



## eurex circular 154/14

**Date:** 11 July 2014  
**Recipients:** All Trading Participants of Eurex Deutschland and Eurex Zürich and Vendors  
**Authorized by:** Mehtap Dinc



Action required

### Introduction of Variance Futures on the EURO STOXX 50® Index

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**Content may be most important for:**

Ü All departments

**Attachments:**

1. Updated sections of the Contract Specifications for Futures Contracts and Options Contracts at Eurex Deutschland and Eurex Zürich
2. Eurex Clearing circular 089/14

**Summary:**

The Management Board of Eurex Deutschland and the Executive Board of Eurex Zürich AG decided to introduce Variance Futures contracts on the EURO STOXX 50® Index effective **22 September 2014**.

This circular contains information on the following topics:

Introduction date, contract specifications, trading hours, risk parameters and preparations necessary for start of trading.

Information related to clearing of the new products, utilization of the Eurex Trade Entry Services, transaction fees and the amended sections of the relevant Rules and Regulations of Eurex Clearing AG is contained in Eurex Clearing circular 089/14 which we are providing to our Trading Participants as attachment 2.



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## **Introduction of Variance Futures on the EURO STOXX 50® Index**

### **1. Introduction**

The Management Board of Eurex Deutschland and the Executive Board of Eurex Zürich AG decided to introduce Variance Futures on the EURO STOXX 50® Index with effect from 22 September 2014.

To implement this decision, the Contract Specifications for Futures Contracts and Options Contracts at Eurex Deutschland and Eurex Zürich will be amended as specified in attachment 1 with effect from 22 September 2014.

### **2. Product description**

Variance Futures replicate the pay-off profile of a Variance Swap using a daily margined futures contract. Instead of a final settlement payment at the end of the life time the pay-off profile of the Variance Swap is generated as the sum of all variation margin payments throughout the holding period of the Variance Futures contract.

Variance Futures on the EURO STOXX 50® Index are traded in a quantity of "notional Vega", which represents a risk amount that is expressed in euro and at prices of "volatility". Volatility is the annualised average price fluctuation of the EURO STOXX 50® Index that is expected until the expiration of the contract month. Volatility is expressed in percentage points.

Variance Futures are standardised in two dimensions:

- **Maturity:** Variance Futures will have the same expiration dates as the related index options products (OESX), up to two years.
- **Standard variance price:** Each maturity will have a standard variance price, which is the square of the volatility level that is observed in the market on the first trading day of a new contract month. This standard variance price is constant over the lifetime of the new contract month.

Each individual trade will be converted into a position in the standard Variance Futures contract with the respective maturity:

- The economics of the spot starting Variance Swap are converted into Variance Futures that has started in the past.
- The traded volatility is converted into the standard variance price of the Variance Futures.

Trading and clearing in different notations involves conversions from notional Vega to Variance Futures contracts and from volatility to Variance Futures prices.

- After the conversion the contract size is rounded to the nearest integer, at least 1 contract and
- the Variance Futures price is rounded to the nearest fourth digit (0.0001).

Variance Futures prices contain two major elements:

- The realized variance from the start day of the contract month until the end of the trade day.
- The implied variance for the remaining life time resulting from the traded volatility.

In order to replicate a Variance Swap trade that starts with the first underlying price observation at the end of the trading day (EURO STOXX 50<sup>®</sup> Index close), trades need to be converted twice from volatility to Variance Futures prices:

- Intraday, after a trade match: Conversion into PRELIMINARY Futures prices.
- End of day: Conversion into FINAL Futures prices that include the realised variance until the end of the trading day.

At Eurex Exchange, these conversions are done by the trading system “T7”. Matched trades are reported to the clearing system in futures only; the clearing and position keeping takes place in futures only.

The detailed formulae that are used for the conversion from notional Vega into Variance Futures contracts and from volatility into Variance Futures prices can be found in the contract specifications in attachment 1.

**3. Product characteristics**

- a) The conversion from notional Vega into a position in Variance Futures may require rounding. The amount of Variance Futures contracts resulting from a trade in notional Vega is rounded to the nearest integer, at least one Variance Futures contract. A backwards conversion from futures to notional Vega can lead to a different notional Vega from the notional Vega that was matched by the trading system T7. This effect is amplified in the case where an order is matched in multiple partial executions.

Example:

An order of one notional Vega is executed in the order book and a Variance Futures quantity of 0.2 is calculated. The Variance Futures quantity is rounded to one Futures contract, which corresponds to a notional Vega of five.

- b) The maximum quantity of Variance Futures contracts that can be reported to the clearing system per transaction is 999,999 Futures. Order executions that lead to higher quantities will not lead to transactions and all orders that are (also partially) involved in such a matching event will not lead to transactions either. All orders that are involved in such a matching event will be deleted from the order book. Orders that have been partially executed in such matching event will be deleted to the amount that has been executed.

Example:

	Buy order		Sell orders (by time preference)		
	Vega	corresponding Futures	corresponding Futures	Vega	
deleted	1.000.000	1.100.000	500.000	454.545	deleted
			400.000	363.636	deleted
			300.000	272.727	90.909 Vega remain in the order book, representing 100.000 Futures

- c) For Variance Futures, the Eurex Clearing system will be in the state “HALT” until 18:30 CET. Preliminary trades that are transmitted from the T7 trading system to the clearing system will be registered and will be confirmed by the clearing system. However, PRELIMINARY trades cannot be finally cleared while the clearing system is in state “HALT”. After the PRELIMINARY trades have been replaced by FINAL trades the clearing system changes its state to “POST FULL” and the FINAL trades can be finally cleared. This also affects the registration of block trades, which need to be registered directly to the clearing system at their FINAL trade prices. This can be done during the “POST FULL” phase.

- d) PRELIMINARY conversion parameters and FINAL conversion parameters are available on the Eurex Trader GUI and also via the public broadcast stream. Eurex Exchange applies only the published conversion parameters in order to convert notional Vega and volatility into Variance Futures contracts and PRELIMINARY and FINAL Futures prices, respectively.
- e) When a Variance Future trade needs to be reversed (e.g. for a mistrade), the column "TrdState" in the T7 system will show "CANCELLED" instead of "REVERSED" (as for all other products) for the reversed trade.

#### 4. Product code

Variance Futures		
Futures	Eurex product code	ISIN
Variance Futures on the EURO STOXX 50 <sup>®</sup> Index	EVAR	DE000A11Q8E3

#### 5. Contract specifications

For the detailed contract specifications please see attachment 1.

	<b>EURO STOXX 50<sup>®</sup> Variance Futures (EVAR)</b>
<b>Contract value</b>	EUR 1 per Variance Futures point
<b>Contract terms</b>	Variance Futures Contracts are available for trading at Eurex Deutschland and Eurex Zürich AG until one day before the final settlement day of each of the following terms: up to and in each case including the final settlement day of the next, the second and the third succeeding calendar month and the next three succeeding quarter-end months (March, June, September, December) and the next two succeeding half-year expiration days (June and December) thereafter.
<b>Minimum price change</b>	0.0001 Variance Futures points
<b>Tick value</b>	EUR 0.0001
<b>Settlement</b>	Cash settlement
<b>Final settlement price/ expiration day</b>	The final realized variance is based on the average of the EURO STOXX 50 <sup>®</sup> Index calculations between 11:50 CET until 12:00 noon CET on the third Friday of the expiration month
<b>Final settlement day</b>	The third Friday of the expiration month
<b>Last trading day</b>	<b>One trading day before the final settlement day</b>
<b>Continuous trading</b>	09:00–17:30 CET
<b>Eurex Trade Entry Services</b>	<b>18:30–21:00 CET</b>

<b>Trade matching/ block trade entry</b>	<ul style="list-style-type: none"> <li>Variance Futures are traded on-exchange in terms of notional Vega at volatility. Upon matching notional Vega and volatility are converted into Variance Futures at Variance Futures prices. The corresponding conversion formulas and parameters are published by the exchange.</li> <li>Block trades are entered in Variance Futures at FINAL Variance Futures prices.</li> </ul>
<b>Order maintenance</b>	<ul style="list-style-type: none"> <li>notional Vega at volatility</li> <li>Minimum order size = 1 Vega</li> <li>Minimum price change in volatility = 0.05 volatility points</li> </ul>

The updated Contract Specifications for Futures Contracts and Options Contracts at Eurex Deutschland and Eurex Zürich will be published on the Eurex website [www.eurexexchange.com](http://www.eurexexchange.com) as of start of trading under the link:

**[Resources > Rules and Regulations > Contract specifications](#)**

## 6. Trading hours (CET)

Product	Pre-Trading-Period	Continuous Trading	Post-Trading Full Period	Eurex Block Trade Service	Last trading day	
					Trading until	Exercise until
EURO STOXX 50 <sup>®</sup> Variance Futures (EVAR)	07:00–08:50	09:00–17:30	18:30–22:00	18:30–21:00	17:30	n.a.

## 7. Trading calendar

EURO STOXX 50<sup>®</sup> Variance Futures are available for trading on each exchange day of Eurex Exchange. The expiring contract month is not available for trading on its expiration day. The exact trading days can be found in the trading calendar which will be published on the Eurex website as of start of trading under the following link:

**[Trading > Trading calendar](#)**

## 8. Admission to Eurex Trade Entry Services

Variance Futures on the EURO STOXX 50<sup>®</sup> index will be admitted to the Eurex Trade Entry Services with a minimum block trade size of 1 contract.

Product	Minimum Block Trade size
EURO STOXX 50 <sup>®</sup> Variance Futures (EVAR)	1

Members who are already registered for Eurex Trade Entry Services may use the respective Trade Entry Service for the Variance Futures without any further action.

Members wishing to participate in the Eurex Trade Entry Services for the first time should confirm their acceptance of the General Conditions for Participation by signing the appropriate form and returning it to Eurex. In addition, where the member firm is a Non-Clearing Member, its General Clearing Member must sign and return the General Clearing Member's Declaration Agreement at the same time. The necessary forms can be found on the Eurex website under the following link:

**[Resources > Forms](#)**

## 9. Preparations necessary to start trading

All on-exchange trades will be booked three times:

1. Intraday with a PRELIMINARY Futures price
2. End of day: The cancellation of the PRELIMINARY trade
3. End of day: The booking of the trade with its FINAL Futures price

Clearing systems of the Clearing Members need to be able to identify the PRELIMINARY trades and prevent them from being finally cleared. Clearing systems also need to be able to identify these three transactions to be a single trade.

Variance Futures are set up in the Eurex simulation environment, where this processing can be tested.

## 10. Product group assignment

The new product has been assigned to the following product group:

Product	Product group	Settlement location unit	Regulatory status	Settlement type	Product type	Product segment	Product currency	Product group code					
								X	N	E	F	V	E
EURO STOXX 50 <sup>®</sup> Variance Futures (EVAR)	E/I Futures in EUR	no	not approved for trading in U.S.	cash	F	Volatility Index	EUR	X	N	E	F	V	E

## 11. Transaction fees

The fees listed below apply for trading, clearing and settlement for Variance Futures on the EURO STOXX 50<sup>®</sup> Index.

Contract	Currency	Standard fee per contract M/ P-accounts	Standard fee per contract A-accounts
<b>On-exchange transactions</b>			
EURO STOXX 50 <sup>®</sup> Variance Futures (EVAR)	EUR	0.20	0.30
<b>Off-Book transactions</b>			
EURO STOXX 50 <sup>®</sup> Variance Futures (EVAR)	EUR	0.30	0.45

For further details, please refer to the current Price List for Eurex Clearing AG on the Eurex website under the link:

**[Resources > Rules and Regulations > Price list](#)**

## 12. Excessive System Usage Fee and Order to Trade Ratio

Excessive System Usage Fee (ESU) and Order to Trade Ratio (OTR) are determined in line with the existing index derivatives. Variance Futures on the EURO STOXX 50<sup>®</sup> index are assigned to the group “equity index futures” (FINX). For detailed information please refer to our website under the links:

**Products > Equity Index Derivatives** or  
**Technology > Excessive System Usage Fee** or  
**Technology > Order to Trade Ratio**

## 13. Risk parameters

As of start of trading, risk parameters will be published on the Eurex website under the link:

**Market data > Clearing data > Risk parameters and initial margins**

## 14. Eurex Clearing Prisma eligibility

Variance Futures on the EURO STOXX 50<sup>®</sup> index are not Eurex Clearing Prisma eligible.

In general, listed derivatives on single stocks, equity indexes, fixed income and money market instruments as well as EurexOTC Clear IRS products are eligible for margin calculation in Eurex Clearing Prisma. You can check the up-to-date list of particular Eurex Clearing Prisma eligible Eurex Exchange products published on the Eurex Clearing website under the link:

**Risk management > Risk parameters**

or direct your questions with regard to Eurex Clearing Prisma eligibility to the hotline +49-69-211-1 24 52.

## 15. Mistrade parameters

Mistrade claims in Variance Futures are evaluated in the trading notation, volatility and notional Vega. A deviation of the mistrade transaction price from the reference price shall be deemed significant if the price of the mistrade transaction deviates from the reference price by more than the mistrade range.

Mistrade ranges for Variance Futures on the EURO STOXX 50<sup>®</sup> index will be available for download on the Eurex website [www.eurexchange.com](http://www.eurexchange.com) as of start of trading under the following link:

**Products > Volatility Index Derivatives**

## 16. Data vendor codes

At start of trading, vendor codes for the new instruments will be published on the Eurex website [www.eurexchange.com](http://www.eurexchange.com) under the link:

**Products > Vendor Product Codes**

## 17. Further Information

Further information can be found on the Eurex website [www.eurexchange.com](http://www.eurexchange.com) under the following link:

**Resources > Publications**

The presentation “Variance Futures on Eurex\_product description and clearing concept.pptx” contains detailed information and examples on Variance Futures and how they are processed in Clearing.

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AMENDMENTS ARE MARKED AS FOLLOWS:

INSERTIONS ARE UNDERLINED

DELETIONS ARE CROSSED OUT

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1. **Part:**  
**Contract Specifications for Futures Contracts**

[..]

1.21 **Subject:**  
**Contract Specifications for Variance Futures Contracts**

The following sub-part contains contract specifications for Futures Contracts on Variance ("Variance Futures Contracts").

1.21.1 **Subject Matter of Contract**

- (1) A Variance Futures contract shall refer to future average price fluctuation (variance) of a specific underlying instrument.
- (2) The following Futures Contracts on variance are available for trading at the Eurex Exchanges; the institutions mentioned in brackets, being owners of the respective index, are responsible for the calculation:  
§ Variance Futures Contracts (product ID: EVAR) referring to Variance of the EURO STOXX<sup>®</sup> 50 Index (STOXX Limited)
- (3) The value of a Variance Futures contract shall be:  
§ EUR 1 per Variance Futures point for Variance Futures contracts (product ID: EVAR)
- (4) If any changes are made in the calculation of an underlying index such that the concept of the index appears to be no longer comparable with the concept that applied when the Variance Futures contract was admitted to trading, the Boards of Management of the Eurex Exchanges may order the termination of trading in such contracts as of the last trading day prior to the change in the respective index. Open positions shall be settled in cash upon the termination of trading. The respective final settlement price shall be used (Chapter II, number 2.6.3 of the Clearing Conditions of Eurex Clearing AG).

1.21.2 **Obligation of fulfillment**

After the determination of the final settlement price (according to 1.21.7.5) on the final settlement day of the contract, the seller of a Variance Futures Contract shall pay in cash any



difference between the agreed price and the higher final settlement price/ the purchaser shall pay in cash any difference between the agreed price and the lower final settlement price.

### 1.21.3 Term

Variance Futures Contracts are available for trading at the Eurex Exchanges until one day before the final settlement day (number 1.21.4) of each of the following terms: up to and in each case including the final settlement day of the next, the second and the third succeeding calendar month and the next three succeeding quarter-end months (March, June, September, December) and the next two succeeding half-year expiration days (June and December) thereafter.

### 1.21.4 Last trading day, Final Settlement day, Close of Trading

- (1) Last trading day of the Variance Futures Contract is the day before the final settlement day.
- (2) Close of trading on the last trading day of Variance Futures Contracts (product ID: EVAR) referring to Variance of the EURO STOXX<sup>®</sup> 50 Index is 17:30 CET.
- (3) Final settlement day is generally the third Friday of the expiration month, one business day after the last trading day provided that such day is a trading day at Eurex; otherwise, it shall be the trading day immediately preceding such day. Final settlement takes place at 12:00 CET. At this point in time the last price observation is recorded and the final Realized Variance (according to 1.21.7.2.2.1) is calculated.

### 1.21.5 Price Gradations

The price of a Variance Futures Contracts shall be calculated with four decimal places. The minimum price change (tick) is

§ 0.0001 points for Variance Futures Contracts (product ID: EVAR); this corresponds to a value of EUR 0.0001.

### 1.21.6 Fulfilment, Cash Settlement

- (1) Fulfilment day for Variance Futures Contracts shall be the Exchange day after the final settlement day.
- (2) The Variance Futures Contracts shall be fulfilled through cash settlement between the Clearing Members and Eurex Clearing AG. The responsible Clearing Member is in charge of the cash settlement to Non-Clearing-Members and own clients; whereas the Non-Clearing Members are in charge of the cash settlement of Non-Clearing Members to their clients.

### 1.21.7 Trading convention

#### 1.21.7.1 Exchange Trading

Variance Futures are traded in a quantity of "notional Vega", which represents a risk amount that is expressed in Euros and at prices of "Volatility", which is the annualized average price fluctuation of a specific underlying instrument over the lifetime of the contract that is expressed in percentage points. Subsequent to a trade matching the traded notional Vega is

converted into a Variance Futures quantity and the Volatility is converted into a Variance Futures price, according to 1.21.7.2

Price gradation and trade size:

In trading Variance Futures, the minimum price increment in Volatility is 0.05 percentage points. The minimum trade size in trading Variance Futures is 1 notional Vega.

## 1.21.7.2 Conversion

### 1.21.7.2.1 Description

Upon matching of orders that are expressed in notional Vega ( $\nu$ ) and Volatility ( $\sigma$ ), matched trades are converted into a position in Variance Futures contracts at Variance Futures prices. Conversions from Volatility into Variance Futures prices require the end of day closing price of the underlying instrument. Trade price conversions before the publication of this price result into preliminary trade prices. The preliminary trade prices will be updated after the publication of the closing price of the underlying instrument.

The conversion takes place according to the formulae specified in sections 1.21.7.2.2 and 1.21.7.2.3.

### 1.21.7.2.2 Formula Trade Price Conversion

Volatility is converted into the Variance Futures price according to the following formulae:

#### 1. Traded variance

$$\text{traded variance } (\sigma_t^2) = \frac{(\text{traded "Volatility" } (\sigma)^2 * (T - t) + \sigma_r^2 * t)}{T}$$

#### 2. Traded Variance Futures price

$$\begin{aligned} \text{traded Futures price}(F_t(\sigma)) \\ = D_t * (\text{traded variance } (\sigma_t^2) - \text{standard variance strike}(\sigma_0^2)) - \text{ARMVM}_t \\ + C \end{aligned}$$

where

$T$  = total amount of daily variance observations that are expected to occur during the life time of the contract

$t$  = amount of daily variance observations that have occurred until the day of the trade match

$D_t$  = discount factor according to 1.21.7.2.2.3, valid at time  $t$

$\sigma_r^2$  = realized variance measured until and including the closing price of the underlying instrument at the end of the day of the trade match. Realized variance is calculated according to section 1.21.7.2.2.1

$\sigma_0^2$  = standard variance strike according to section 1.21.7.3

$\text{ARMVM}_t$  = Accumulated Return on Modified Variation Margin –

A correction term according to section 1.21.7.2.2.2

$C$  = a constant term

### 1.21.7.2.2.1 Realized Variance

Realized variance is determined by the Boards of Management of the Eurex Exchanges based on the closing prices of the underlying instrument between the first trading day and the final settlement day according to the following formula:

$$\sigma_r^2 = 10.000 * \frac{252}{t} \cdot \sum_{i=1}^t \ln^2 \left( \frac{S_i^{und}}{S_{i-1}^{und}} \right)$$

.where

$t$  = amount of daily variance observations that have occurred until the day of the calculation

$S_i^{und}$  = end of day closing price of the underlying instrument

#### 1.21.7.2.2.2 Accumulated Return on Modified Variation Margin

The Accumulated Return on Modified Variation Margin (ARMVM) is calculated on each variance observation day, using the following formula:

$$ARMVM_t = ARMVM_{t-1} * e^{(r'_{t-1}(\frac{\Delta t}{365}))} + (S_{t-1} - C) * (e^{(r'_{t-1}(\frac{\Delta t}{365}))} - 1)$$

.where

$S_{t-1}$  = the settlement price of the variance futures on the previous business day according to 1.21.7.4

$r'_{t-1}$  = the risk free overnight rate (EONIA) that was set on the previous business day by the European Central Bank

$\Delta t$  = the difference between two subsequent calculations of the ARMVM in calendar days

$C$  = a constant term

On the first trading day of a Variance Futures contract ARMVM is set to zero.

#### 1.21.7.2.2.3 Discount Factor

The discount factor is calculated on every exchange business day based on the following formula:

$$D_t = e^{(-r_t \frac{(T-t)}{365})}$$

.where

$T$  = expiration date

$t$  = calculation date

$r_t$  = EURIBOR rate interpolated for the maturity of the Variance Futures contract, remaining between the calculation date and the expiration date

Interpolation Method:

Linear interpolation is used in order to determine the risk free interest rate. Inputs are the EURIBOR rates surrounding the maturity of the Variance Futures:

$$r_t = \frac{T_{K+1} - T}{T_{K+1} - T_K} * r(T_K) + \frac{T - T_K}{T_{K+1} - T_K} * r(T_{K+1}) \quad , \text{with } T_K \leq T < T_{K+1}$$

.where

$T_{K+1}$  = maturity of the EURIBOR rate later than the Variance Futures maturity

$T_K$  = maturity of the EURIBOR rate before the Variance Futures maturity

$T$  = maturity of the Variance Futures

#### 1.21.7.2.3 Formula Trade Size Conversion

The traded quantity, expressed in notional Vega is converted into Variance Futures using the following formula:

$$Q(F) = \frac{\text{notional Vega}(v)}{2 * \sigma} * \frac{T}{T-t}$$

, where

***T = total amount of daily variance observations that are expected to occur during the life time of the contract***

***t = amount of daily variance observations that have occurred until the day of the calculation***

***σ = traded "Volatility"***

The Variance Futures quantity is rounded to the nearest integer; at least to 1 Variance Futures contract.

The highest admissible Variance Futures quantity is 999,999 contracts. If an order or a quote is entered into the Eurex system specifying a notional Vega quantity that would result, according to the conversion method set out in 1.21.7.2.3, in a transaction with a higher Variance Futures quantity ("Exceeding Order"), the respective Exceeding Order will be deleted and will not generate a transaction. Orders or quotes that are matched with such Exceeding Orders in full will be deleted and will neither generate a transaction. Orders or quotes that are matched only partially with such Exceeding Orders will be deleted to the extent they have been matched with such Exceeding Order and the respective deleted part of the order or quote and will neither generate a transaction. Such orders or quotes will remain in the order book to the extent they have not been deleted.

### 1.21.7.3 Standard Variance Strike

The standard variance strike ( $\sigma_0^2$ ) is determined by the Boards of Management of the Eurex Exchanges on the first trading day of a new instrument and is kept unchanged during the life time of the instrument. The standard variance strike is based on the volatility level ( $\sigma$ ) in percentage points that is observed in the market on that day.

### 1.21.7.4 Daily settlement price

The daily settlement price of Variance Futures contracts ( $S_t$ ) is calculated in the same way as described in 1.21.7.2.2. Instead of traded "Volatility" ( $\sigma$ )<sup>2</sup>, a settlement "Volatility" ( $\sigma_{settle}$ )<sup>2</sup> is used as input factor. That means  $S_t = F_t(\sigma_{settle})$ . The settlement "Volatility" ( $\sigma_{settle}$ )<sup>2</sup> is determined as:

1. The volume weighted average price during the last 30 minutes of trading on each scheduled trading day.
2. The market maker mid point price during the last 30 minutes of trading on each scheduled trading day.
3. The last price of the VSTOXX Sub index that references the same maturity as the Variance Futures contract.

### 1.21.7.5 Final settlement price

The final settlement price of Variance Futures contracts is calculated in the same way as described in 1.21.7.2.2. For the calculation of the Realized Variance according to 1.21.7.2.2.1 the following underlying price  $S_T^{und}$  is used on the final settlement day:

- Variance Futures on the EURO STOXX<sup>®</sup> 50 index use the EURO STOXX<sup>®</sup> 50 index value that is based on the average of the EURO STOXX<sup>®</sup> 50 index calculations from 11:50 a.m. until 12:00 noon CET on the final settlement day of the expiration month.

### 1.21.7.6 Market Disruption

In case of a market disruption event on trading day t, the realized variance according to section 1.21.7.2.2.1 is calculated using

$$S_t^{und} = S_{t-1}^{und}$$

The closing price of the underlying instrument of the previous day is used as the closing price of the day of the realized variance calculation.

A market disruption event means the occurrence or existence of at least one of the following situations on an exchange day:

1. The index provider fails to calculate an index level.
2. Eurex is closed for trading during the last hour prior to the publication of the last underlying price.
3. The Futures on the underlying instrument is not available for trading during the last hour prior to the publication of the last underlying price.
4. The options on the underlying instrument are not available for trading during the last hour prior to the publication of the last underlying price.

The Boards of Management of the Eurex Exchanges determine situations where orderly price determination is not possible and a market disruption event has occurred.

[..]

[..]

**Annex C in relation to Contract Specifications:****Trading Hours Futures Contracts****Index Futures Contracts**

Product	Product-ID	Pre-Trading-Period	Continuous Trading	Post-Trading Full-Period	OTC Block Trading	Last Trading Day	
						Trading until	
Variance Futures on EURO STOXX 50® Index	EVAR	<u>07:00-08:50</u>	<u>09:00-17:30</u>	<u>18:30-22:00</u>	<u>18:30-21:00</u>	<u>17:30</u>	

\* During daylight savings time in Germany (CEST)

[..]

clear to trade



## eurex clearing *circular 089/14*

**Date:** 11 July 2014  
**Recipients:** All Clearing Members, Non-Clearing Members and Registered Customers of Eurex Clearing AG and Vendors  
**Authorized by:** Heike Eckert

### Introduction of Variance Futures on the EURO STOXX® 50 Index

**Related Eurex circular:** 154/14

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**Content may be most important for:**

Ü All departments

**Attachments:**

Updated sections of the following Rules and Regulations:

1. Clearing Conditions for Eurex Clearing AG
2. Conditions for Utilization of the Eurex Trade Entry Services (General Conditions for Participation)
3. Price List for Eurex Clearing AG

**Summary:**

Effective **22 September 2014**, Eurex Clearing will extend its clearing services to the following product:

Variance Futures contracts on the EURO STOXX® 50 Index (EVAR)

This circular provides information on the clearing of the newly introduced product and the updated sections of the relevant Rules and Regulations of Eurex Clearing AG. Specific information on the introduction of the new product as well as the updated sections of the relevant Rules and Regulations of Eurex Deutschland and Eurex Zürich AG can be retrieved from Eurex circular 154/14.



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Erik Tim Müller

Aktiengesellschaft mit  
Sitz in Frankfurt/Main  
HRB Nr. 44828  
USt-IdNr. DE194821553  
Amtsgericht  
Frankfurt/Main

**Introduction of Variance Futures on the EURO STOXX® 50 Index**

Effective 22 September 2014, Eurex Clearing will extend its clearing services to the following product:

Variance Futures contracts on the EURO STOXX® 50 Index (EVAR)

This circular provides information on the clearing of the newly introduced product and the updated sections of the relevant Rules and Regulations of Eurex Clearing AG. Specific information on the introduction of the new product as well as the updated sections of the relevant Rules and Regulations of Eurex Deutschland and Eurex Zürich AG can be retrieved from Eurex circular 154/14.

**1. Eurex product**

Variance Futures		
Futures	Eurex product code	ISIN
Variance Futures on the EURO STOXX® 50 index	EVAR	DE000A11Q8E3

Variance Futures replicate the pay-off profile of a Variance Swap using a daily margined futures contract. Instead of a final settlement payment at the end of the life time the pay-off profile of the Variance Swap is generated as the sum of all variation margin payments throughout the holding period of the Variance Futures contract.

Variance Futures on the EURO STOXX 50® Index are traded in a quantity of “notional Vega”, which represents a risk amount that is expressed in euro and at prices of “volatility”. Volatility is the annualised average price fluctuation of the EURO STOXX 50® Index that is expected until the expiration of the contract month. Volatility is expressed in percentage points.

Variance Futures are standardised in two dimensions:

- Maturity: Variance Futures will have the same expiration dates as the related index options products (OESX), up to two years.
- Standard variance price: Each maturity will have a standard variance price, which is the square of the volatility level that is observed in the market on the first trading day of a new contract month. This standard variance price is constant over the lifetime of the new contract month.

Each individual trade will be converted into a position in the standard Variance Futures contract with the respective maturity:

- The economics of the spot starting Variance Swap are converted into Variance Futures that has started in the past.
- The traded volatility is converted into the standard variance price of the Variance Futures.

Trading and clearing in different notations involves conversions from notional Vega to Variance Futures contracts and from volatility to Variance Futures prices.

- After the conversion the contract size is rounded to the nearest integer, at least 1 contract and
- the Variance Futures price is rounded to the nearest fourth digit (0.0001).

Variance Futures prices contain two major elements:

- The realized variance from the start day of the contract month until the end of the trade day.
- The implied variance for the remaining life time resulting from the traded volatility.



In order to replicate a Variance Swap trade that starts with the first underlying price observation at the end of the trading day (EURO STOXX 50<sup>®</sup> Index close), trades need to be converted twice from volatility to Variance Futures prices:

- Intraday, after a trade match: Conversion into PRELIMINARY Futures prices.
- End of day: Conversion into FINAL Futures prices that include the realised variance until the end of the trading day.

At Eurex Exchange, these conversions are done by the trading system "T7". Matched trades are reported to the clearing system in futures only; the clearing and position keeping takes place in futures only.

- a) The conversion from notional Vega into a position in Variance Futures may require rounding. The amount of Variance Futures contracts resulting from a trade in notional Vega is rounded to the nearest integer, at least one Variance Futures contract. A backwards conversion from futures to notional Vega can lead to a different notional Vega from the notional Vega that was matched by the trading system T7. This effect is amplified in the case where an order is matched in multiple partial executions.
- b) The maximum quantity of Variance Futures contracts that can be reported to the clearing system per transaction is 999,999 Futures. Order executions that lead to higher quantities will not lead to transactions and all orders that are (also partially) involved in such a matching event will not lead to transactions either. All orders that are involved in such a matching event will be deleted from the order book. Orders that have been partially executed in such matching event will be deleted to the amount that has been executed.
- c) For Variance Futures, the Eurex Clearing system will be in the state "HALT" until 18:30 CET. Preliminary trades that are transmitted from the T7 trading system to the clearing system will be registered and will be confirmed by the clearing system. However, PRELIMINARY trades cannot be finally cleared while the clearing system is in state "HALT". After the PRELIMINARY trades have been replaced by FINAL trades the clearing system changes its state to "POST FULL" and the FINAL trades can be finally cleared. This also affects the registration of block trades, which need to be registered directly to the clearing system at their FINAL trade prices. This can be done during the "POST FULL" phase.
- d) PRELIMINARY conversion parameters and FINAL conversion parameters are available on the Eurex Trader GUI and also via the public broadcast stream. Eurex Exchange applies only the published conversion parameters in order to convert notional Vega and volatility into Variance Futures contracts and PRELIMINARY and FINAL Futures prices, respectively.
- e) When a Variance Future trade needs to be reversed (e.g. for a mistrade), the column "TrdState" in the T7 system will show "CANCELLED" instead of "REVERSED" (as for all other products) for the reversed trade.

## 2. Clearing Conditions for Eurex Clearing AG

Please find the relevant amendments to the Clearing Conditions for Eurex Clearing AG in attachment 1 to this circular.

Effective 22 September 2014, the amended Clearing Conditions will be available for download on the Eurex Clearing website [www.eurexclearing.com](http://www.eurexclearing.com) under the following link:

**[Resources > Rules and Regulations > Clearing Conditions](#)**

### 3. Conditions for Utilization of the Eurex Trade Entry Services (General Conditions for Participation)

Variance Futures on the EURO STOXX 50<sup>®</sup> index will be admitted to the Eurex Trade Entry Services with a minimum block trade size of 1 contract.

Please be informed that the potential usage of the Eurex Block Trade functionalities for the Variance Futures is only possible within the following trading hours: 18:30–21:00 CET.

The Conditions for Utilization of the Eurex Trade Entry Services were amended accordingly. Please refer to attachment 2 for further details.

As of 22 September 2014, the amended Conditions for Utilization of the Eurex Trade Entry Services will be available for download on the Eurex Clearing website under the following link:

**[Resources > Rules and Regulations > Conditions for Utilization of the Eurex Trade Entry Services](#)**

### 4. Transaction Fees

Contract	Currency	Standard fee per contract M/P-accounts	Standard fee per contract A-accounts
<b>On-exchange transactions</b>			
EURO STOXX 50 <sup>®</sup> Variance Futures (EVAR)	EUR	0.20	0.30
<b>Off-Book transactions</b>			
EURO STOXX 50 <sup>®</sup> Variance Futures (EVAR)	EUR	0.30	0.45

For further details, please refer to the current Price List for Eurex Clearing AG on the Eurex Clearing website under the link:

**[Resources > Rules and Regulations > Price list](#)**

### 5. Trading hours and trading calendar

Trading hours of Variance Futures are as follows:

Product	Pre-Trading-Period	Continuous Trading	Post-Trading Full Period	OTC Block Trading	Last Trading day	
					Trading until	Exercise until
EURO STOXX <sup>®</sup> 50 Variance Futures (EVAR)	07:00–8:50	09:00–17:30	18:30–22:00	18:30–21:00	17:30	n.a.

All trading hours are CET.

As of start of trading, a detailed list of the trading days can be found in the trading calendar which will be published on the Eurex website [www.eurexchange.com](http://www.eurexchange.com) under the path:

**[Trading > Trading calendar](#)**

## 6. Preparations necessary to start clearing

All on-exchange trades will be booked three times:

1. Intraday with a PRELIMINARY Futures price
2. End of day: The cancellation of the PRELIMINARY trade
3. End of day: The booking of the trade with its FINAL Futures price

Clearing systems need to be able to identify the PRELIMINARY trades and prevent them from being cleared. Clearing systems also need to be able to identify these three transactions to be a single trade.

Variance Futures are set up in the Eurex simulation environment, where this processing can be tested.

## 7. Risk parameters

As of start of trading, risk parameters will be published on the Eurex Clearing website under the link:

**[Risk management > Risk parameters](#)**

## 8. Prisma eligibility

Variance Futures on the EURO STOXX<sup>®</sup> 50 Index are not Prisma eligible.

In general, listed derivatives on single stocks, equity indices, fixed income and money market instruments as well as OTC IRS products are eligible for calculation in Prisma.

You can check the up-to-date list of particular Prisma eligible Eurex products published on the Eurex Clearing website under the link:

**[Risk management > Risk parameters](#)**

or direct your questions with regard to Prisma eligibility to the hotline +49-69-211-1 24 52.

## 9. Position limits

A Clearing Member may not own or control contracts exceeding EUR 10 million Vega notional. The position limit holds for all contract months combined. It is computed by summing up the absolute values of net positions for all contract months, i.e. Clearing Members may not recognize offsets across maturities.

The position limit is a post-trade limit. Clearing Members who violate this limit will be contacted by Eurex Clearing.

## 10. Amendments to the Rules and Regulations of Eurex Deutschland and Eurex Zürich AG

The respective amended sections of the Contract Specifications for Futures Contracts and Options Contracts at Eurex Deutschland and Eurex Zürich are provided in the attachment 1 to Eurex circular 154/14.

Pursuant to Chapter I, Part 1, Number 17.2.3 of the Clearing Conditions, the changes and amendments to the Clearing Conditions communicated with this circular shall be deemed to have been accepted by each Clearing Member, Non-Clearing Member and each Registered Customer, unless they object in writing to Eurex Clearing AG prior to the actual effective date of such change and amendment of the Clearing Conditions. The right to terminate the Clearing Agreement or the Clearing License according to Chapter I, Part 1, Number 2.1.4 Paragraph 2 Number 7.2.1 Paragraph 4 and Number 13 of the Clearing Conditions shall remain unaffected.

Pursuant to Number 16 Paragraph 3 of the Price List, the amendments and additions to the Price List as communicated with this circular shall be deemed to have been accepted by the respective Clearing Member unless such Clearing Member's written objection is submitted to Eurex Clearing AG within ten (10) business days after publication.

\*\*\*\*\*

CHAPTER II IS BEING AMENDED  
AMENDMENTS ARE MARKED AS FOLLOWS:  
INSERTIONS ARE UNDERLINED  
DELETIONS ARE CROSSED OUT

\*\*\*\*\*

[...]

## **Part 2 Clearing of Futures Contracts**

The following provisions shall apply to the Clearing of futures contract transactions specified in Number 1 of the Contract Specifications for Futures Contracts and Options Contracts at Eurex Deutschland and Eurex Zürich ("**Eurex Contract Specifications**").

### **2.1 General Provisions**

The "General Provisions" pursuant to this Number 2.1 apply for all futures contracts unless specific or rules deviating from the "General Provisions" pursuant to Number 2.2 to 2.19 apply to the respective futures contracts.

#### **2.1.1 General Liabilities**

- (1) Eurex Clearing AG shall be a contracting party to all payments and deliveries arising out of the settlement of Futures contracts.
- (2) Clearing Members must fulfil their payment obligations in accordance with the instructions of Eurex Clearing AG.
- (3) Paragraphs (1) and (2) shall apply accordingly regarding the fulfilment of Transactions in products of the Eurex Exchanges, which have been included in the Clearing by Eurex Clearing AG and whose fulfilment requires the opening of a position in a specific derivatives contract on another derivatives exchange or another clearing house, respectively, in favour of the counterparty of these transactions.

#### **2.1.2 Daily Settlement Price**

- (1) For each futures contract, profits and losses arising out of open positions on any Business Day will be determined at the end of the Post-Trading Period on the basis of the daily settlement price determined pursuant to Paragraph (2). For open positions from the previous Business Day, the relevant profit or loss amount shall

equal the difference between the daily settlement prices of the contract in question on the relevant Business Day and the previous Business Day. For transactions on the relevant Business Day, the relevant profit or loss amount shall equal the difference between the price at which the Transaction was concluded and the daily settlement price for such Business Day.

The determined profit or loss amount on any Business Day shall be the Variation Margin Requirement, Segregated Variation Margin Requirement or Net Omnibus Variation Margin Requirement, as applicable, and/or any Redelivery Amount, as the case may be (as defined in Chapter I Part 2 Number 7, Chapter I Part 3 Subpart A Number 6 Subpart C Number 5 or Chapter I Part 4 Number 7, as applicable).

- (2) Eurex Clearing AG determines the daily settlement price according to the true market conditions of the respective contract and under consideration of its risk assessment.
- (a) When determining the daily settlement prices pursuant to Sentence 1 for contracts of the current expiry month, the following procedure shall apply.
1. For contracts with which a closing price in the closing auction pursuant to Section 64 of the Exchange Rules for Eurex Deutschland and Eurex Zürich is determined before 7 p.m., Eurex Clearing AG shall determine the daily settlement price according to the closing price respectively determined for the contract.
  2. With all other contracts, the daily settlement price shall be determined from the volume-weighted average of the prices of all transactions of the last minute before the respective reference point in time in the respective contract, provided that more than five transactions have been settled within this period. In case more than at least five transactions have been concluded before the respective reference point in time, the daily settlement price shall be determined from the volume-weighted average of the prices of the last five transactions concluded before the reference point in time in the respective contract, provided that those transactions are not concluded more than 15 minutes before the reference point in time.
  3. In case no price can be determined according to the aforementioned procedure, the daily settlement price shall be determined on the basis of the procedure described in (b) below.
- (b) For all other contract terms, the following procedures apply to the determination of the daily settlement price.
1. The daily settlement price for a contract shall be determined according to the average bid-ask spread of the combination order book.

2. In case there is no spread in the combination order book, Eurex Clearing AG shall base the determination on the average bid-ask spread of the respective expiry month.
  3. In case there is no average bid-ask spread for the respective expiry month, the daily settlement price shall be determined according to the theoretic price based on the price of the underlying.
- (c) The daily settlement price for futures contracts on exchange-traded index fund shares and on shares shall be determined by Eurex Clearing AG according to the closing price of the respective future determined in the closing auction of the underlying plus the respective costs of carry. For index fund shares, the closing price in the electronic trade on the Frankfurter Wertpapierbörse/SWX shall be relevant; for shares, the closing price according to the regulation in Number 2.7.2 shall be relevant.
- (d) The daily settlement price for futures contracts with assigned group ID BR01, CA01, US01 or US02 (Annex A of the Contract Specifications for Futures Contracts and Options Contracts at Eurex Deutschland and Eurex Zürich) shall be determined by the volume-weighted average of the last three prices of the underlying before the reference point in time (Paragraph 5); Eurex Clearing AG shall hereby collect the prices via the data provider Reuters AG. The calculated value shall respectively be added to the costs of carry.
- (e) The daily settlement price for the Commodity Index Futures Contracts shall be determined on the basis of the mean bid/ask spread in the order book before the reference point in time.
- If it is not possible to determine a price pursuant to the aforementioned provisions or if the daily settlement price so determined would not reflect the true market conditions, Eurex Clearing AG shall determine the settlement price at its equitable discretion.
- (f) The daily settlement price for Eurex-KOSPI-Daily Futures contracts shall also be the final settlement price (Number 2.16.2).
- (g) The daily settlement price for FX Futures contracts shall be determined according to the procedures described in Paragraph (a). In the case that no daily settlement price can be determined according to aforementioned procedures, the daily settlement price shall be determined on the basis of the mean bid-ask spread in the orderbook before the reference point in time. If it is not possible to determine a price pursuant to aforementioned provisions or if the daily settlement price so determined would not reflect the true market conditions, EUREX CLEARING AG shall determine the settlement price in its reasonable discretion.

(h) The daily settlement price for Variance Futures contracts shall be determined according to the specification in Number 1.21.7 of the Contract Specifications for Futures Contracts and Options Contracts at Eurex Deutschland and Eurex Zürich.

*daily settlement price Variance Future ( $F_{settle}$ )*

$$= D_t * (\text{daily settlement variance } (\sigma_{settle}^2) - \text{standard variance strike } (\sigma_0^2)) - ARMVM_t + C$$

With the

*daily settlement variance ( $\sigma_{settle}^2$ )*

$$= \frac{(\text{daily settlement Volatility } (\sigma_{settle})^2 * (T - t) + \sigma_r^2 * t)}{T}$$

Where the daily settlement "Volatility" ( $\sigma_{settle}$ )<sup>2</sup> is determined as:

1. The volume weighted average price during the last 30 minutes of trading on each scheduled trading day.
2. The market maker mid point price during the last 30 minutes of trading on each scheduled trading day.
3. The last price of the VSTOXX Sub index that references the same maturity as the Variance Futures contract

*T = total amount of daily variance observations that are expected to occur during the life time of the contract*

*t = amount of daily variance observations that have occurred until the current settlement day*

*D<sub>t</sub> = discount factor according to 1.21.7 of the Contract Specifications for Futures Contracts and Options Contracts at Eurex Deutschland and Eurex Zürich*

$\sigma_r^2$  = realized variance measured until and including the closing price of the underlying instrument at the end of the day of the trade match. Realized variance is calculated according to section 1.21.7.2.2.1 of the Contract Specifications for Futures Contracts and Options Contracts at Eurex Deutschland and Eurex Zürich.

$\sigma_0^2$  = standard variance strike according to section 1.21.7.3 of the Contract Specifications for Futures Contracts and Options Contracts at Eurex Deutschland and Eurex Zürich.

$ARMVM_t$  = Accumulated Return on Modified Variation Margin, according to section 1.x.7 of the Contract Specifications for Futures Contracts and Options Contracts at Eurex Deutschland and Eurex Zürich.

- (3) Paragraph (1) shall apply to the legal relationship between Clearing Members and their relevant Non-Clearing Members or Registered Customers, respectively, *mutatis mutandis*.
- (4) Number 2.1.1 apply *mutatis mutandis* with respect to all payments pursuant to this Number 2.1.2.
- (5) Reference times

<b>Contract</b>	<b>Reference Time (CET)</b>
AGRICULTURAL INDEX FUTURES WITH ASSIGNED PRODUCT ID FEPP, FHOG OR FPIG	16:00
AGRICULTURAL INDEX FUTURES WITH ASSIGNED PRODUCT ID FSMP, FWHY OR FBUT	18:30
ALL OTHER INDEX DIVIDEND FUTURES	17:30
ALL OTHER INDEX-FUTURES	17:30
CECE® EUR-FUTURES	17:10



<b>Contract</b>	<b>Reference Time (CET)</b>
COMMODITY INDEX FUTURES	17:30
CONF-FUTURES	17:00
ETC Futures	17:30
EUREX -KOSPI-DAILY FUTURES CONTRACTS	17:30
FIXED INCOME FUTURES (DENOMINATED IN EURO)	17:15
FUTURES CONTRACTS WITH ASSIGNED GROUP ID BR01, CA01, US01 OR US02	17:45
FX FUTURES	17:30
GOLD FUTURES	CONCLUSION OF AFTERNOON FIXING TAKING PLACE AROUND 16:00
HURRICANE FUTURES	22:00
INDEX DIVIDEND FUTURES	17:30
MONEY MARKET FUTURES	17:15
RDX® EUR FUTURES, RDX® USD FUTURES	16:30
SILVER FUTURES	CONCLUSION OF THE SILVER FIXING TAKING PLACE AROUND 13:00

<b>Contract</b>	<b>Reference Time (CET)</b>
SMI® INDEX DIVIDEND FUTURES	17:20
SMI®-FUTURES, SLI® FUTURES	17:20
SMIM® FUTURES	17:20
<u>VARIANCE FUTURES</u>	<u>17:50</u>

“Afternoon Fixing” means the fixing of the price for one troy ounce gold stated in USD, such fixing taking place during the opening days of the London Bullion Market (or a succeeding market on which market participants in the London market for trading with gold trade in gold) at 16:00 (CET) according to the rules of the London Bullion Market Association (or a succeeding organisation representing market participants in the London market for trading with gold). In case the fixing of one troy ounce gold in USD according to the rules of the London Bullion Market Association (or a succeeding organisation representing the market participants in the London market for trading with gold) takes place at a time other than mentioned above, the conclusion of the price fixing at this other time shall be the time for the afternoon fixing.

“Silver Fixing” means the fixing of the price for one troy ounce silver stated in USD, such fixing taking place during the opening days of the London Bullion Market (or a succeeding market on which market participants in the London market for trading with silver trade in silver) at 13:00 (CET) according to the rules of the London Bullion Market Association (or a succeeding organisation representing market participants in the London market for trading with silver). In case the fixing of one troy ounce silver in USD according to the rules of the London Bullion Market Association (or a succeeding organisation representing the market participants in the London market for trading with silver) takes place at a time other than mentioned above, the conclusion of the price fixing at this other time shall be the time for the Silver Fixing.

[...]

## **2.21 Clearing of Variance Futures contracts**

The following provisions shall apply to the Clearing of Variance Futures contract transactions specified in Number 1.x of the Contract Specifications for Futures Contracts and Options Contracts at Eurex Deutschland and Eurex Zürich.

### **2.21.1 Payment Procedures**

All payments shall be made on the Business Day (Number 1.5.4 of the Contract Specifications for Futures Contracts and Options Contracts at Eurex Deutschland and Eurex Zürich) following the final settlement day. All Clearing Members must ensure their ability to effect payments on the due date thereof through sufficient credit balances in the RTGS Account or the euroSIC Account.

### **2.21.2 Final Settlement Price**

(1) According to the Number 1.21.7 of the Contract Specifications for Futures Contracts and Options Contracts at Eurex Deutschland and Eurex Zürich the final settlement price of the Variance Futures contracts is calculated in the same way as described in 1.21.7. For the calculation of the realized variance according to 1.21.7 the following underlying price  $S_i^{und}$  is used:  
Variance Futures on the EURO STOXX® 50 index use the EURO STOXX® 50 index value that is based on the average of the EURO STOXX® 50 index calculations from 11:50 a.m. until 12:00 noon CET on the final settlement day of the expiration month.

In case of a market disruption event the realized variance according to section 1.21.7.2.2.1 of the Contract Specifications for Futures Contracts and Options Contracts at Eurex Deutschland and Eurex Zürich is calculated using

$$S_i^{und} = S_{i-1}^{und}$$

The closing price of the underlying instrument of the previous day is used as the closing price of the day of the realized variance calculation.

(2) A market disruption event means the occurrence or existence of at least one of the following situations on an exchange day:

1. The index provider fails to calculate an index level.
2. Eurex is closed for trading during the last hour prior to the publication of the last underlying price.

3. The Futures on the underlying instrument is not available for trading during the last hour prior to the publication of the last underlying price.

4. The options on the underlying instrument are not available for trading during the last hour prior to the publication of the last underlying price.

In case of extraordinary circumstances, especially if the trading is interrupted due to technical problems or if a price determination is not possible for other reasons, Eurex Clearing AG may determine the final settlement price by means of another procedure.

### **2.21.3 Fulfilment, Delivery**

Open positions from the last trading day of a contract shall be balanced on the final settlement day by means of a net payment credited to or debited from the internal cash account of the Clearing Member pursuant to Chapter I Part 1 Number 4.3. Such payment shall equal the difference between the final settlement price of such contract and such contract's daily settlement price on the preceding Business Day. For positions opened on the last trading day, the booking amount shall equal the difference between the final settlement price and the trading price.

[...]

\*\*\*\*\*

AMENDMENTS ARE MARKED AS FOLLOWS:

INSERTIONS ARE UNDERLINED

DELETIONS ARE CROSSED OUT

\*\*\*\*\*

[...]

## 9 Admitted Products, Combinations and Combination Transactions Option-Share

[...]

### 9.4 Block Trade Facility

Eurex Clearing AG has admitted the products listed in the following to the Block Trade Facility. Such admission is independent from the respective transactions being entered into the Eurex Clearing System within the scope of an options strategy, an options volatility strategy or as a Combination Transaction Option-Share, consisting of OTC options transactions and OTC securities transactions.

#### 9.4.1 Admitted Products:

Product	Minimum number of tradable contracts
---------	--------------------------------------

[...]

Mini-Futures Contracts on the VSTOXX <sup>®</sup> Index (FVS)	1000
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<u>Futures Contracts on the Variance of the EURO STOXX 50<sup>®</sup> Index (EVAR)</u>	<u>1</u>
--	----------

[...]

[...]

## **Annex A to the General Conditions for Participation:**

### **OTC Periods of Use (all times in CET)**

#### **Futures Contracts**

[...]

#### **Volatility Index Futures Contracts**

Product	Product-ID	Start-End
VSTOXX <sup>®</sup> Mini Futures	FVS	09:00-19:00
<u>EURO STOXX 50<sup>®</sup> Variance Futures (EVAR)</u>	<u>EVAR</u>	<u>18:30-21:00</u>

[...]

**Price List for Eurex Clearing AG**

\*\*\*\*\*

AMENDMENTS ARE MARKED AS FOLLOWS:

INSERTIONS ARE UNDERLINED

DELETIONS ARE CROSSED OUT

\*\*\*\*\*

[...]

**3. Transaction Fees for Derivatives Transactions (Transactions on the Eurex Exchanges and OTC-Transactions)**

[...]

**3.1 Matching / Recording of Derivatives Transactions (Trade)****3.1.1 Exchange Transactions (excluding Block Auction)**

[...]

Contract *	Currency	Standard Fee per Contract (contract volume ≤ threshold)	Reduced Fee per Contract (contract volume > threshold)	Threshold A-Accounts (number of contracts)	Threshold P-Accounts (number of contracts)
[...]					
<b>Equity Index Derivatives</b>					
<b>Futures</b>					
[...]					
Futures on STOXX® Indices	EUR	0.30	n. a.		
<u>EURO STOXX 50® Variance Futures****</u>	<u>EUR</u>	<u>0.30</u>	<u>n.a.</u>		
MSCI Futures (denominated in EUR)	EUR	0.50	n. a.		
[...]					

[...]

\*\*\*\* For FX-Derivatives (FX-Futures and FX-Options) the standard fee per contract for transactions booked on P-Accounts is 0.15 USD.

For EURO STOXX 50® Variance Futures the standard fee per contract for transactions booked on P-accounts is 0.20 EUR

**Price List for Eurex Clearing AG**

[...]

**3.1.3 OTC Transactions**

(1) [...]

(2) [...]

Contract	Currency	Standard Fee per Contract (contract volume ≤ threshold)	Reduced Fee per Contract (contract volume > threshold)	Threshold A-Accounts (number of contracts)	Threshold P-Accounts (number of contracts)
[...]					
<b>Equity Index Derivatives</b>					
<b>Futures</b>					
[...]					
Futures based on STOXX <sup>®</sup> Indices	EUR	0.45	n. a.		
<u>EURO STOXX 50<sup>®</sup> Variance Futures****</u>	<u>EUR</u>	<u>0.45</u>	<u>n.a.</u>		
MSCI Futures (denominated in EUR)	EUR	0.75	n. a.		

[...]

\*\*\*\* For FX-Derivatives (FX-Futures and FX-Options) the standard fee per contract for transactions booked on P-Accounts is 0.225 USD.

For EURO STOXX 50<sup>®</sup> Variance Futures the standard fee per contract for transactions booked on P-accounts is 0.30 EUR

[...]

**3.3 Position Closing Adjustments**

[...]

Contract	Fee per Contract
[...]	
<b>Equity Index Derivatives</b>	
[...]	
Futures on STOXX <sup>®</sup> Indices	EUR 0.60
<u>EURO STOXX 50<sup>®</sup> Variance Futures</u>	<u>EUR 0.60</u>
MSCI Futures (denominated in EUR)	EUR 1.00
[...]	



**Price List for Eurex Clearing AG****3.4 Cash Settlement**

<b>Contract</b>	<b>Fee per Contract</b>	<b>Maximum Fee for Contracts on the same underlying of each A-, P- and M-accounts</b>
[...]		
<b>Equity Index Derivatives</b>		
[...]		
Futures on STOXX <sup>®</sup> Indices	EUR 0.30	
<u>EURO STOXX 50<sup>®</sup> Variance Futures</u>	<u>EUR 0.30</u>	
MSCI Futures (denominated in EUR)	EUR 0.50	
[...]		

[...]