



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

Attachment 4 – Proposed Conversion Procedure via Eurex Clearing Price Correction Service

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1. Introduction

The proposal is that, as at a date to be determined, 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 proposed 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. Proposed 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 day prior to the implementation date for €STR flat ("**Calculation Date**") the Daily Settlement (Clearing) Price and Conversion Adjusted Settlement Price for each expiry.

On the first subsequent exchange day ("**€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 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 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.

More information on the conversion procedure via the Price Correction Service, including the Calculation Date, €STR Transition Effective Date and timing schedule, will be published in due course via another Eurex circular.

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2.1 Example: TESX Dec-22 Expiry

	Calculation Date (Effective Date -1)	€STR Transition Effective Date		
Date	Friday, 12 March 2021	Monday, 15 March 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).

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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
	membClgldCod	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 (15 March 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 (15 March 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.

4. Focus Day in C7 Simulation Environment

Eurex will organise a Focus Day to facilitate testing by the trading and clearing members in the C7 Simulation environment of the proposed Conversion Procedure.

More information will be published in due course via another Eurex circular.