



EURO STOXX 50® Index Total Return Futures – Transition to €STR Flat

Attachment 4 – Conversion Procedure via Eurex Clearing Price Correction Service

Status Final
Author Eurex Clearing
Classification Public

Release Date 2021/09/16

EUREX

Table of Content

- 1. Introduction..... 3**
- 2. Application of the Conversion Methodology using Eurex Clearing's Price Correction Service to implement Technical Trades 4**
- 3. Reporting and Technical Documentation 7**

1. Introduction

On 18th of October 2021, Eurex will implement the changes necessary for the EURO STOXX 50® Index Total Return Futures (TESX) to be amended to use €STR flat as the funding rate by application of the conversion methodology. This will be achieved by using the Eurex Clearing Price Correction Service.

The intention is that holders of open positions in a TESX contract have their open positions re-established at the calculated Conversion Adjusted Settlement Prices. A description of the operational process is given below.

2. Application of the Conversion Methodology using Eurex Clearing's Price Correction Service

The method envisaged to be used for the conversion procedure will be based on Technical Trades entered by Eurex Clearing in C7 clearing system via **Price Correction Service**.

Eurex will determine and publish on the trading day immediately preceding the changes i.e. Friday, 15 October 2021 ("**Calculation Date**") the Daily Settlement (Clearing) Price and Conversion Adjusted Settlement Price for each expiry.

On Monday, 18 October 2021 ("**€STR Transition Effective Date**"), the following shall apply **prior to the start of trading** in Eurex T7 trading system:

- The Start Of Day open positions held in C7 clearing system will be booked out at the previous Daily Settlement Price and will subsequently be booked back in prior to the market opening at the Conversion Adjusted Settlement Price, by means of technical trades at position account level.
- In case of position accounts held on gross (Long and Short), the technical trades will be performed for each side accordingly.
- The variation margin value (VM) will be calculated based on the difference between the Conversion Adjusted Settlement Price and the Daily Settlement Price determined on the Effective Date. More details on the specific calculation of the VM corresponding to the technical trades in the C7 clearing system are presented in the numerical illustration described below in this document.

As a result of the above, on the €STR Transition Effective Date and going forward, the **Funding Rate** used to determine Daily & Accrued Funding, will be **€STR flat**.

To be noted that in cases where the members will trigger on / after the €STR Transition Effective Date any Give-up of trades executed on / before the Calculation Date, the adjusted VM which is calculated on Monday, 18 October 2021 will be not be transferred together or additionally with the Give-up. Therefore, the cash amount which is calculated by C7 on the effective date based on the technical transactions will remain at the Give-up Member. The respective members (i.e. Give-up and Take-up member) would need to handle such situation bilaterally.

The same applies in cases of position transfers which will be processed against the previous day settlement price whereby the respective members would need to handle such situations bilaterally. In such cases, a possible approach could be for the members to use the existing "Position Transfer with Cash" functionality available to move cash between the members in either direction.

2.1 Example: TESX Dec-22 Expiry

| | Calculation Date (Effective Date -1) | €STR Transition Effective Date | | |
|--|---|--|---|---|
| Date | Friday, 15 October 2021 | Monday, 18 October 2021 | | |
| Funding Rate | €STR + 8.5 bps | €STR flat | | |
| T7 Trading System Phase | Close | Pre-Opening | | Close |
| Status | Position | Technical Trade Book Out | Technical Trade Book In | Position |
| Contracts | 1 Long | -1 | +1 | 1 Long |
| Multiplier | EUR 10 | EUR 10 | EUR 10 | EUR 10 |
| Daily Settlement TRF Spread (basis points) | 32.0 | | | 40.5 |
| Daily Settlement (Clearing) Price (index points) | 4,068.53 | 4,068.53 | | 4,083.19 |
| Conversion Adjusted Spread (basis points) | 40.0 | | | |
| Conversion Adjusted Settlement Price (index points) | 4,074.29 | | 4,074.29 | |
| Technical Trades Price in C7 (index points) | | Sell-to-Close at 4,068.53 (Book Out Trade at previous day's settlement price) | Buy-to-Open at 4,074.29 (Book In Trade at conversion adjusted settlement price) | |
| Variation Margin Impact in C7 | | Book Out Trade: VM = -1 contract * (EOD settlement price – Book Out Price) * EUR 10 VM = -1 contract * (4,083.19 - 4,068.53) * 10 = - EUR 146.60 | Book In Trade: VM = +1 contract * (EOD settlement price – Book In Price) * EUR 10 VM = +1 contract * (4,083.19 – 4,074.29) * 10 = + EUR 89.00 | Long Position: VM = +1 contract * (EOD settlement price – Prior day settlement price) * EUR 10 VM = +1 contract * (4,083.19 - 4,068.53) * 10 = + EUR 146.60 |
| Total Variation Margin Applied | | | | - 146.60 + 89.00 + 146.60 = + EUR 89.00 |

Thereby, the Variation Margin (VM) calculations on the €STR Transition Effective Date will in effect reference the Conversion Adjusted Settlement Price instead of previous day's Daily Settlement Price. In the example above, the implementation of the switch in funding to €STR flat is done via the increase in TRF spread while ensuring neutrality at the same time (i.e. increase to 40 bps which is 8 bps higher than unadjusted settlement spread of 32 bps).

2.2 Example of impact on C7 clearing reports

In the table below we illustrate the main information from the CB012 Report (“Account Statement”) corresponding to the numerical example from section 2.1:

| Report Effective Date | Clearing Member ID | Exchange Member ID | Account Name | Currency Type Code | Tick Size | Tick Value | Last Settlement Price | Current Settlement Price | Trading Unit | Total Long Position per contract | Total Short Position per contract | Position ID | Transaction Adjustment Date CET | Transaction Time CET | Buy/Sell | Open/Close Flag | Change in Long Quantity | Change in Short Quantity | Net Quantity | Transaction Price | Premium / Variance Balance | Transaction Type |
|-----------------------|--------------------|--------------------|--------------|--------------------|-----------|------------|-----------------------|--------------------------|--------------|----------------------------------|-----------------------------------|-------------|---------------------------------|----------------------|----------|-----------------|-------------------------|--------------------------|--------------|-------------------|----------------------------|------------------|
| | membCldCod | membExchldCod | account Name | currTypCod | ticSiz | ticVal | lstSetlmtPr c 1 | currSetlmtPr c 1 | secuTrdUntNo | | | positionId | trnDatCet | trnTimCet | buyCod | opnClsCod | trnLngQty | trnShtQty | netQty | trnPrc | prmVmarAmt | trnTyp |
| 15.03.2021 | ABCFR | ABCFR | A1 | EUR | 0.01 | 0.1 | 4,068.53 | 4,083.19 | 1 | 1 | 0 | 2FC314 | | | | | 1 | 0 | 1 | | 146.60 | OPN |
| 15.03.2021 | ABCFR | ABCFR | A1 | EUR | 0.01 | 0.1 | 4,068.53 | 4,083.19 | 1 | 1 | 0 | 2FC314 | 15.03.2021 | 7:45:00 AM | B | O | 1 | 0 | 1 | 4,074.29 | 89.00 | 131 |
| 15.03.2021 | ABCFR | ABCFR | A1 | EUR | 0.01 | 0.1 | 4,068.53 | 4,083.19 | 1 | 1 | 0 | 2FC314 | 15.03.2021 | 7:45:00 AM | S | C | -1 | 0 | -1 | 4,068.53 | -146.60 | 131 |
| 15.03.2021 | ABCFR | ABCFR | A1 | EUR | 0.01 | 0.1 | 4,068.53 | 4,083.19 | 1 | 1 | 0 | 2FC314 | | | | | 1 | 0 | 0 | | | END |

- The daily P/L (Variation Margin) impact is displayed in the column “**Premium/Variation Balance**”
 - On the Calculation Date (Friday, 15 October 2021) the member had a **long open position** of one contract
 - Variation Margin (VM) calculated by C7 clearing system is performed for each individual transaction and position as follows:
 - **Technical Trade “Book-Out” (Sell-to-Close)**
 $VM = (\text{Current Settlement Price} - \text{“Book-Out” Transaction Price}) * (\text{Trading Unit}) * (\text{Tick Value} / \text{Tick Size}) * (\text{Net Quantity}) = (4,083.19 - 4,068.53) * 1 * (0.1 / 0.01) * (-1) = - 146.60$
 - **Technical Trade “Book-In” (Buy-to-Open)**
 $VM = (\text{Current Settlement Price} - \text{“Book-In” Transaction Price}) * (\text{Trading Unit}) * (\text{Tick Value} / \text{Tick Size}) * (\text{Net Quantity}) = (4,083.19 - 4,074.29) * 1 * (0.1 / 0.01) * (1) = + 89.00$
 - **EOD Long Open Position**
 $VM = (\text{Current Settlement Price} - \text{Last Settlement Price}) * (\text{Trading Unit}) * (\text{Tick Value} / \text{Tick Size}) * (\text{Net Quantity}) = (4,083.19 - 4,068.53) * 1 * (0.1 / 0.01) * (1) = + 146.60$
- ⇒ **TOTAL Variation Margin (Monday, 18 October 2021) = - 146.60 + 89.00 + 146.60 = + EUR 89.00** (same amount as in the first table presented above)

3. Reporting and Technical Documentation

The technical trades recorded in Eurex Clearing C7 system due to the conversion procedure will be reflected from a technical and reporting perspective as follows:

- C7 GUI will display the technical transactions with the following identifiers:
 - **“Orig Trade Type”** field value of **“D = Technical Transaction”**
 - **“Tran Type”** field value of **“131 = Technical Transaction”**
 - **“Tran Type Description”** field value of **“PRICE_CORRECTION”**
 - **“Orig Trade Type”** field value of **“TECHNICAL”**
 - **“O/C”** field value of **“O”** for Book In Trade and **“C”** for Book Out Trade
- The **CB012** (“Account Statement”) report will reflect the technical trades with the following attributes:
 - **“trdTyp”** trade field value of **“D = Technical Transaction”**
 - **“trnTyp”** transaction type value of **“131 = Price Correction”**
- FIXML identifiers corresponding to the technical trades are:
 - **“TrdType”** (tag 828) with value **“63 = Technical Transaction”**
 - **“TransferReason”** (tag 830) with value of **“131 = Technical Transaction”**
- C7 technical documentation available on the Eurex website:
 - Description of the CB012 report is available in the **“Eurex Clearing XML Reports – Reference Manual”**.
 - Description of the relevant fields and identifiers is available **“Volume 3: Transaction & Position Confirmation”** of the Eurex Clearing C7 Interface Specification.
 - FIXML message samples for technical trades are available in the **“Volume 6: Message Samples”** of the Eurex Clearing C7 Interface Specification.