or they can be assigned by an expert committee.

In the [strategic asset allocation](#), the general long-term orientation of an investment is determined. In order to react to short-term market changes, the weights are adjusted in the [tactic asset allocation](#).

A combination of tactic and strategic asset allocation is the so-called Core Satellite approach. The basic investment philosophy is set in the Core, the fine-tuning with single investments occurs in the Satellites.

Further criteria of asset allocation can be diversification, sustainability, yield and risk tolerance.

## How is asset allocation implemented in practice?

The implementation of asset allocation differs by the following criteria:

Investors can take the [investment decision](#) either by themselves, whereby help from an external source can be acquired, or the process can be delegated altogether.

The [instruments](#) used to represent the different asset classes can be single securities such as shares or bonds, respectively investment funds and Tracker Certificates mirroring the individual asset classes.

The repayment of the invested capital at maturity can be (partially) [protected](#) by a third party or the asset allocation is carried out without such an additional protection.

# ZKB Dynamic Asset Class Index

## Fundamental values of the ZKB Dynamic Asset Class Index

The past 10 years were on the one hand characterised by steady market phases, on the other hand by phases that were extraordinarily volatile. For many investors, this implied that earnings from good market phases had to be given up during corrections, which was emotionally stressful for investors.

To generate sustainable returns and to avoid emotion-based investment decisions, the ZKB Dynamic Asset Class Index employs a model-driven approach to realise an optimized asset allocation. The ZKB Dynamic Asset Class Index combines three elements:

- Diversification
- Trend following
- Risk control

These three values are generally not subject to short-term changes, but can be used in the long run and are characterised by their **lasting attractiveness**.

The ZKB Dynamic Asset Class Index focuses in the asset classes on liquid instruments that can be managed **homogeneously**. This makes the index more **efficient**.

## Diversification

Diversification describes the dispersion of investments in order to avoid concentrated risk due to large positions in single investments.

The ZKB Dynamic Asset Class Index diversifies on two levels. On the first level, three different asset classes are selected: equities, commodities and bonds.

On the second level, the ZKB Dynamic Asset Class Index invests into single assets of the respective asset classes instead of investing into an aggregated index. In equities, investments are made into eight single country indices. In commodities, 21 different commodity futures are available, such as crude oil and gold. In bonds, the index can invest into 10 different bond futures such as government bonds of Switzerland, Germany and the USA.

## Trends

Asset classes develop differently during the course of an economic cycle (see chart 2). Rising share prices are mainly driven by expectations of economic growth (cyclical).

Commodity prices follow the actual demand. Prices for commodities increase after the boom is evident and are therefore somewhat delayed (post cyclical).

When growth tends to slow down, central banks regularly lower key interest rates in order to stimulate economy. Combined with lower demand for capital, interest rates fall and prices of bonds with fixed coupons increase (anti cyclical).

Chart 1: Diversification on two levels



Source: Zürcher Kantonalbank

To follow the trend is the intuitive behaviour of many investors. Usually, good performing assets are increased while the ones with poor revenues are sold. The danger herewith is that buying and selling occur too slowly. Consequently, relatively high entry prices are paid and relatively low exit prices are realised. Furthermore, the decisions are often accompanied by fear and greed, both of them poor partners to form a decision.

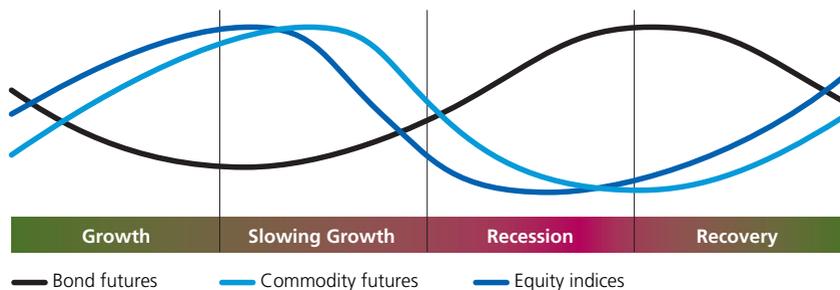
The ZKB Dynamic Asset Class Index adjusts the asset allocation on a monthly basis. A model calculates the optimal composition of the index and automatically carries out the adjustment.

The model complies with intuitive investment behaviour, but adapts it **faster** and **more efficient**.

During a typical economic cycle, the weights of the single asset classes change as follows (see chart 3):

- In a growth phase, the product invests in equities and commodities.
- At the first sign of economic cooling, the weight of commodities is increased at the expense of equities.
- At an upcoming recession, equities and commodities are reduced in favour of bonds.

Chart 2: Asset classes during an economic cycle



Source: Zürcher Kantonalbank

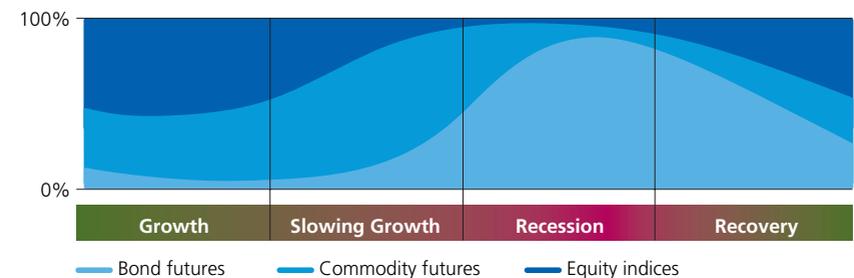
### Risk control

Risk control is the top priority of the ZKB Dynamic Asset Class Index. The weight of a single investment is therefore based on its potential return as well as on its potential risk. An investment yielding an average return with a low risk is preferred over an investment with high returns and high risk. No investment can overrule the primacy of risk control.

Assets with high fluctuations are generally considered risky. The fluctuation of an asset is also known as **volatility**.

The volatility of an asset usually shows a typical pattern: prices increase continuously, relatively slowly and constantly, in the case of stocks sometimes even over several years. The volatility is low. If there is no further room for increase, prices tend to move sideways. In this phase, extreme price changes towards both directions are possible and volatility is increasing. In the course of the correction, volatility reaches its peak before prices reach their floor. Price fluctuations and volatility decrease.

Chart 3: Asset Allocation



Source: Zürcher Kantonalbank

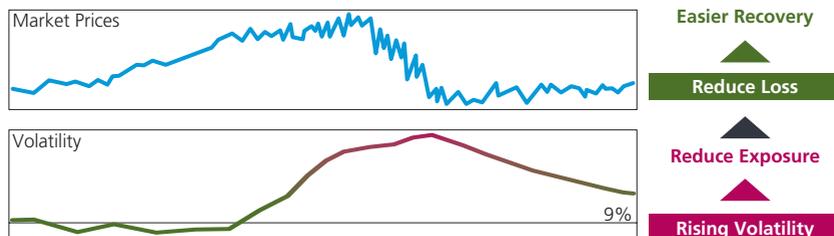
# Investment Solution

To realise the risk control, the ZKB Dynamic Asset Class Index calculates the current volatility of each index member and reduces investments that are above the **target volatility**. The target volatility is set at a low 9%. Because the ZKB Dynamic Asset Class Index does not tolerate higher risk, the yield target ranks below the ambition to avoid losses. This way, earned profits are efficiently protected

from losses and the index can return faster into the profit zone when markets recover: money that is not lost in the first place does not need to be recovered later on.

Thanks to the risk control, the index is designed for **continuous and sustainable** development. This way, the index is not subject to high fluctuations and losses are held as small as possible.

Chart 4: Volatility and market prices



Source: Zürcher Kantonalbank

## Structured Product by Zürcher Kantonalbank

The ZKB Investment Building Block offers

- unconditional **capital protection**
- **participation** in the ZKB Dynamic Asset Class Index

Both features are realised by means of a Structured Product in an inexpensive and uncomplicated way.

## Flexibility

The ZKB Investment Building Block combines the need for wealth protection with the need for return. Investors' general requirements with regard to their investments remain by large more or less the same in different life stages. Thanks to the long-term attractive underlying, the ZKB Investment Building Block can be **universally** used in different modifications. The necessary adaptations to changing life stages are realised in the structured product, i.e. by altering maturity and the level of capital protection.

The product can be used as:

- an investment product
- instrument for asset formation
- as investment tool for saving premiums for 3a/3b products (in collaboration with an insurance company)
- as bridging between asset formation and capital consumption
- to use up capital
- as a flexible means to save money instead of repaying mortgages

The universal use of the ZKB Investment Building Block leads to a simplified management of assets as investors are not confronted with a big number of different investments. The different investments are solely a modification of a single building block.

# Redemption

The repayment at expiry consists of the two components capital protection and participation.

## Capital Protection

At expiry, Zürcher Kantonalbank guarantees the capital protection<sup>1)</sup> in the form of a **minimum redemption**. This minimum redemption payment is not attached to any conditions and will be paid in any case.

Chart 5: Payment at Maturity



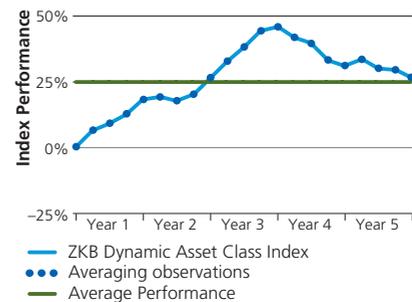
## Participation

Investors participate in the **average performance** of the ZKB Dynamic Asset Class Index.

In order to calculate the average performance of the index, the change of the index level since issue is regularly, e.g. quarterly, observed. At the end of the Structured Product's maturity, the average of all observations is calculated in which investors participate (see chart 6).

Investors participate with a predefined factor (participation rate) above a predefined index level (strike price) in the performance of the ZKB Dynamic Asset Class Index.

Chart 6: Averaging



Participating in the average performance of the index brings several advantages for investors:

- Investors are only marginally affected if markets collapse at the end of the maturity. The averaging can be considered as partial profit (or loss) taking on the investment and offers therefore a protection of realised profits.
- Thanks to the averaging, investors can achieve higher participation rates. Depending on the level of capital protection and the interest rate level, participation can also be above 100%.
- By averaging the performance, the market value of the Structured Product is stabilized.

Usually, the strike price is set at 100%, meaning that investors participate in an increase of the index starting from the initial level (100%, see chart 7a). However, it is also possible to set the strike price for example at 90%, hence investors already participate in the index performance starting from a lower level (90% of the initial level, see chart 7c). In such a case, even if the index decreases by 3% to 97% of its initial level, investors would participate in a 7% performance (difference to the strike price).

## Example

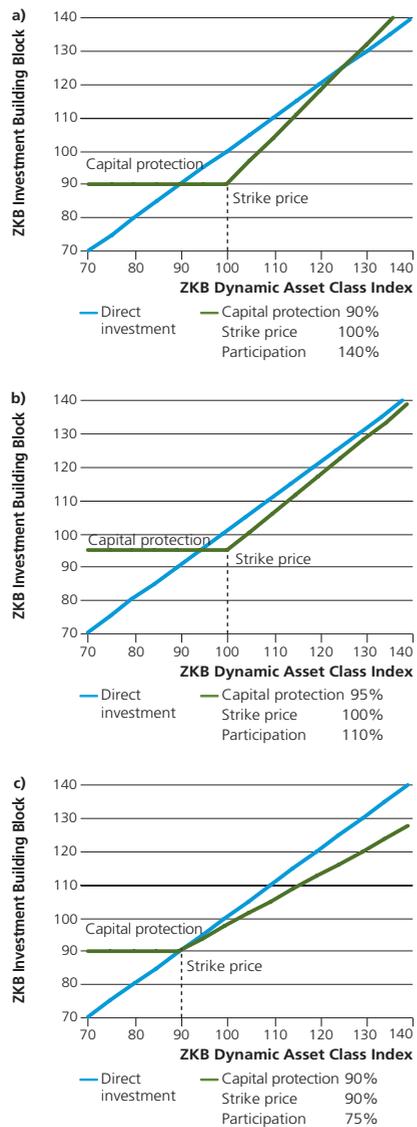
The following charts 7a–c depict different variations of the product and underline the dependence of the repayment in relation to:

- Average development of the ZKB Dynamic Asset Class Index
- Participation rate
- Capital protection: the lower the capital protection the higher the participation rate
- Strike price: the lower the strike price, the lower the participation rate

Charts 7a and 7b show that the ZKB Investment Building Block can perform even better than a direct investment if markets increase and if capital protection is kept at a lower level. If markets fall, the capital protection shields investors from considerable capital losses in all scenarios.

<sup>1)</sup> Products with minimum redemption of 90% or more belong to the category Capital Protection according to the Swiss Derivative Map of the Swiss Structured Products Association.

Chart 7: Payoff profiles of different product variations at maturity



Source: Zürcher Kantonalbank

## Reporting

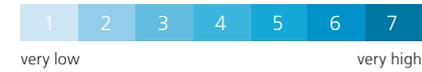
Zürcher Kantonalbank provides a detailed reporting for each single ZKB Investment Building Block. The reporting will contain among others the current price as well as the development of the product since issue. Further, the performance of the product since issue is derived and split into single performance factors, which will be explained in detail.

Based on this [transparency](#), investors can at any point in time track the profit or loss of the investment as well as its success factors.

## Taxes

For retail investors with tax domicile Switzerland, the implied internal rate of return from the capital protection component is subject to income tax at sale or maturity. The participation in the ZKB Dynamic Asset Class Index on the other hand qualifies as capital gain and is not subject to income tax for private investors with tax domicile Switzerland.

## Risk Level



Product with 95% capital protection:  
Risk Level 2

Product with 90% capital protection:  
Risk Level 3

## Sustainability Indicator

Zürcher Kantonalbank awarded a sustainability indicator to over 500 debtors and companies. Structured Products are not covered by the investment research. Therefore, Structured Products on the ZKB Dynamic Asset Class Index have no such rating.

The ZKB Dynamic Asset Class Index consists of equities, commodities and bonds. As the ZKB Sustainability Research categorically excludes investment in commodities, the ZKB Dynamic Asset Class Index would even with rating not be deemed sustainable as defined by the ZKB Sustainability Research (as per January 2012).

# Opportunities and Risks

## Opportunities

- **Combination of protection and return**  
The product follows clear rules that are applied by financial models. This prevents from emotion-based decisions in the portfolio.
- **Transparency / Product description / Reporting**  
For each ZKB Investment Building Block, Zürcher Kantonalbank provides a product reporting. This way, clients can obtain the price change of the product since issue as well as the explanation of the changes.
- **Life Cycle Investment**  
Thanks to the possibility of structuring the product in different ways, the product efficiently addresses needs in different life stages.
- **Flexibility**  
The product can be offered in different variations. It is also possible to issue products with very long maturities. Depending on the current interest rate environment, different capital protection levels are possible. The participation rate depends on the maturity, interest rates at issue and the capital protection level.
- **Strong local and trustworthy partner**  
Zürcher Kantonalbank successfully issues Structured Products since more than 15 years. The issuer profits from its stable approach by abstaining from short-term trends. With a client-driven approach, Zürcher Kantonalbank successfully differentiates itself from its competitors.

## Risks

- **Liquidity risk**  
Zürcher Kantonalbank aims to provide a regular secondary market for the Structured Product. The liquidity of the Structured Product depends on the liquidity of the index members, which is among others also a selection criterion.
  - **Market risk**  
The value of the Structured Product is based on the value of the two components capital protection and participation. The indicated capital protection corresponds to the capital protection level at expiry. The product can trade below this level during its term.
- During the maturity:
- the value of the capital protection increases if interest rates fall and vice versa.
  - the value of the participation component increases if the ZKB Dynamic Asset Class Index increases and vice versa.
- **Issuer's Risk**  
Investors bear the risk of Zürcher Kantonalbank Finance (Guernsey) Ltd. as issuer. A Keep-Well Agreement with Zürcher Kantonalbank, Zurich, secures claims from the Structured Product.

# Contact

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# Annex – Index Guidelines ZKB Dynamic Asset Class Index

## **ZKB Dynamic Asset Class Index [DACI] (as of: February 27, 2012)**

### [General Information](#)

The ZKB Dynamic Asset Class Index [DACI] is calculated by Rodex Risk Advisers LLC, Chaltenbodenstrasse 4, 8834 Schindellegi, Switzerland (the “Calculation Agent”). It consists of a number of model-applied financial instruments, fees and other index constituents. The index is a so-called Excess Return Index.

The index is regularly adjusted (usually monthly). The selection of investment and hedging instruments lies in the sole discretion of the Calculation Agent and is based on a model-driven approach. The objective of the index is to realise risk control in form of limiting volatility to 9% p.a. and generating returns by means of a trend following model. The index is calculated on a daily basis by the Calculation Agent and published on Reuters. The Calculation Agent can delegate this task to a third party.

Index Components	Name	Index component	Bloomberg	Max. weight	
<b>ZKB Dynamic Asset Class Index [DACI]</b>	Equity Indices in total max. 100%	CAC40® Index	CF Index	20%	
		DAX® Index	DAX Index	20%	
		EURO STOXX 50® Index	SX5E Index	30%	
		FTSE® Index	UKX Index	20%	
		Hang Seng® Index	HSI Index	10%	
		Nikkei 225® Index	NKY Index	20%	
		S&P 500® Index	SPX Index	30%	
		SMI® Index	SMI Index	20%	
		Commodity Futures in total max. 100%	Aluminium	LA1 Comdty	10%
			Cocoa	CC1 Comdty	10%
			Coffee	KC1 Comdty	10%
			Copper	LP1 Comdty	20%
			Corn	C 1 Comdty	10%
			Cotton	CT1 Comdty	10%
Gold	GC1 Comdty		20%		
Heating Oil	HO1 Comdty		10%		
Lean Hogs	LH1 Comdty		10%		
Live Cattle	LC1 Comdty		10%		
Natural Gas	NG1 Comdty		10%		
Nickel	LN1 Comdty		10%		
Palladium	PA1 Comdty		10%		
Platinum	PL1 Comdty		10%		
Silver	SI1 Comdty		10%		
Soybeans	S 1 Comdty		10%		
Sugar	SB1 Comdty		10%		
Unleaded Gasoline (RBOB)	XB1 Comdty		10%		
Wheat	W 1 Comdty		10%		
WTI Crude Oil	CL1 Comdty		20%		
Zinc	LX1 Comdty	10%			
Bond Futures in total max. 500%*	Canada Government Bond Future 10Y	CN1 Comdty	100%		
	Euro-Bobl Future 5Y	OE1 Comdty	200%		
	Euro-Bund Future 10Y	RX1 Comdty	100%		
	Euro-Schatz Future 2Y	DU1 Comdty	500%		
	Japan Government Future 10Y	JB1 Comdty	100%		
	Long Gilt Future 10Y	G 1 Comdty	100%		
	Short Gilt Future 2Y	WB1 Comdty	100%		
	US Treasury Future 10Y	TY1 Comdty	100%		
	US Treasury Future 2Y	TU1 Comdty	500%		
	US Treasury Future 5Y	FV1 Comdty	200%		

\*The maximum weight for 2-year US Treasury Futures is 500%. The purpose of this is to bring the volatility of the individual assets to a comparable level.

<b>Calculation Agent</b>	Rodex Risk Advisers LLC, Chaltenbodenstrasse 4,8834 Schindellegi
<b>Selection Criteria</b>	The Calculation Agent will compose the index solely of financial instruments as listed under Index Components. The selection of the investment and hedging instruments lies in the sole discretion of the Calculation Agent.
<b>Start of index calculation</b>	January 01, 2012
<b>Index start level</b>	100; corresponds to index level t=0
<b>Index calculation</b>	Index calculation takes places on every trading day.
<b>Time of publication</b>	The Calculation Agent publishes the official index level on t on the respective following value day (t+1) using the closing prices of the previous day or the last available closing prices respectively.

<b>Place of publication</b>	Reuters ZKBDACI9, see also "Publication of data"
<b>Calculation Method</b>	The index level is calculated on each trading day t by the of the sum of all values of the individual index components.  $I_t = \left( I_{t'} + \sum_k b_{t'}^k * FX_{t'}^k * (F_t^k - F_{t'}^k) \right) * G_t$ <p>where:  <math>I_t</math>: Index level at date t  <math>I_{t'}</math>: Index level at the date of last index adjustment  <math>t</math>: Any trading day  <math>t'</math>: Last date of index adjustment  <math>b_{t'}^k</math>: Number of Futures k in the index at date t'. The number of Futures k is calculated according to the following formula:  <math display="block">b_{t'}^k = w_{t'}^k * \frac{I_{t'}}{FX_{t'}^k * F_{t'}^k}</math> <math>w_{t'}^k</math>: Weight of Future k at date t'  <math>FX_{t'}^k</math>: Exchange rate of currency of Futures k against CHF at date s for s = t or t' (1 currency unit corresponds to <math>FX_{t'}^k</math> – number of Swiss Francs)  <math>F_s^k</math>: The Futures contract value of index component k, calculated as price of the Futures k at the date s in local currency multiplied by the contract size of the Future.  e.g.: Price CL1 = USD 108.00, contract size = 1,000 Barrels  → <math>F_s^k = USD 108.00 * 1'000 = USD 108'000.00</math> (Futures contract value), for s = t or t'  <math>G_t</math>: Fee factor which represents a fee of 20 basis points per annum (act/360)</p> <p>The Calculation Agent determines the value of the index components to the best of its knowledge. For this purpose, the Calculation Agent uses next to internal valuation models also valuations which are provided by external data suppliers.</p> <p>In order to calculate the index level on the official end of day price of the index, the Calculation Agent uses a hypothetical portfolio whose value is scaled to 100 on the first day of index calculation. On all following calculation days, the index develops according to the performance of the corresponding portfolio where transaction costs due to portfolio adjustments are accounted for.</p> <p>The index components are solely compiled for the purpose of index calculation. The index implies a hypothetical investment in the index components, however, the Calculation Agent neither intends nor requests an investment in the index components.</p>
<b>Publication of data</b>	The index level is daily published. The index composition can be enquired at the Calculation Agent and is published on the Webseite of Rodex Risk Advisers with a delay of 6 months. www.rodexrisk.com.
<b>Change of index rules</b>	The Calculation Agent can modify the index calculation methodology at its sole discretion.

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