Eurex Exchange’s T7

Release 4.0

Final Release Notes

Version	V1.2.2
Date	24 October 2016

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Content

1. Introduction 6

1.1 New features and enhancements 6

1.2 Mandatory Java 8 Update 6

1.3 Further reading 7

1.4 Functional Product and Instrument Files 8

1.5 Contacts 8

2. Functional Aspects 9

2.1 Trade Entry Service (TES) Functionality 9

2.1.1 Overview 9

2.1.2 User Concept and Migration of User Entitlement 9

2.1.3 TES Activity Status 11

2.1.4 Instrument Types Supported for TES 13

2.1.5 TES Types and TES Type Eligibility 15

2.1.6 TES Trade Characteristics 15

2.1.7 TES Trade Closure, Entry and Approval Time 18

2.1.8 TES Trade Maintenance 18

2.1.9 TES Profile 21

2.1.10 TES Trade Traceability 22

2.2 Total Return Futures 23

2.2.1 Overview 23

2.2.2 Trading versus Clearing Notations 23

2.2.3 TRF Conversion Parameters 24

2.2.4 Preliminary to Final Trade conversion 24

2.2.5 Trade at Market (TAM) 24

2.2.6 TRF Settlement Prices 24

2.3 Various Functional Enhancements 25

2.3.1 Enhancement of Order Mass Cancellation Request 25

2.3.2 Decommissioning of previous open interest information in the Eurex RDI and Eurex RDF 25

2.3.3 Consider the trade volume resulting from volatility strategies in trade volume reporting 25

2.3.4 Book-or Cancel Restriction in order modify messages 25

2.3.5 Increase Flex Account 25

2.3.6 Opening Auction versus Intra-day Auction 26

3. Technical Enhancements 27

3.1 TES Interface Landscape 27

3.2 Structure of New TES Requests 28

3.2.1 New TES Requests 28

3.2.2 TES Requests Participant Overview 28

3.2.3 TES Entry Request Message Flow 29

3.2.4 TES Side Approval Message Flow 30

3.2.5 TES Modification Message Flow 30

3.2.6 TES Deletion Message Flow 31

3.3 Enhancement of Eurex EOBI 31

3.3.1 Enhancement of the EOBI market data interface to include selected options (OKS2) and some single stock futures 31

3.3.2 Change in sequence of execution and cancellation messages regarding SMP events 32

3.4 Various Technical Enhancements 32

3.4.1 Multimarket capability for MDI, RDI and RDF 32

3.4.2 Extension of scope concept in ETI header files 32

3.4.3 Additional information in the trade messages delivered via the Eurex FIX interface 33

3.4.4 Additional product state information on public Market Data Interfaces 33

3.4.5 Market and Reference Data Interface changes due to preparation for Cash market migration 33

3.4.6 Listener Broadcast processing 33

4. GUI Enhancements 34

4.1 Eurex GUI General 34

4.1.1 Separate Landing Pages for Eurex and EEX Market 34

4.1.2 TES and T7 Connection Icons: Indication of System Availability 34

4.2 Eurex Trader GUI 34

4.2.1 TES Trade Closure, Entry, Approval and Execution Time 34

4.2.2 Allow All TES Trade Types to be started from Buy or Sell Side 34

4.2.3 Page Broker 34

4.2.4 Multilateral versus bilateral 35

4.2.5 TES – Flexible Contracts Trade Entry 35

4.2.6 Full UserID Required for Counterparty field 35

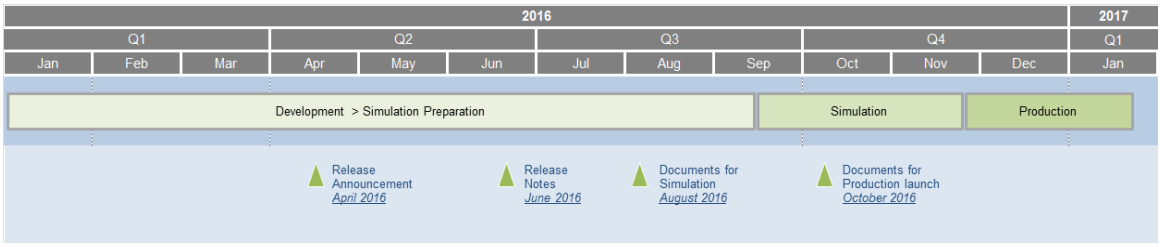
4.2.7 Trader Group and User Level 35

4.2.8 TES Description Field 36

4.2.9 Simple Entry Mode for Bilateral TES trades 36
4.2.10 Support for Flex Accounts 36
4.2.11 New Trade Ids (TES Id, TES Side Id, Deal Id, Deal Item Id) 36
4.2.12 TES Trade Split Support 36
4.2.13 Display of TES Transaction Size Limit 36
4.2.14 Contract Information Popup 37
4.2.15 Bulk Load Support for All TES Trade Types 37
4.2.16 Full Range of On-Exchange Strategy Types Supported in TES Entry 37
4.2.17 Variance Futures Extended Trading Phase 37
4.2.18 TES EFPI Trade at Index Close (TAIC) 37
4.2.19 Automatic Alert Signals for Incoming TES Trades 37
4.2.20 Views 37
4.2.21 TES Time & Sales 38
4.2.22 Fill Counterparty of Trade 38
4.2.23 TES Types 38
4.3 Eurex Admin GUI 39
4.3.1 User Maintenance Wizard 39
5. Report Changes 40
6. Appendix 41
6.1 Total Return Futures – Functional Concept 41
6.1.1 Introduction 41
6.1.2 Total Return Futures (TRF) Concept 42
6.1.3 Detailed Product 43
6.1.4 TRF Trade Lifecycle 44
6.1.5 Distributions & Funding 45
6.1.6 Conversion from Trading to Clearing Notation 47
6.1.7 Reports 48
6.2 Definitions and abbreviations 50
7. Change log 51

1. Introduction

Eurex Exchange is planning to launch release 4.0 of Eurex Exchange's T7 on **21 November 2016** in order to improve and extend its exchange infrastructure.
The following diagram gives an overview of the introduction schedule:



Eurex Exchange will provide a dedicated simulation environment, in order to give trading participants the opportunity to perform comprehensive testing of their trading applications, independent from Eurex Exchange's production environment. The simulation period for T7 Release 4.0 is currently planned to start on **23 September 2016.**

In addition to T7's release simulation participants can also use the T7 Cloud Simulation which allows trading participants and Independent Software Vendors (ISVs) to test against the current T7 production and simulation environment. In this environment participants can initiate predefined market scenarios and test specific strategies more easily than in a shared environment. The T7 Cloud simulation is available 24/7 for a fixed price per hour and is accessible using an SSL-encrypted internet connection. For more information on the T7 Cloud Simulation please refer to **http://www.eurexchange.com/exchange-en/technology/t7-cloud-simulation**.

1.1 New features and enhancements

Release 4.0 of Eurex Exchange's T7 will introduce the following major enhancements:

- Trade Entry Services ("TES")
- Trading Functionality for Total Return Futures (TRF) Products
- Report Changes (new, changed, discontinued and deleted reports)

Additionally, some smaller functional and technical enhancements and changes will be implemented:

- Enhancement of the Order Mass Cancellation Request
- Decommissioning of previous unadjusted and previous adjusted open interest information in the Extended Market Data Interface and Reference Data
- Consider the trade volume resulting from volatility strategies in trade volume reporting
- Book-or Cancel restriction in order modify messages
- Increase Flex Account
- Enhancement of Eurex EOBI
- Multimarket capability for MDI, RDI and RDF
- Extension of scope concept in ETI header files
- Additional information in the trade messages delivered via the Eurex FIX interface
- Additional product state information on public Market Data Interfaces
- Market and Reference Data Interface changes due to preparation for Cash market migration
- Listener Broadcast processing

1.2 Mandatory Java 8 Update

For T7 Release 4.0, the installation of Java 8 (minimum: Version 8 Update 73) for the Eurex T7 Trader GUI and Eurex T7 Admin GUI on the participants' side is **mandatory**. The usage of the GUIs with older Java versions will not be possible. In the event that the correct Java version is not installed, the respective Eurex T7 Trader GUI and

Eurex T7 Admin GUI will not start.
Oracle ceased public availability of security fixes and upgrades for Java 7 as of April 2015.

1.3 Further reading

The following existing documents will be revised for T7 Release 4.0. Preliminary versions (identified by ◆) were published in **June and August 2016** prior to the start of simulation and final versions (identified by ●) will be published in **September and October 2016** prior to the production launch.

Eurex Exchange's T7	Q2/2016			Q3/2016			Q4/2016		
	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
Release Notes									
Eurex Exchange's T7 Release Notes			◆			●			
Simulation									
Participant Simulation Guide						●			
Overview and functionality									
Functional and Interface Overview					●				
Functional Reference						●			
Participant and User Maintenance Manual							●		
Eurex GUI solutions									
Eurex Trader and Admin GUI – Manual						◆	●		
Eurex Trader and Admin GUI - Installation Manual						◆	●		
Trading interfaces									
Eurex Enhanced Trading Interface – Manual					◆		●		
Eurex Enhanced Trading Interface - XML Representation					◆		●		
Eurex FIX Gateway - FIX 4.2 and 4.4 Manual					◆		●		
Eurex FIX Gateway - FIXimate FIX 4.2 and 4.4					◆		●		
Eurex FIX Gateway - FPL Repository					◆		●		
Market and reference data interfaces									
Eurex Market + Reference Data Interfaces, Manual					◆		●		
Eurex Market + Reference Data Interfaces, FAST Templates					◆		●		
Eurex Reference Data File – FIXML Schema Files					◆		●		
Eurex Extended Market Data Services – Manual					◆		●		
Eurex Extended Market Data Interfaces, FAST Templates					◆		●		
Eurex Enhanced Order Book Interface – Manual					◆		●		
Eurex reports									
Eurex XML Reports - Reference Manual						◆	●		
Network access									
Eurex Network Access Manual					◆		●		

The documents will be available on the Eurex website www.eurexchange.com **> Technology > Eurex Exchange's T7 > System Documentation > Release 4.0.**

Please note that the outlined schedule is preliminary and subject to change.

1.4 Functional Product and Instrument Files

The functional products and instrument files on the Eurex web page www.eurexchange.com will be enhanced to cover the Trade Entry Services and other various enhancements.

The updated document will be available on the Eurex website www.eurexchange.com **> Technology > Eurex Exchange's T7 > Documents > Products and Instruments.**

1.5 Contacts

If you have any questions or require further information, please contact your Trading & Clearing Services Key Account Manager or via e-mail to memberservices@eurexchange.com. Alternatively, please contact your Technical Key Account Manager using your VIP number or via e-mail to cts@eurexchange.com.

2. Functional Aspects

2.1 Trade Entry Service (TES) Functionality

2.1.1 Overview

Eurex Trade Entry Services enables trading participants to enter off-book transactions in standardised and tailor-made (also denoted as flexible) contracts. With these services participants benefit from the customised trading in Eurex markets and the advantages of standardised clearing and settlement services provided by Eurex Clearing.

The Trade Entry Services are currently supported by the Eurex Clearing classic system. With T7 Release 4.0 the TES functionality will be migrated to the Eurex Exchange's T7 trading platform which is already available for on-exchange trading. The migration will lead to a consolidation of the on-exchange and off-book trading activities in a single state-of-art trading platform.

As a consequence of the migration of TES functionality from the Eurex Clearing classic system to Eurex Exchange's T7 trading platform, trading participants and ISVs using the current FIXML interface to access the TES functionality need to migrate to T7's ETI Interface. Eurex Clearing's FIXML Interface will depreciate all TES functionality for Eurex products (see also chapter 3.1 below).

Trading participants using the T7 Trader GUI will be less affected since conceptual changes of the TES functionality will be covered by the GUI convenience layer in order to provide similar TES GUI functionality as of today.

The migration of TES functionality to the T7 platform will offer Eurex trading participants and ISVs the following benefits:

- Common trading as well as market and reference data interfaces for on-exchange and off-book derivatives trading.
- Consolidated user management for on-exchange and off-book trading, hence there will be no need to maintain users separately on the Eurex Clearing classic system.
- Support of off-book trading of complex instruments that are already available for on-exchange trading such as:
    - Futures Calendar Spreads
    - Standard Futures Strategies
    - Non-standard options strategies
    - Standard options and options volatility strategies currently only supported for on-exchange trading
    - Packs, Bundles and Strips for trading in STIRs products.
    - Off-book trading for variance futures in parallel to on-exchange trading.

Please note that

- the TES migration for EEX products will be performed at a later point in time and, consequently, the TES functionality outlined in the present chapter does not apply to the EEX products
- the Options Volatility Strategies for stock options which includes the stocks as underlying leg are not supported in T7.

2.1.2 User Concept and Migration of User Entitlement

Trade Entry Service (TES) on T7 will use the existing participant, business unit, user and session concept. This section describes the TES specific features.

For a more detailed description, please refer to the document "Participant and User Maintenance Manual", published on the Eurex webpage (see chapter 1.3).

2.1.2.1 TES Users

Every TES entry request that reaches T7 must carry the identifier of the **initiating user**, i.e. a natural person who is legally responsible for the TES entry, and for each side of the TES trade the identifier of the **approving user,** i.e. a natural person who is legally responsible for the side approval. Please note that each party to the trade is an **approving user**. Only the **initiating user** can modify or delete a TES trade which he previously initiated.

In case the **initiating user** is also a party to the TES trade then he also needs to approve his side(s) of the TES trade using the approve request.

Several users may be set up as belonging to the same **trader group**. One or more of these users may be given the user level **head trader**. A **head trader** (**user)** may delete pending TES trades of an **initiating user** belonging to the same trader group and approve TES sides of an **approving user** belonging to the same trader group.

A user may be given the user level of a **supervisor**. A s**upervisor (user)** may delete pending TES trades of any **initiating user** belonging to the same business unit and approve TES sides of any **approving user** belonging to the same business unit.

2.1.2.2 TES Roles & Activity

The activities which will be available to the TES participants are:

- Enter a TES trade
- Modify a TES trade
- Delete a TES trade
- Approve a TES trade side

Roles are defined by grouping of the above activities. The following TES roles will be supported:

- TES trader – A TES trader must be involved in the TES trade as one of the counter parties. A user who is assigned the TES trader role can enter a TES trade as an initiating user and then modify or delete that TES trade. A TES trader can act as an approving user and can approve his TES side.
- TES broker – A TES broker is not involved in the TES trade as a counter party. A user who is assigned TES broker role can enter a TES trade as an initiating user and then modify or delete that TES trade, but is not allowed to act as approving user and approve a TES trade.
- TES view – This role allows the user to view TES trades.

The following figure gives an overview of the roles and activities which will be introduced for the TES trades.

Role / Activity	TES Trader	TES Broker	TES View
Enter TES Trade	✓	✓*	
Modify TES Trade	✓	✓	
Approve TES Trade	✓		
Delete TES Trade	✓	✓	
View TES Trade	✓	✓	✓
Add Flexible Instrument	✓	✓	

* Cannot be part of any trade side.

Figure 1: TES Roles and TES Activity

By default, each Eurex participant will receive the TES trader, the TES broker and the TES view role. However, the broker allowed flag in the TES profile (see Figure 4 below) can restrict the broker activities with respect to a specific product – instrument type – TES type combination.

The roles TES trader and TES broker also include the activity to submit a create instrument request for flexible instruments by default.

TES roles are provided at a business unit level to participants and, afterwards, the business unit administrator can provide the corresponding TES roles to a user belonging to that business unit similar to the roles assignment procedure in the on-exchange area. However, a TES activity like a TES trade entry can only be performed by a dedicated user having the corresponding entitlement.

2.1.2.3 Migration of User Entitlement

Almost all users which are currently using the TES functionality are set up as users in T7 as well. Exceptions are users, which are:

- Using only the FIXML interface to Eurex Clearing classic system (not using the T7 GUI)
- Having different user Ids for T7 and Eurex Clearing classic system

System Administrators of these users are requested to set up new users in T7 or align the user Ids.

Entitlement Migration:

Eurex offers the following support for a migration of TES trading entitlement (user level):

If a user participates in TES trading in the period before the TES migration, Eurex will migrate

- The TES type eligibility (see chapter 2.1.5 for description of TES types) -> Based on RAL settings in Eurex Clearing classic system, the various TES types will be assigned to the user
- Entitlement (assignment of TES roles and product / product group) -> Based on RAL settings in Eurex Clearing classic system, the various TES roles will be assigned to the user for the respective Product Assignment Groups (PAG)
- Transaction Size Limits (TSL) with respect to TES, known as *Max TES Quantity* in Eurex Clearing classic system
- Default Transaction Size Limits (Default TSL) with respect to TES, known as *Default Max TES Quantity* in Eurex Clearing classic system

The migration of the above mentioned attributes on user level will be based on the respective settings in the Eurex Clearing classic system on 09. November 2016 (end-of-day). Modifications done after this date will not be taken into account and have to performed again after the introduction of Release 4.0.

Please note that for US located user the same restriction already applicable for on-exchange trading also applies for the TES trading, i.e. US located users are not allowed to enter or approve TES trades for non-CFTC approved products.

2.1.2.4 Migration of participant entitlement

TES Type Eligibility and Transaction Size Limits on participant level (defined by GCM) will be migrated based on the respective settings in the Eurex Clearing classic system on **09. November 2016** (end-of-day). Modifications done after this date will not be taken into account and have to performed again after the introduction of Release 4.0.

2.1.3 TES Activity Status

The TES activity status for a product determines which TES activities are allowed in the product.

2.1.3.1 TES Activity Status Overview

For a given product, the following values for the TES activity status are foreseen:

- On - When the TES activity status is *On* for a product then TES trade entry, TES trade modification, TES trade deletion and TES trade approval are allowed for all the instruments of the corresponding product.
- Ended - The TES activity status *Ended* terminates the TES trading session of a business day. All the pending TES trades will be deleted during transition to the TES activity status Ended. TES trade entry/modification/approval and deletion are not allowed.
- Off – The TES activity status *Off* indicates that the product is no longer available for TES trading or TES trading has not been started for the day. In this case all TES activities are disabled for the product.
- Halted – The TES activity status *Halt* is reserved for emergency situations. Market Supervision may set the TES activity status to *Halted* for a product if they judge that market conditions or technical conditions impair the integrity of the market. In this state TES trade entry/modification/approval and deletion are not allowed. Pending TES trades remain when the TES activity status is *Halted*.



Figure 2: On-Exchange Product States and TES Activity Status

2.1.3.2 Instrument's TES Status

For TES trading the TES instrument status controls whether an instrument is currently available for TES trading or not. For a given instrument the following value for TES instrument status are foreseen:

- Active – The TES instrument status of an instrument to allow TES trading will be *Active*.
- Inactive - Market supervision may decide to deactivate an instrument during the day. An inactive complex instrument can no longer be traded.
- Expired - Instruments that expire during the trading day, rather than at the end of the trading day, will upon expiration acquire the listing status *Expired* as opposed to *Active*.

Note that an instrument is also characterized by its already existing on-exchange instrument status supplementing the TES instrument status.

2.1.4 Instrument Types Supported for TES

TES trading on T7 will support simple instruments, complex instruments and also flexible instruments.

The instrument identifiers source for on-exchange and off-book trades will be the same. As for on-exchange trading the instrument Id's of complex instrument for off-book trades have to be used for entering TES trades.

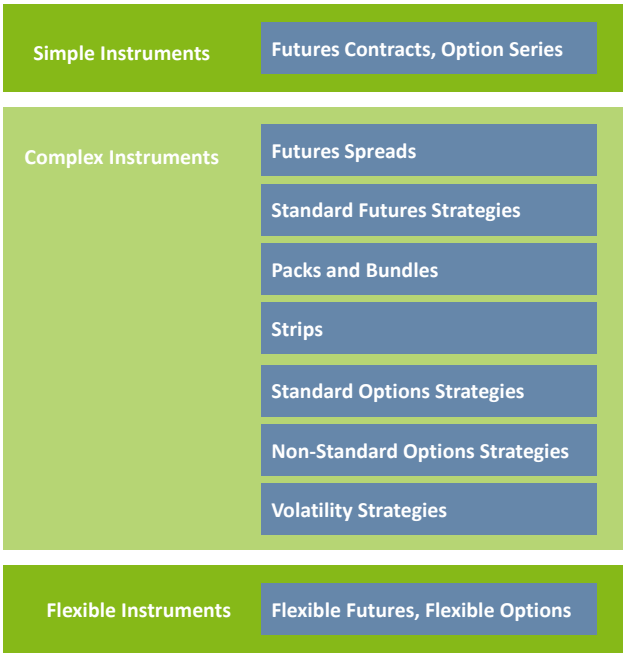


Figure 3: Instrument Types supported for TES Trading

2.1.4.1 Simple Instruments

Eurex Exchange pre-defined futures contracts or option series with their corresponding instrument Id's will be provided via the Eurex RDI interface or via the Eurex RDF report at the beginning of the trading day.

2.1.4.2 Complex Instruments

A complex instrument is an instrument that facilitates the simultaneous trading of two or more simple instruments at a net price, with the guarantee that all of the involved simple instruments are traded together.

The simple instruments that make up a complex instrument are referred to as the leg instruments of the complex instrument. The following types of complex instruments, each of these acting as an instrument type, will be supported by the T7 TES trading:

- **Futures Spreads** are calendar spread combinations for futures.
- **Packs and Bundles** allow to simultaneously buy or sell all quarterly contracts of a short term interest rate futures product that expire in a time span of one or more years.
- **Strips** are similar to Packs and Bundles, but allow a more flexible choice of leg instruments of short term interest rate futures product.
- **Standard Futures Strategies** are multi-leg futures strategies (i.e. butterfly and condor) that conform to an instrument combination which is pre-defined by the exchange.
- **Standard Options Strategies** are multi-leg options strategies that conform to an instrument combination which is pre-defined by the exchange.
- **Non-standard Options Strategies** are multi-leg options strategies that are freely defined by the users.
- **Options Volatility Strategies** are strategies of a predefined type that combine one or more options series with the underlying which is represented by a futures instrument. Options Volatility Strategies are not supported for stock options, because a stock instrument cannot be used as underlying.

Apart from some futures spreads any other complex instrument needs to be created intraday before it can be used for TES trading activities

2.1.4.3 Flexible Instruments

Eurex Exchange will support off-book trading of tailor-made futures and options contracts. The current Flexible Contract service offered by Eurex Trade Entry Service will be available as TES type *Block Trade* for the instrument type *flexible*.

A flexible instrument can be created by the user similar to the complex instrument. The response to the creation request will provide the flexible symbol (also denoted as *FlipId)* and system generated instrument identifier for the flexible instrument, the instrument identifier will be used for the subsequent TES trade entry on this flexible instrument. The creation of a new flexible instrument will also be published via the **Public Market Data Interfaces** with the complete signature.

The instrument Identifier for the flexible instrument will be valid only for the current business day. If the definition of a newly requested flexible instrument matches with an already existing flexible instrument then the Identifier of the already existing flexible instrument will be returned in the response of the creation request.

Last trading day and expiration day of a regular instrument are defined on the corresponding product level. In case the last trading day and the expiration day coincide for regular instruments, it will be possible to trade a flexible instrument which expires on the same business day. In case the last trading day is prior to the expiration day for regular instruments (e.g. MSCI futures), then the last trading day and the expiration day of a flexible instrument differs by the same amount as for regular instruments and, consequently, it is not possible to trade a flexible instrument on its expiration day. Please note that a TES trader creating a flexible instrument is always specifying the expiration date (and not the last trading day).

2.1.4.3.1 Flexible Instruments in Futures

Flexible instruments can be created in Eurex futures products by selecting:

- **Flexible maturity** - Participants of a flexible futures trade can create their own maturity date for the transaction. Individual maturity dates can be as early as the current business day or as long as the maturity date for the most distant respective standard futures contract.
- **Settlement type** – The settlement type can be cash settlement or physical delivery.

Validation is performed to ensure that a flexible instrument is not identical to a standard simple instrument in terms of maturity and settlement type.

2.1.4.3.2 Flexible Instrument in Options

Flexible instruments can be created in Eurex options products by selecting:

- **Exercise price** - The selected exercise price can be defined above the highest exercise price of the corresponding regular option series or may be the lowest exercise price of an option (e.g. LEPOs) which can be represented in the Eurex system or an intermediate price. Maximum exercise prices are limited to 2.5-times the highest available standard expiries in the respective product.
- **Expiration date** - The expiration date can be any business day (with some special Eurex defined exceptions) starting from the same business day until the longest currently active standard expiration date of the respective product.
- **Exercise style** - American-style (exercise on any business day during the lifetime of the option) or European-style (exercise only on the expiration day of the option) can be specified.
- **Settlement type** - The settlement type can be cash settlement or physical delivery.

Eurex Exchange defines the valid flexible instrument parameters at a product level, for example physical delivery is not supported for index options.

The creation of a flexible option with the same parameters in terms of exercise price, expiration date, exercise style and settlement type compared to simple instrument is not allowed.

2.1.5 TES Types and TES Type Eligibility

The Trade Entry Services on T7 will support the following services referred as TES types:

- **Block Trade** - Supports the multi and bilateral, off-book trading of standard Eurex products. Buyers and sellers can enter the trades that they previously arranged with each other into the Eurex system.
- **Exchange for Physicals (EFP) Fin** – Supports bilateral off-book trading on futures products and a cash reference to specific bonds.
- **Exchange for Physicals (EFP) Index** – Supports bilateral off-book trading on futures products and a cash reference to an equity basket.
- **Exchange for Swaps (EFS)** – Supports bilateral off-book trading on futures products and a cash reference to a swap contract.
- **Vola Trade** – Supports bilateral off-book trading on futures products and a reference to an options off-book (Block TES trade) trade. On-exchange options trades are not allowed to be used as a reference for a vola trade.
- **Trade at Market** – Specific TES type for Total Return Futures products (TRF); for more details, see chapter 2.2.5 or chapter 6.1.
- **Basis Trade –** Specific TES type only used for basis trades resulting from Eurex Bonds to indicate the derivative futures leg in T7; this TES type can not be used via the Eurex ETI or T7 Trader GUI.

The TES type eligibility of “Block Trade” does automatically include the TES type eligibility of “Trade at Market” and “Basis Trade”, i.e. there is no independent TES type eligibility for “Trade at Market” and “Basis Trade”.

The existing eligibility to do TES trading activity in a particular TES type for the business unit will also be migrated to T7 TES trading. The supervisor of the business unit will be able to pass this eligibility to the users belonging to its business unit.

The TES type eligibility defines on business unit and user level if TES trading in one or more of the above mentioned TES types is allowed.

This TES type eligibility will be migrated for all business units and a subset of users (which are participating in TES trading in the period before the TES migration) based on the actual RAL setting in Eurex Clearing classic system.

The application regarding TES type eligibility for members will remain as of today by using the forms “Acceptance of the Conditions for Utilization of Eurex Trade Entry Services” for NCM and “Declaration – Agreement of the General Clearer for Utilization of Eurex Trade Entry Services” for GCM.

2.1.6 TES Trade Characteristics

This chapter describes the characteristics and the maintenance of a TES trade especially for the TES type block.

2.1.6.1 Bilateral and Multilateral TES Trades

A *bilateral TES trade* is an off-book trade executed between exactly one buyer and one seller implying two approving users.

A *multilateral TES trade* is an off-book trade executed between one or several buyers against one or several sellers implying more than two approving users.

The sum of the trade volume of all buyers is always equal to the sum of the trade volume of all sellers.

The T7 *TES Trade Entry* applies to bilateral and multilateral TES trades. The number of sides allowed for a TES trade is defined as *Max Participants* in the TES profile (see chapter 0). If *Max Participants* is defined as two then only a bilateral TES trade with one buy and one sell side is allowed for the corresponding Product-Instrument type and TES type combination.

The approving user of the same business unit may have more than one side in the same TES trade (several buy or several sell sides in case of multilateral TES trades). Crossed sides in the same TES trade (opposite buy and sell sides for the same business unit) are allowed only when either the buy crossed sides or the sell crossed sides have the trading capacity *Agency*. Note that buy and sell sides with trading capacity *Agency* are allowed for the same business unit. The sequence of the buy and the sell sides has no importance and is not validated.

From an approving user perspective a TES trade is always seen as a bilateral trade with the initiating user as its counterpart. The clearing information of an approving user will not be communicated to the other approving users as well as to the initiating user involved in the same TES trade.

2.1.6.2 TES Trade and TES Side Identifiers

- TES trade identifier (TES Id, also denoted as *PackageID* in FIX-Terminology)
  When a trader or a broker successfully entered a new TES trade in T7, the system will assign a unique TES trade identifier (*TES Id*) to the newly entered and pending TES trade. The *TES Id* will be guaranteed to be unique among all TES trades in the same product on the same business day. The *TES Id* will be communicated to the initiating user and to all approving users via the TES broadcast.

  The initiating user will be able to identify the TES trade using the *TES Id* in order to delete or modify the TES trade.

- TES side identifier (TES Side Id, also denoted as *IndividualAllocID* in FIX-Terminology)
  When a new TES trade was successfully entered in T7, the system will assign to each side of the TES trade a TES side identifier (TES Side Id). The *TES Side Id* will be guaranteed to be unique among all TES sides in the same product on the same business day. The *TES Side Id* will be communicated to the corresponding approving user via TES broadcast.

  In order to approve a TES side, the approving user has to specify the *TES Id* and *TES Side Id*.

2.1.6.3 TES Trade Price

The TES trade price must be provided by the initiating user when entering a TES trade. The price entered for the TES trade will be validated to be within an exchange defined price range based on the rules stated in the “Conditions for Utilization of the Eurex Trade Entry Services”. If the price is outside this range then the TES trade will be rejected with a corresponding error message.

Apart from being in the expected price range the price provided in each TES trade is validated to be in accordance to the price step table of the relevant instrument. A price step table defines price intervals and the size of the price step for each price interval. Inside each price interval, valid TES prices are those that can be obtained by adding an integer multiple of the price step to the lower end of the price interval. Price steps are always integer multiples of the tick size, and therefore, valid TES prices are always integer multiples of the tick size however not every multiple of the tick size is a valid TES price.

The price of the TES trade entered by the initiating user will also be communicated to the approving user in the TES broadcast along with the *TES Id* and *TES Side Id*. The TES trade price can be changed only by the initiating user and then the TES trade needs to be again approved by all the approving users. The approving user cannot change the TES trade price.

2.1.6.4 TES Side Quantity

The initiating user must provide the quantity for each buy and sell side of the TES trade. The accumulated quantity of the buy sides must be equal to the accumulated quantity of the sell sides. The quantity on each buy as well as sell side should be at least equal to the *Minimum Lot Size* defined in the applicable TES profile. For a TES trade in options volatility strategy the side quantity multiplied by the **options multiplier** must be greater than or equal to the *Minimum Lot Size.*

During the approval of a TES side by the approver, the side quantity will be validated against the approving user’s *Transaction Size Limits* (TSL) for TES. If an approver has multiple sides in a single TES trade, the quantity of

each side will be validated against the TES TSL for the user. For a TES trade in complex instrument the leg quantity multiplied by the leg ratio must be less than or equal to the Transaction Size Limits (TSL) for TES.

For each side of the TES trade the side quantity entered by the initiating user will also be communicated to the approving user in the corresponding TES broadcast along with the *TES Id* and *TES Side Id*. The side quantity can only be changed by the initiating user. If a side quantity is changed by the initiating user then each approving user who is part of the TES trade needs to again approve their TES trade side. The approving user cannot change the TES side quantity.

2.1.6.5 TES Trade Publication and Non-Disclosure Limits

Price and quantity of a TES trade successfully ratified on T7 will be published in real time on the **Public Market Data Interfaces, Eurex MDI** and **Eurex EMDI** as well as on the TES Times & Sales window of the **Eurex Trader GUI** and in the report TE910 – "Daily Trade Activity". The accumulated end-of day trading statistics of the current business day provided via the **Public Market Data Interfaces** will include all TES trades.

For bilateral TES trades exceeding the **Non Disclosure Limit** defined in the corresponding TES profile (see chapter 2.1.9), the initiating user will be able to specify that the TES trade is not published in real time to the market (see also chapter 3.2.3). As a consequence, a successfully ratified TES Trade satisfying the non-disclosure criteria will only be considered in the end-of-day trading statistics and in the report TE910 – "Daily Trade Activity" of the current business day, and will be available on the next business day in the TES Times & Sales window of the **Eurex Trader GUI**.

2.1.6.6 Trade Description

The free text field TES trade description can be entered by the initiating user and will be communicated to all the approving users in the TES broadcast. Please note that the approving user is not able to modify the text field TES trade description. On the other hand, the initiating user is not able to access the free format text fields provided to the approving users (see also chapter 2.1.6.7).

2.1.6.7 Other Attributes

Several TES attributes, which needs to be filled by the approving trader, are not directly relevant to TES trading but serve other purposes, e.g. in the post-trade processing, or to satisfy regulatory requirements. These are:

- The *Trading Capacity* is a mandatory attribute which contains the trading business type (agency, proprietary, market making),
- Clearing related attributes
    - *Clearing Account* (optional),
    - *Take-Up Member* (optional),
    - *Open-Close Indicator* (mandatory),
- Free format text fields (optional),
- A *Compliance Information* (optional),attribute for use by the regulatory authority,
- A *Country Code* (optional), indicating the real origin of the approving trader.
- A *Rate Identifier* (optional), to be filled according to FIA guidelines.
- Other information that is needed in the context of trading the Eurex/KRX link product or Eurex/TAIFEX link products.

More information on the handling of clearing related attributes, of free format text fields and of attributes containing information related to the cooperation between Eurex and other exchanges is provided in later in the chapter dedicated to the TES requests.

Default rules to ensure consistency between *Trading Capacity* and *Clearing Account* as for on-exchange trading activities are provided in the Functional & Interface Overview document chapter 5.5.4.

2.1.7 TES Trade Closure, Entry and Approval Time

The following times are relevant in the context of a TES trade entry and approval in T7.

2.1.7.1 Time of Commencement

The *time of commencement* is the actual time when the off-book trade has been agreed outside T7 before the physical entry of the TES trade in T7 takes place. The *time of commencement* has to be specified by the initiating user and is applicable to all the TES sides of the TES trade. The entry of *the time of commencement* is mandatory for each TES trade, and a TES trade without it will be rejected.

In case the *time of commencement is* equal to or greater than the *TES entry time* or is older than 24 hours, the TES trade will be rejected.

After a successful entry of a TES trade, the *time of commencement* will be visible to all approving users involved in the TES trade. Since the *time of commencement* can not be modified by the approving user, the approval of a TES trade always implies that the *time of commencement* is accepted by the approving user. In case the approving user disagrees with the *time of commencement* entered, he should not approve the TES trade implying that the TES trade is never ratified.

2.1.7.2 TES Entry Time

When a TES trade is entered on T7 it will be assigned TES entry time. The TES entry time will apply to all approving users of TES trade.

2.1.7.3 Side Approval Time

Whenever a side of the TES trade is approved by the approving user then that time of approval will be recorded as the side approval time for the corresponding side.

2.1.8 TES Trade Maintenance

2.1.8.1 TES Trade Entry

After a TES trade entry by the initiating user the status of all its sides will be set to *Pending* including the TES trade side owned by the initiating user.

A Bilateral TES Trade is entered by the **Buyer A** as Initiating User						
TES Id	TES Side Id	User Character	Role	User Name	Activity	Side Status
1		Initiating User	TES Trader	Buyer A		
1	1	Approving User	TES Trader	Buyer A	ENTER	Pending
1	2	Approving User	TES Trader	Seller B	ENTER	Pending

or

A Bilateral TES Trade is entered by the **Seller B** as Initiating User						
TES Id	TES Side Id	User Character	Role	User Name	Activity	Side Status
1		Initiating User	TES Trader	Seller B		
1	1	Approving User	TES Trader	Seller B	ENTER	Pending
1	2	Approving User	TES Trader	Buyer A	ENTER	Pending

or

A Bilateral TES Trade is entered by the **Broker C** as Initiating User						
TES Id	TES Side Id	User Character	Role	User Name	Activity	Side Status
1		Initiating User	TES Broker	Broker C		
1	1	Approving User	TES Trader	Buyer A	ENTER	Pending
1	2	Approving User	TES Trader	Seller B	ENTER	Pending

During the approval of its TES trade side, the approving user has to complete its own clearing info which includes the attributes described above in section *2.1.6.7 Other Attributes.* Once a side is approved by the approving user the status of that side will be set to *Approved* and it will be marked with the *side approval time*. The approval can be done independently by each approving user. There will be no check on the sequence of approval. An approved side can be approved again by the approving user in order to modify the clearing attributes. The second approval of the approving user does not update the status as well as the *side approval time*.

The Bilateral TES Trade is approved first by the Approving User Buyer A who is also the Initiating User						
TES Id	TES Side Id	User Character	Role	User Name	Activity	Side Status
1		Initiating User	TES Trader	Buyer A		
1	1	Approving User	TES Trader	Buyer A	APPROVE	Approved
1	2	Approving User	TES Trader	Seller B		Pending

or

The Bilateral TES Trade is approved first by the Approving User Seller B						
TES Id	TES Side Id	User Character	Role	User Name	Activity	Side Status
1		Initiating User	TES Trader	Buyer A		
1	1	Approving User	TES Trader	Buyer A		Pending
1	2	Approving User	TES Trader	Seller B	APPROVE	Approved

When the last remaining side is approved by the corresponding approver the status of the TES trade is immediately ratified afterwards, i.e. the status of all sides is changed to *Executed*.

The Bilateral TES Trade is finally approved by the Approving User Seller B						
TES Id	TES Side Id	User Character	Role	User Name	Activity	Side Status
1		Initiating User	TES Trader	Buyer A		
1	1	Approving User	TES Trader	Buyer A		Approved
1	2	Approving User	TES Trader	Seller B	APPROVE	Approved
1	1	Approving User	TES Trader	Buyer A	EXECUTE	Executed
1	2	Approving User	TES Trader	Seller B	EXECUTE	Executed

Once fully approved (i.e. all sides are executed), the ratified TES trade is sent to the clearing system and each side receives a legally binding *trade notification* which confirms the conclusion of the TES trade. For TES trades in complex instruments, a trade notification will be sent for each leg. A TES trade cannot be modified or approved again once the status of the sides is changed to *Executed* and a trade notification was sent out.

2.1.8.2 TES Trade Modification

The initiating user can modify the TES trade details as long as the trade has not been ratified and the status of sides has not been changed to *Executed*. All the TES trade attributes including price, quantity and TES sides can be modified except the traded instrument and the related references (i.e. cash basket, index, swaps or bonds). Modification of any TES attribute apart from TES description will be treated like a new TES trade entry. As a result the *TES entry time* as well as the *side approval time* will be reset and the status of all sides will be changed to *Pending*, but the TES trade identifier will remain the same. Each of the approving users will be notified about the modification even if he has already approved his side. During TES trade modification all the attributes will be validated again as it is done for the *TES trade entry*.

- Modification of *TES trade price*, *time of commencement* and *TES publication status* – Each side will be informed about the modification and is required to fill (or refill) the clearing information and perform the approval again. The corresponding *TES side id* will be kept.
- Modification of TES side quantity – When the quantity of at least two TES sides is changed then the corresponding sides are informed about the modification along with the updated quantity and updated *TES*

entry time. The sides for which quantity have not changed will also be informed that the TES trade has been modified by the initiating user with updated *TES entry time*. Each side is required to fill (or refill) the clearing information and perform the approval again. The corresponding *TES side id* will be kept.

- Modification of TES sides by adding or deleting a TES side of the TES trade – When the initiating user is submitting a TES trade modification request with the original *TES side ids*, the involved traders keep their *TES side id*. If the initiating user is submitting a TES trade modification request where the *TES side id* is not included, then the corresponding side is considered as a newly entered side and receives a new *TES side id*. When an original *TES side id* is not sent back with the modify request, the corresponding side is deleted. For all sides, the approving time, the clearing information and the approving status are reset to *Pending* irrespectively of the previous approval status. All approving users are then informed by a TES broadcast that they have to approve again their side(s) and to fill (or refill) their clearing information.

A Bilateral TES Trade is entered by the **Buyer A** as Initiating User						
TES Id	TES Side Id	User Character	Role	User Name	Activity	Side Status
1		Initiating User	TES Trader	Buyer A		
1	1	Approving User	TES Trader	Buyer A	ENTER	Pending
1	2	Approving User	TES Trader	Seller B	ENTER	Pending

The Bilateral TES Trade is approved first by the Approving User Seller B						
TES Id	TES Side Id	User Character	Role	User Name	Activity	Side Status
1		Initiating User	TES Trader	Buyer A		
1	2	Approving User	TES Trader	Seller B	APPROVE	Approved
1	1	Approving User	TES Trader	Buyer A		Pending

The above Bilateral TES Trade is modified by the Initiating User A by Entering Seller as C and removing Seller B						
TES Id	TES Side Id	User Character	Role	User Name	Activity	Side Status
1		Initiating User	TES Trader	Buyer A		
1	1	Approving User	TES Trader	Buyer A	MODIFY	Pending
1	2	Approving User	TES Trader	Seller B	DELETE	Deleted
1	2	Approving User	TES Trader	Seller C	ENTER	Pending

Afterwards,

The above Bilateral TES Trade is again modified by the Initiating User A by Adding Buyer D						
TES Id	TES Side Id	User Character	Role	User Name	Activity	Side Status
1		Initiating User	TES Trader	Buyer A		
1	1	Approving User	TES Trader	Buyer A	MODIFY	Pending
1	2	Approving User	TES Trader	Seller C	MODIFY	Pending
1	3	Approving User	TES Trader	Buyer D	ENTER	Pending

2.1.9 TES Profile

The table below summarizes the valid instrument type - TES type combinations supported by T7 (for the definition of TES types, please refer to chapter 2.1.5). In addition, it also indicates the mapping between TES Type and Trade Type ID which is provided by T7 to the clearing system. In case of TES trades referring to complex instruments (i.e. instruments with instrument type not identical to simple instrument), the Trade Type ID is the same for all leg trades of the complex instrument trade they belong to.

Product Line	T7 InstrumentType	T7 TES Type	TradeTypeId / C7 TrdType
OPTION	SIMPLE_INSTRUMENT	BLOCK	1
FUTURE	SIMPLE_INSTRUMENT	BLOCK	1
FUTURE	SIMPLE_INSTRUMENT	EFP-FIN	1001
FUTURE	SIMPLE_INSTRUMENT	EFP-IDX	1002
FUTURE	SIMPLE_INSTRUMENT	EFS	12
FUTURE	SIMPLE_INSTRUMENT	VOLA	1000
OPTION	FLEXIBLE_INSTRUMENT	BLOCK	54
FUTURE	FLEXIBLE_INSTRUMENT	BLOCK	54
OPTION	STANDARD_OPTION_STRATEGY	BLOCK	1
OPTION	NON_STANDARD_OPTION_STRATEGY	BLOCK	1
OPTION	OPTION_VOLATILITY_STRATEGY	BLOCK	1
FUTURE	FUTURES_SPREAD	BLOCK	1
FUTURE	INTER_PRODUCT_SPREAD	BLOCK	1
FUTURE	STANDARD_FUTURES_STRATEGY	BLOCK	1
FUTURE	PACK_AND_BUNDLE	BLOCK	1
FUTURE	STRIP	BLOCK	1
FUTURE	SIMPLE_INSTRUMENT	BASIS	55
FUTURE	SIMPLE_INSTRUMENT	TAM	1

To support a configurable mapping between products and their instrument types on the one hand and TES types on the other hand, a TES profile will be introduced.

The TES profile will summarize all valid product – instrument type – TES type combinations termed as TES profile Key and corresponding TES profile attributes. The TES profile attributes are:

- **Broker Allowed** – This flag defines whether broker trades are supported or not.
- **Max Participants** - This field provides information about how many participants / TES approving users can be involved on both sides of a TES trade
- **Minimum Price Step** – This field provides the information about the minimum price increment allowed for a TES trade.
- **Minimum Lot Size** - This field provides the information about the minimum TES side quantity allowed in a single leg.
- **Non-disclosure Limit** – This field provides the quantity threshold for using the non-disclosure feature.
- **Price Validation Rule** – The rule used for price validation of TES trades in accordance to “Conditions for Utilization of the Eurex Trade Entry Services”

The TES profile will be published on the Eurex web page and with the help of the TES profile; it will be possible to obtain an overview of the TES functionality provided for a specific product – instrument type – TES type combination. ***Figure 4*** below gives an example of the TES profile with respect of the index future FDAX and the option OGBL.

TES Profile								
Key			Attributes					
Product	Instrument Type	TES Type	Broker Allowed	Max Participants	Minimum Price Step	Minimum Lot Size	Non-disclosure Limit	Price Validation Rule
FDAX	Simple	Block	FALSE	2	0.5	250	999999	FUTURE SIMPLE INSTRUMENT
FDAX	Flexible	Block	FALSE	2	0.5	250	1	FUTURE SIMPLE INSTRUMENT
FDAX	Simple	Vola	FALSE	2	0.5	1	999999	FUTURE SIMPLE INSTRUMENT
FDAX	Simple	EFP_Idx	FALSE	2	0.5	1	999999	FUTURE SIMPLE INSTRUMENT
FDAX	Calendar Spread	Block	FALSE	2	0.5	250	999999	FUTURES SPREAD
OGBL	Simple	Block	TRUE	30	0.005	100	999999	OPTION SIMPLE INSTRUMENT
OGBL	Flexible	Block	FALSE	2	0.005	100	1	OPTION SIMPLE INSTRUMENT
OGBL	Standard Strategy	Block	FALSE	2	0.005	100	999999	STANDARD OPTION STRATEGY
OGBL	Volatility Strategy	Block	FALSE	2	0.005	100	999999	OPTION VOLATILITY STRATEGY
OGBL	Non-standard Strategy	Block	FALSE	2	0.005	100	999999	NON STANDARD OPTION STRATEGY

Figure 4: Example of a TES profile

(The above TES Profile view is just an example and does not depict the actual configuration)

2.1.10 TES Trade Traceability

The following diagram shows the key identifiers available for TES trades and how participants can use them to cross reference the trade/transaction confirmations:

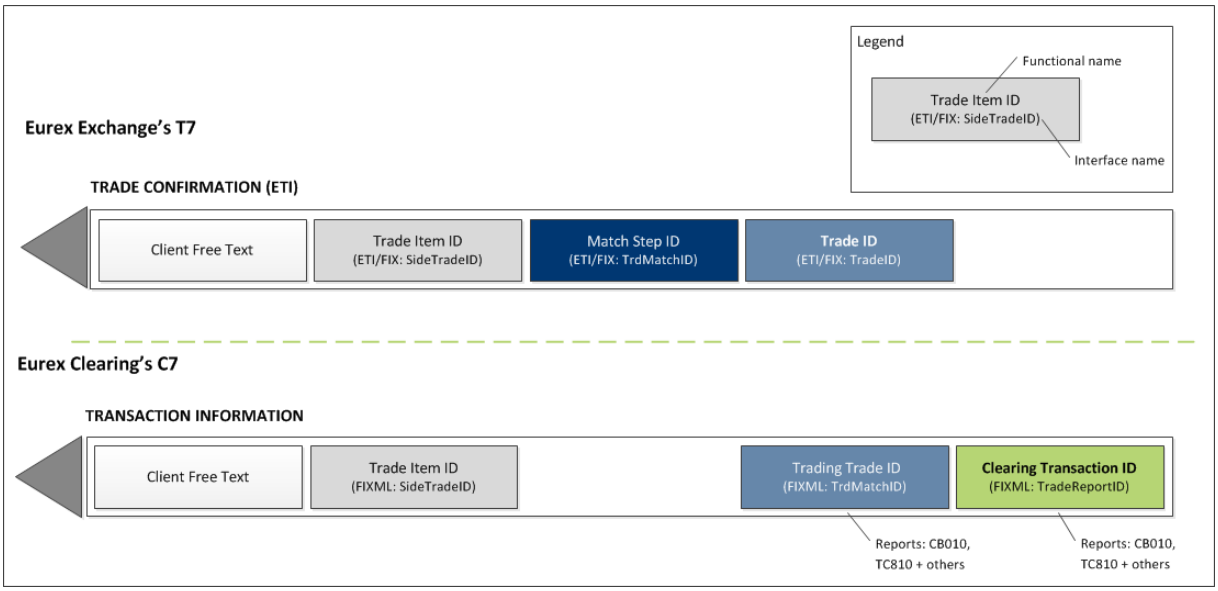


Figure 5: T7 Ids used for TES trading.

In case of TES trades in complex instruments, the Match Step ID is the same for all leg trades belonging to the complex instrument TES trade while the Trade ID is different for each leg trade. Please note that the Trade ID and Side Item ID are only unique (within product and business day) for either on-book or off-book (TES) trades. Participants wishing to reconcile their T7 trade confirmation with their C7 transaction confirmation messages need to take the field TrdType into account (see table in chapter 2.1.9). This means in order to get a unique identifier for a trade on T7 per business day and per product, Participants should use the combination of the fields Trade ID and TrdType.

Please note that the Match Step ID is identical to the TES ID created when the TES trade was initiated by the initiating user and that the Trade ID and Trade Item ID are generated when the TES trade was approved by all involved parties.

2.2 Total Return Futures

The new offering for Total Return Futures (TRF) will be supported by T7 Release 4.0 for on-book and off-book trading (TES). The launch date of the EURO STOXX 50® Index Total Return Futures will be communicated in a subsequent Eurex circular.

2.2.1 Overview

TRF contracts are associated with an underlying index and replicate the daily performance of a Total Return Swap corresponding to the contract expiration, namely the index price variation, the daily distribution and the daily payment of a funding rate completed by the traded TRF spread.

- The buyer of a Total Return Future is the receiver of the total return (distribution + underlying index price movement) and the payer of the funding rate plus the traded TRF spread.
- The seller of a Total Return Future is the payer of the total return (distribution + underlying index price movement) and the receiver of the funding rate plus the traded TRF spread.

In T7, TRF trading prices are handled in trading notation, i.e. as an interest rate spread given in basis points, denoted as the **TRF Spread**. In order to be sent to the clearing system, the trading spread is converted to clearing notation, i.e. a clearing price given in index points, denoted as the **Traded Futures Price**.

The relation between the trading price and the clearing price depends on conversion parameters like the underlying index value and accrued amounts since the product launch. They are completed by the traded basis calculated from the TRF Spread entered by traders as the trading price.

Clearing Price = Index + Accrued Distribution – Accrued Funding + Traded Basis

Traded Basis = Index * TRF Spread * 0.0001 * (Days to Maturity / Annualisation Factor)

Where

- the **Days to Maturity** is the number of calendar days until the instrument expiration,
- the **Accrued Funding** is the accumulated daily funding interest since the product launch,
- the **Accrued Distribution** is the accumulated daily distribution since the product launch,
- the **Annualisation Factor** is a number of days in one year (with 360 or 365 days convention),
- the **Index** is the value of the underlying index (close value or a custom index value for trade at market, see chapter 2.2.5).

During the day, the on-exchange trading uses a preliminary clearing price calculation. A **Preliminary Index** value is automatically set to the previous day's underlying index close value in order to calculate a preliminary clearing price immediately sent to C7 as **preliminary** trades.

Each evening, after T7 has received the underlying index close value for the day, the clearing prices of all preliminary trades that occurred during that day are recalculated from that **Final Index** value and resent to C7 as **final** trades.

By default the preliminary and final trade processing applies also to the Trade Entry Service (TES). However, a tailor made **Custom Index** value can be entered on-demand by the TES traders. In this case the clearing price calculated with the custom index value, does not need to be updated in the evening with the underlying index close value. The corresponding Trade at Market (TAM) trades are posted as **regular** trades.

The first product planned to be introduced is a Total Return Futures on the EURO STOXX 50® Index with the EONIA® being the funding rate to be considered.

2.2.2 Trading versus Clearing Notations

TES trades, orders and quotes are entered and maintained exclusively in trading notation corresponding to a TRF interest spread given in basis points (1 bp = 0.0001) .

Order and quote broadcasts as same as TES broadcasts are filled only with prices in trading notation. Trade price statistics are also provided exclusively in trading notation by the market data interface.

Once executed, the traded price in trading notation is converted in clearing notation given in Index points before it is sent to C7. The ETI trade notification is provided with prices in both notations.

Note that only the price in clearing notation is sent to the clearing system.

2.2.3 TRF Conversion Parameters

Accrued distribution and accrued funding are calculated at the beginning of the day by Market Supervision. The preliminary index is automatically filled with the previous day underlying index close value defined in the product level.

The conversion parameters are immediately available via the Eurex RDI (Reference Data Interface) and Eurex RDF (Reference Data File). They are also available on the T7 trader GUI.

In the evening, the underlying index close value approved by market supervision becomes the final index value used by all instruments (except the expiring contract on the expiration which is set with the EOD settlement price of the FESX).

All conversion parameters and the corresponding inputs are listed on a new report TA115 (see chapter 5).

2.2.4 Preliminary to Final Trade conversion

During the day and until the final index is approved by market supervision**, preliminary trades** (on-exchange trades and bock trades) are sent to C7 with a preliminary clearing price calculated from the preliminary index value.

As soon as the final index is approved by market supervision, all preliminary trades are automatically converted to **final trades** with the clearing price recalculated from the final index value. One unique trade confirmation message is sent for each preliminary to final trade conversion.

Note that it is not expected that new trades are executed after this automatic preliminary to final trade conversion. However, in such a case, the clearing price of these new trades will be calculated from the final index value and will be sent as regular trades which do not need to be reconverted.

2.2.5 Trade at Market (TAM)

TAM trades can only be entered off-book by using a new TES type TAM and by providing a mandatory custom index as an external TES reference attribute. The TES configuration and the entitlement for TAM trades are similar to block trades.

The entered custom index replaces the generic Index value in the trading to clearing price calculation irrespectively of the preliminary or the final index values.

Executed TAM trades are immediately posted as regular block trades. They do not need to be reconverted when the final index is available.

2.2.6 TRF Settlement Prices

Settlement prices for TRF contracts are also provided in both notations. The TRF settlement spread determined by market supervision for each contract is considered as the settlement price in trading notation.

The TRF settlement spread is then converted in clearing notation like for any traded price by using the accrued distribution, the accrued funding and the final index value before to be approved as the settlement price used for the variation margin.

On the expiration day, the expiring contract is considered as an inactive contract, i.e. it cannot be traded. A special procedure applies for the final settlement price of the expiring contract which is calculated by using the EDSP of FESX futures.

Note that the previous day and the current day values of the settlement prices in trading notation are published via RDI in addition to the conversion parameters. The previous day value of the settlement price in trading notation may be used as a default reference price in the trading area instead of the prior day settlement price used on C7 in clearing notation.

More details about the handling of Total Return Futures can be found in chapter 6.1.

2.3 Various Functional Enhancements

2.3.1 Enhancement of Order Mass Cancellation Request

With T7 Release 4.0 the *Order Mass Cancellation* request on **Eurex ETI** and **Eurex FIX** interfaces will be enhanced to help participants manage their open orders in the book more efficiently. The enhanced request will include the side and price as a filter criterion. Therefore, participants will be able to delete multiple orders on buy or sell side of the order book up to a particular price level. The request can only be sent for single instruments. Market orders will not be deleted when price / side is used in the filter of the *Order Mass Cancellation* request.

- *Side* and *Price* will be included as optional fields to the filter criteria of the *Order Mass Cancellation* request on both the **Eurex ETI** and **Eurex FIX** interfaces.
- *Side* and *Price* will also be included as optional fields in *Order Mass Cancellation* notification on both the **Eurex ETI** and **Eurex FIX** interfaces.
- *Side* and *Price* will also included as optional field in the *Order Mass Cancellation* response on the **Eurex FIX** interface but the *Order Mass Cancellation* response on **Eurex ETI** will not be changed.

2.3.2 Decommissioning of previous open interest information in the Eurex RDI and Eurex RDF

With T7 release 4.0, the fields P*revious Unadjusted Open Interest* and P*revious Adjusted Open Interest* will be removed from the interface **Eurex RDI (Reference Data Interface)** and **Eurex RDF (Reference Data File)**. Adjusted open interest will be published via **Eurex EMDS (Extended Market Data Service)** and previous unadjusted open interest will be available via the new report **TE930** – “Daily Trade Statistics” which will replace the report **TD930** – “Daily Trade Statistics”.

2.3.3 Consider the trade volume resulting from volatility strategies in trade volume reporting

The trade volume of the underlying leg of volatility strategies was not considered in market data in previous releases. With T7 Release 4.0, the volume of the underlying leg will be reported correctly via the market data interfaces.

2.3.4 Book-or Cancel Restriction in order modify messages

With T7 Release 4.0, participants will be able to specify on each order modification whether an existing Book-or-Cancel order to be treated as a regular book order, a regular book order to be treated as a Book-or-Cancel order, or keep the book orders as originally specified. The field O*rderRestriction* was already available in ***ETI*** *Order Modify* request (standard) and will be added in Order Modify Response (standard).

In case the Book-or-Cancel order crosses the order book on modification, it will be deleted. The field *ExecRestatementReason* will be enhanced to reflect this deletion.

The FIX-Gateway processing will be also enhanced to reflect the new behaviour by the modification of Book-or-Cancel orders.

2.3.5 Increase Flex Account

The field *PartyIDPosition-Account* will be increased from 20 to 32 characters. The following **ETI**-messages will be affected:

- NewOrderSingleRequest
- ModifyOrderSingleRequest

- NewOrderComplexRequest
- ModifyOrderComplexRequest
- OrderExecReportBroadcast
- TradeBroadcast

Trade Enrichment Rules will not be affected.

The change will be also reflected in the FIX messages, in which the related party field is used:

- FIX field PartyIDPositionAccount(tag 20038) for the FIX version 4.2.
- PartyID(tag 448) with PartyRole(452) = 38 (Flexible account identifier) for the FIX version 4.4.

2.3.6 Opening Auction versus Intra-day Auction

With T7 Release 4.0, the instrument state A*uction* indicated as *Opening* by the instrument state qualifier can only occur once per business day (usually in the morning prior to the instrument state “continuous”).

As a consequence, when resuming the on-exchange trading activities by changing from product state *HALT* to *Trading* to resolve an intra-day emergency situation, the trading session may start with an instrument state *Auction* which is qualified as *Intra-day* but not with an instrument state *Auction* qualified as *Opening*.

3. Technical Enhancements

3.1 TES Interface Landscape

Eurex Enhanced Trading Interface (Eurex ETI), the high performance trading interface supporting full access to the on-exchange trading functionality will be enhanced to support the Eurex Trade Entry Services on T7. Existing low frequency sessions for on-exchange trading can also be used for Eurex TES transactions without any modifications. TES is not possible via high frequency sessions.

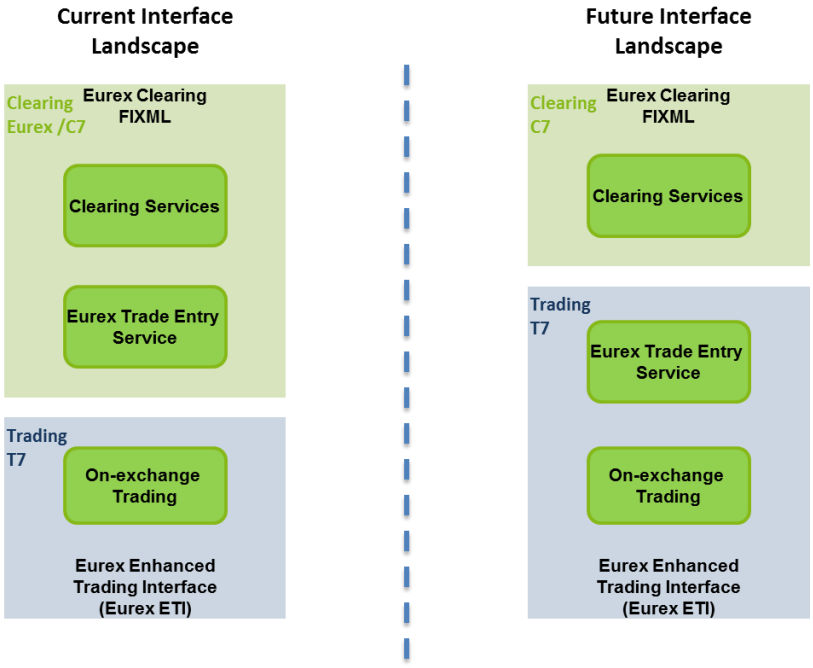


Figure 6: Interface landscape changes before and after the migration of TES functionality from the Eurex Clearing classic system to T7

As a result of moving the Eurex Trade Entry Service from Eurex Clearing classic system to Eurex Exchange's T7 trading platform, the Eurex Clearing FIXML Interface used primarily for Eurex Clearing services will no longer provide access to the TES functionality. Consequently, trading participants and ISVs who are currently using the existing FIXML interface for accessing the TES functionality need to migrate to ETI in order to participate in TES.

With T7 Release 4.0 the **Eurex Trader GUI** will continue to support the T7 TES functionality. After the launch of T7 Release 4.0 TES transactions will be sent directly to T7. All T7 users of a specific business unit will be maintainable in a consistent way via the **Eurex Admin GUI** irrespective of whether they are used for on-exchange or off-book trading activities.

The **Public Market Data Interface Eurex EMDI** supports TES by publishing the off-book trades in real-time. The same product and instrument identifier used for on-exchange trading will also used for off-book trades. TES trades are not supported by the **Eurex EOBI** interface and they will be removed from the **Eurex Extended Market Data** Service.

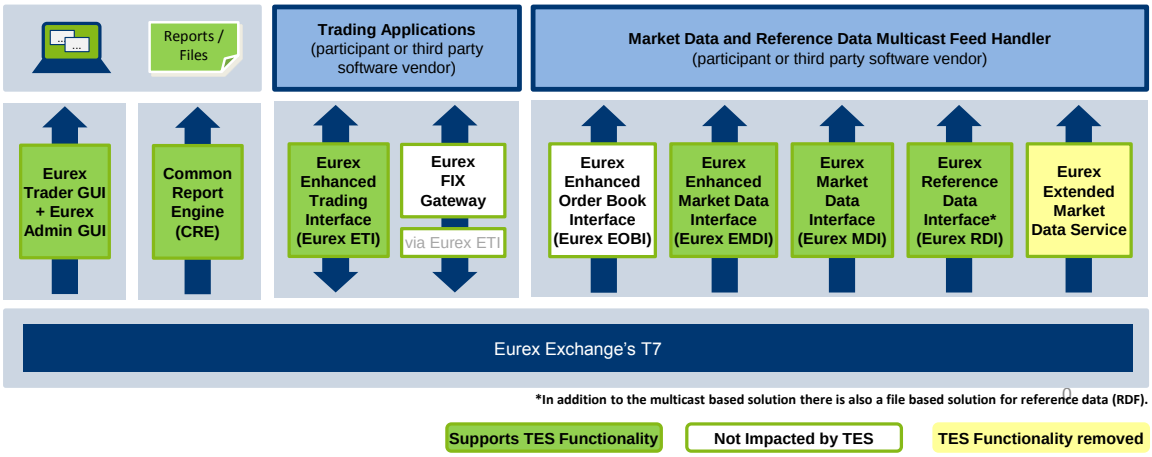


Figure 7: TES Supported Interfaces of Eurex Exchange's T7 trading platform

Figure 6 and Figure 7 only depict changes for Eurex products; the interface changes mentioned in this section are not applicable to EEX products.

3.2 Structure of New TES Requests

3.2.1 New TES Requests

To support the TES functionality on Eurex Exchange's T7 trading platform, Eurex ETI will be enhanced with the following requests also denoted as TES requests:

- TES Trade Entry:
  The request allows the entry of a TES trade containing the general TES trade information like the instrument Id, the trade price, the traded quantity, the *TES closure time* or the text field "TES trade description". It also specifies all users involved on the buy and sell side of the TES trade (approving users). The general TES trade information is visible to all approving users. After the request has successfully been accepted, the executing user will become the initiating user of the TES trade. Note that the TES *closure time* needs to be entered in UTC via the Eurex ETI.
- TES Trade Modify:
  The request allows the modification of a pending TES trade by its initiating user. As long as the TES trade is not approved by all of its approving users, the modification of the general TES trade information except instrument Id and external references is supported. This also includes the approving users and the number of the approving users involved on the TES trade sides.
- TES Trade Delete:
  The request allows the deletion of a pending TES trade by its initiating user.
- TES Trade Approve:
  The request allows the approval of a pending TES trade side by its approving user. All TES trade side specific information (e.g. trading capacity, open/close indicator, text fields) needs to be specified in this request. A TES trade also needs to be approved by the initiating user if the initiating user is identical to an approving user, i.e. if the user who was initiating the TES trade is also involved on any side of the same TES trade.

Please note that for each TES request, the executing user and the entering user of the TES request must be identical.

3.2.2 TES Requests Participant Overview

The following table summarizes the TES request participant rights.

- Group head traders and trader supervisors can submit a *TES Trade Delete* request referring to a TES trade with an initiating user belonging to the same trader group or to the same business unit, respectively

(indicated in the highlighted boxes in the first diagram below).

- Group head traders and trader supervisors can submit a *TES Trade Approve* request referring to a TES trade with an approving user belonging to the same trader group or to the same business unit, respectively (indicated in the highlighted boxes in the second diagram below).

	Initiating User	Initiating User Supervisor	Initiating User Head Trader
TES Requests (or GUI view) entered for and on behalf of the Initiating User			
Trader Supervisor and Head Group Trader of the Initiating User can Delete TES Trade of the latter.			
Enter TES Trade	YES	NO	NO
Delete TES Trade	YES	YES	YES
Modify TES Trade	YES	NO	NO
TES Broadcast	YES	YES	YES
By default, all traders belonging to the Initiating User's Business Unit can see the TES trade(using TES Trade Broadcast) initiated by their colleague.			

	Approving Users	Approving User Supervisor	Approving User Head Trader
TES Requests (or GUI view) entered for and on behalf of the Approving User			
Trader Supervisor and Head Group Trader of the Approving User can directly Approve TES sides of the latter.			
Approve Side	YES	YES	YES
TES Broadcast	YES*	YES*	YES*
TES Trade Broadcast	YES	YES	YES
Only traders belonging to the Approving User's Business Unit can see deals (using TES Trade Broadcast) resulting from the execution of TES side.			
All traders belonging to an Approving User's Business Unit can see the TES side (using TES Broadcast) to be approved by their colleague.			
* The Approving Users can only view their side with the initiating user as their counterparty			

Figure 8: Supervisor and Head Trader

3.2.3 TES Entry Request Message Flow

It will be possible to enter a TES trade either as a broker or as a buy or sell side trader. A user can have both TES broker as well as TES trader roles assigned. In case the initiating user has not been assigned the TES broker role and he is not involved on any side of the TES trade as approving user, the *TES Trade Entry* request will be rejected. The same applies, if the initiating user has not been assigned the TES trader role and he is involved on any side of the TES trade as an approving user.

The *TES Trade Entry* request will be used to enter bilateral and multilateral TES trades. All sides of the new TES trade will be *Pending* by default and will have to be individually approved by the corresponding approving users.

The quantity validation of a TES trade takes into account each individual side of the TES trade. A validation ensures that the sum of the quantity of all buy sides is equal to the sum of the quantity of all sell sides involved in a TES trade. In addition, the TES trade must be compliant with its minimum lot size specified in the TES Profile (see chapter 0) which implies that each individual side of a TES trade must to equal to or larger than the minimum lot size specified in the TES Profile. As a consequence, the more sides which are involved in a TES trade, the larger the total quantity of a TES trade must be.

For bilateral trades for which the trade volume will be equal to or exceeds the configured non disclosure limit, the initiating user will be able to specify that the TES trade will be published by skipping the non disclosure mechanism. Please note that the publication status will be communicated to all approving users.

A *TES Trade Entry* request with a publication status set to *Do Not Publish* will be rejected when the Non Disclosure mechanism does not apply. Therefore, for a multilateral trade or for a bilateral trade with a quantity smaller than the configured *non disclosure limit*, the *TES Trade Entry* request will be rejected when the entered publication status is set to *Do Not Publish*.

The entered TES trade will receive a global TES Id and each approving side will receive an individual *TES Side Id* (TES Ids and *TES Side Ids* are unique per product on the same trading day):

The *TES Id* will be used to identify the global TES trade and can be used by the initiating user to delete or modify the TES trade as long as at least one side has not been approved.

The *TES Side Id* will be used by the approving users to approve their pending side.

A TES broadcast will be sent out to the initiating user and to the relevant approving user each time the status of the TES trade side changes.

3.2.4 TES Side Approval Message Flow

Each trader of an entered TES trade will have to approve his own side(s) by using the corresponding *TES Side Id* received via the corresponding *TES broadcast*. In case a trader has several sides for the same TES trade, he will have to approve all of them by separate *TES Trade Approve* requests.

During the side approval, the approving user will have to complete the side specific information, in particular the trading capacity and additional clearing information.

When several sides of a TES trade belonging to the same business unit are crossed and the trading capacity of one side to be approved is not identical to *Agency*, the *TES Trade Approve* request will be rejected when there is already an opposite side approved for that business unit with a trading capacity different from *Agency*.

After the side approval, the *approval time* and the side status will be recorded and broadcasted to the initiating user of the TES trade. The approving user will receive a response to its *TES Trade Approve* request and a *TES approval broadcast*.

As long as the TES trade is not ratified (i.e. completely approved by all approving users), a second *TES Trade Approve* request updating side specific information will be accepted. Please note that the side approval time will not be updated by a second *TES Trade Approve* request.

When the last TES trade side is approved, the TES trade will be immediately ratified. All approving traders will receive a TES execution broadcast and a trade confirmation broadcast. In case of a TES trade referring to a complex instrument, a trade confirmation broadcast will be sent out for each leg of the complex instrument.

Once fully approved (all sides executed), the ratified TES trade will be sent to the clearing system. From this point on, it will not be possible for the approving traders to modify any TES trade specific information.

3.2.5 TES Modification Message Flow

The initiating user of a TES trade will be able to update the TES trade with some new values and new sides by using the *TES Trade Modify* request.

The TES modification will be only possible for the initiating user when there is still a pending side for at least one approving user. The modification will keep the original *TES id* but generally will reset the original *TES entry time*. The new *TES entry time* will be systematically returned to the initiating user by the response of the *TES Trade Modify* request.

When no *TES Side Id* is sent for a side of a *TES Trade Modify* request, the corresponding side will be considered as a new entered side and will receive a new *Side Id*. When an original *TES Side Id* is not sent back by the *TES Trade Modify* request, the corresponding side will be deleted.

For all new sides, the approving time, the clearing information and the approving status will be reset to *Pending* irrespectively of the previous approval status. All traders will be then informed by a *TES broadcast* that they will have to approve their side(s) again and to fill (or refill) their clearing information.

When the buy or the sell volume is modified, it will have to be checked as for a regular TES entry, that the new accumulated volumes for the buy and the sell sides will be still equal and validated against all relevant parameters/ entitlements.

When the approving user is replaced by a different approving user, the new approving user will be informed by a *TES broadcast* of the new side entry. In such a case, the old clearing info of the replaced side will be removed. The replaced approving trader will be informed by a TES broadcast about the deletion of his side.

A non-substantial modification of a freely entered TES trade description by the initiating user will be communicated to all traders via a *TES broadcast*. When other attributes are unchanged a new approval will not

be needed. In such a case, the original *TES entry time* and the corresponding *side approving time* and status will not be refreshed.

3.2.6 TES Deletion Message Flow

A pending TES trade may only be deleted only by the initiating user via a *TES Trade Delete* request. Based on the corresponding *TES Id*, the TES deletion will only be possible for TES trades which have not already been ratified.

As long as there is still one pending side of a TES trade, it will be allowed to delete the TES trade. The initiating user will get a response of his *TES Trade Delete* request and a TES deletion broadcast and all approving traders, independently of their previous side status (pending or approved) will be informed of the TES deletion by a corresponding TES deletion broadcast.

Once fully approved by all approving users, the executed TES trades cannot be deleted by the initiating user.

3.3 Enhancement of Eurex EOBI

3.3.1 Enhancement of the EOBI market data interface to include selected options (OKS2) and some single stock futures

Eurex EOBI will be extended with selected single stock futures and options product OKS2 with T7 Release 4.0. Addition of other products to **Eurex EOBI** is under review. For the **Eurex EOBI** enabled options products all options instrument types like standard option strategies, non-standard option strategies and option volatility strategies will also be fully supported.

To provide more capacity for future usage, Eurex will extend the multicast address ranges which will be used for the T7 **Eurex EOBI** market data interface. The extension of the multicast address ranges applies to both the simulation and production environments. The new address ranges will be made available to coincide with the start of the simulation on **23. September 2016** and production on **21. November 2016**.

Production:

Multicast Groups (Service A): 224.0.114.144-159
Multicast Groups (Service B): 224.0.114.160-175

Simulation:

Multicast Groups (Service A): 224.0.114.176-191
Multicast Groups (Service B): 224.0.114.192-207

In order to use the new multicast address the following access lists must be applied to participants' routers.

- Service A:
  - IP access-list standard emdi_simu_A
  - permit 224.0.114.176 0.0.0.15
  - IP access-list standard emdi_eebs_A
  - permit 224.0.114.176 0.0.0.15
- Service B:
  - IP access-list standard emdi_simu_B
  - permit 224.0.114.192 0.0.0.15
  - IP access-list standard emdi_eebs_B
  - permit 224.0.114.192 0.0.0.15

The provision of OKS2 market data via the EOBI interface is planned to start in the simulation environment from **Friday 30. September** and in production from **Monday 12. December** onwards. Please note, the application of the access lists described above must be performed prior to these dates in order to receive OKS2 market data via **Eurex EOBI**.

3.3.2 Change in sequence of execution and cancellation messages regarding SMP events

Consider three orders with the same price, priority time A, B, C, order B is cancelled due to self-match prevention. In previous releases, the **Eurex EOBI** interface reported order cancellations due to self-match prevention after executions.

- order A executed
- order C executed
- SMP order B cancelled

With T7 release 4.0, these order cancellations will be reported in the order of the time priority.

- order A executed
- SMP order B cancelled
- order C executed

3.4 Various Technical Enhancements

3.4.1 Multimarket capability for MDI, RDI and RDF

With T7 release 4.0, **Eurex MDI, Eurex RDI** and **Eurex RDF** will be extended, so that markets can be operated independently from one another with respect to either **Eurex MDI, Eurex RDI** or **Eurex RDF**, and that it will in future be possible to open certain markets individually.

In order to achieve this, the T7's infrastructure will be enhanced to have one dedicated **Eurex MDI** and **Eurex RDI** service instance for each market. The public Reference Data Files (**RDF**) will be split per market. There will be one *SenderCompID* per market. The *MarketDataReport* message (**RDI**) will be extended by the field *marketID*.

To accommodate the above changes, Eurex will make use of the previously announced multicast address groups 224.0.29.0-127 (Service A) and 224.0.30.0-127 (Service B). For more information regarding the specific multicast addresses to be used, please refer to the Network Access Manual and Eurex Market and Reference Data Interfaces Manual v4.0 available on the Eurex website.

Note: For T7 release 4.0 the use of separate *MarketDataChanels* (multicast addresses) for RDI is guaranteed. For MDI on the other hand, the use of separate *MarketDataChannels* cannot be guaranteed and therefore there may be multiple *SenderCompIDs* in one *MarketDataChannel*. A Eurex MDI fail-over can reliably be detected by a change of the *SenderCompID* at the product (*MarketSegment*) level.

3.4.2 Extension of scope concept in ETI header files

In line with the Cash Market migration to T7 new scopes will be defined in the **ETI** interface. The scope name has some wide ranging impact on the names of the **ETI** artifacts and their contents:

- for all **ETI** artifacts (files) the scope is part of the file name (e.g. eti_Scope.xml)
- inside the xml file, the package is named "eti_Scope"

The scope will be added to the **ETI** artifacts names.

Eurex:

- eti_Derivatives.xml
- ETILayouts_Derivatives.h

The package name (as part of the xml file) will be:

- eti_Derivatives

The scope will not be part of the of the ETI structures (Messages, Components, Sequences) names in the header file (ETILayout_*Scope*.h).

3.4.3 Additional information in the trade messages delivered via the Eurex FIX interface

With Release 4.0 the FIX messages *TradeCaptureReport* (AE) and *UserTradeCaptureReport* (UAE) will be enhanced to deliver the information about the original **ETI** *SessionID*, from which the trade was generated.

Implementation details for the supported FIX versions:

- FIX 4.2 - the field *PartyIDSessionID* (tag 20055) is included as optional field in the message *UserTradeCaptureReport* (UAE)
- FIX 4.4 - the additional *PartyID* (448) with *PartyRole* (452) = 55 (*Session* Id) will be delivered in the component *TrdCapRptSideGrp* contained in the message *TradeCaptureReport* (AE)

3.4.4 Additional product state information on public Market Data Interfaces

The Public Market Data Interfaces **Eurex MDI, Eurex EMDI** and **Eurex EOBI** will publish an additional product state *Post End Of Day* which is following the *End Of Day* product state. Similar to the *End Of Day* product state participants will have no access to the order books in the *Post End Of Day* product state and all instruments will be in the instrument state *Closed*.

The state will be communicated as follows on Public Market Data Interfaces:

Eurex Product State	FIX TradingSessionID (336)	FIX TradingSessionSubID (625)	FIX TradSesStatus (340)
Post End Of Day	6 = After-Hours	7 = Quiescent	3 = Closed

3.4.5 Market and Reference Data Interface changes due to preparation for Cash market migration

T7 Release 4.0 will pave the way for the introduction of cash market in release 5.0 by introducing cash specific fields and/or valid values in the layout of the market data interface messages, most notably RDI via its Product Snapshot and Instrument Snapshot messages. Cash market specific fields and/or valid values will not be used in 4.0 and are introduced for the sole purpose of facilitating the cash market introduction.

As a general rule cash specific reference data fields are collected inside new optional FAST groups or fields. Enumerations for existing fields that are common to derivatives and cash are extended with new, cash specific, values, if required.

For a detailed explanation regarding the cash specific fields please consult the Eurex Market and Reference Data Interfaces manual 4.0.

3.4.6 Listener Broadcast processing

With T7 Release 4.0 the sending of the ETI listener broadcast for LF sessions will be moved from the ME (Matching Engine) to the persistency layer. Listener data (order drop copies) will then be sent after persisting the listener data. For this reason the processing time of the listener broadcast (order drop copies) will increase, and hence also the probability that trades (in the trade notification stream) will be reported before the publication of order executions in the listener data stream. Additionally the listener data will not provide the MEOutTimeStamp (TrdReqTSTimeOut, FIX tag 21003) anymore.

4. GUI Enhancements

4.1 Eurex GUI General

The Eurex Trader and Admin GUI will be enhanced in release 4.0 to support the new TES functionality. A more detailed description will follow via the GUI installation "*What's New"* window.

4.1.1 Separate Landing Pages for Eurex and EEX Market

Chapter 4 applies to the Eurex T7 GUIs for the Eurex market only and does not apply to the EEX GUIs for the EEX market. The webpage used to launch the GUIs (the so called "landing page") for the Eurex market remains the same. EEX users will be required launch the respective EEX GUIs from a separate landing page, the link for which can be found on the landing page for the Eurex GUIs. The GUIs for the simulation and production environments can be launched from the same respective landing page.

4.1.2 TES and T7 Connection Icons: Indication of System Availability

The T7 Trader and Admin GUIs will feature a TES and T7 connectivity icon at the bottom right corner of the application window to inform the user whether or not the user connection to these systems exists.

4.2 Eurex Trader GUI

The layout and functions of the TES entry will be enhanced.

4.2.1 TES Trade Closure, Entry, Approval and Execution Time

Introduction of TES times: *trade closure time, TES entry time, side approval time, TES execution time (in CET / CEST)*:

The **time of commencement** will be the time of trade agreement (outside the system) between the counterparties and must be entered manually by the initiating user.

The **TES entry time** will be the time of the technical entry of the TES trade into the T7 system, and will be automatically assigned by the exchange.

The **side approval time** will be automatically assigned by the exchange at the time of the respective side's approval.

The **TES execution time** will be given to all executed sides once the trade is fully approved.

The *time of commencement* will be the only time which can be entered manually. Since it is foreseeable that some users from other time zones than the system time could enter the *time of commencement* in their own time zone by mistake, the *TES Trade Entry* will validate for the plausibility of the closure time by displaying the difference between entered closure time and the current time.

4.2.2 Allow All TES Trade Types to be started from Buy or Sell Side

With the TES migration all TES trades can be initiated from either the buy or the sell side.

Formerly it was not possible to initiate a bilateral trade from the sell side.

4.2.3 Page Broker

Once the TES trade is approved by all participants, neither the initiator nor any counterparty can do any change to the TES trade anymore. A means will be provided to let the counterparty inform the broker in the event the trade details are incorrect. In that event a popup will open in the T7 Trader GUI of the initiator displaying the request of the counterparty to update details of the trade.

4.2.4 Multilateral versus bilateral

With TES migration a TES trade will be considered bilateral if the number of approvers is exactly 2, irrespective of whether or not the initiator is part of the trade, or whether or not the initiator is a buyer or a seller.

4.2.5 TES – Flexible Contracts Trade Entry

The trader may enter, delete, modify, approve, inquire and close an off-book flexible contracts transaction specified in the *TES – Flexible Contracts Entry* window. This has to be agreed by two market participants.

The layout of the *TES - Flexible Contracts Trade Entry* will be changed due to a changed behaviour on how flexible contracts are processed by the T7 backend compared to the Eurex Classic. Following the TES migration flexible contracts will be handled in a similar way to regular TES block trades by the T7 backend. As a result, the *TES - Flexible Contracts Trade Entry* will adapt the layout of the *TES - Block Trade Entry.*

Consequently, the information from the *TES Flex* view which was also integrated into the upper layout of the former *TES - Flexible Contracts Trade Entry* view, will be removed. The information that was displayed in that area will be still available via the separate *TES Flex* view.

4.2.5.1 Flex Contract Identifier

Since flex contracts will be integrated into the T7 trading system with the TES migration, flex contracts require an identifier to distinguish the contracts. The definition of the product and expiration alone for futures and of the product + expiration + strike + callput + version alone for options are not sufficient.

For futures the contract identifier will be extended by the settlement type and

for options the contract identifier will be extended by the exercise style and the settlement type.

Please note that the contract identifier for flexible contracts will always provide information about the settlement type and exercise style (if appropriate) in views displaying flexible contracts.

4.2.5.2 Non Disclosure Limit

The TES flex contracts trade volume will become visible to the public in the *Time & Sales* view if the trade volume is below the non disclosure limit or if the involved parties agreed to publish the public trade information.

4.2.5.3 Settlement Type

The need to specify the distinct physical settlement type (Derivative, Stocks and Payment vs payment) will be replaced by the more generic settlement type *Physical*, which can be used instead of the former three more descriptive values.

4.2.6 Full UserID Required for Counterparty field

Starting with T7 Release 4.0 the full *UserID* will be specified for the counterparty side. Instead of a *UserID*, a nickname may be chosen instead, assuming the nickname has already been registered using the *TES Counterparty* view.

For convenience, the context popup of the *Ctpy* field will provide a list of traders which are already registered by the *TES Counterparty* view. It will also possible to type the member Id or the first letters of a nickname while the popup is open to quickly find the respective counterparties from that list. The popup will provide the following information: *UserID*, *Nickname* and *Comment*.

4.2.7 Trader Group and User Level

The trader group and user level concept of the T7 trading system will also apply to TES trades. The user level and trader group currently assigned to a trader which originally impacted the on-exchange trading activities will therefore also affect the TES trading activity of this user.

4.2.8 TES Description Field

The initiator of a TES trade (formerly called broker) may no longer specify the clearing information fields for the counterparty, e.g. *Text*, *Customer*, *MIOrdNo*. In order to compensate for this, a new *Description* field is provided, which will allow the initiator to give a hint to the counterparty about the background of the trade.

4.2.9 Simple Entry Mode for Bilateral TES trades

The *Trade Entry Services* view will provide the entry of all kind of block trades, both bilateral and multilateral.

In order to meet the demand for a simpler entry mode for the entry of the most commonly traded bilateral block trades, a *Simple / Broker Mode* toggle button will be provided which allows switching between a simple and a fully fledged entry mode.

The view switches automatically to *Broker Mode*, if the *Add Ctpy* action is clicked.

4.2.10 Support for Flex Accounts

The *Account* field of the *TES Entry* will support the same flexible account format which is already supported in the Order Entry.

4.2.11 New Trade Ids (TES Id, TES Side Id, Deal Id, Deal Item Id)

New TES trade ids: *TES Id and TES Side Id, Deal Id* and *Deal Item Id*.

The *TES Id* will no longer be unique per market place. Starting with T7 Release 4.0 traders will need to identify a TES trade by the *TES Id* together with the product Id.

While the *TES Id* and *TES Side Id* will be valid for an unratified TES trade, the *Deal Ids* and *Deal Item Ids* will be assigned during the ratification of a TES trade.

4.2.12 TES Trade Split Support

The *TES Trade Entry* view will provide a calculation tool to aid traders that need to split a TES trade in order to be able to trade at a price between two price ticks provided by the exchange.

GUI users will be supported to enter two TES trades matching in average to the more granular underlying price format. For example, it is intended to trade a FESX futures contract with a price decimal which corresponds to the underlying SX5E index but which does not fit to the tick size of the FESX futures contract, e.g.

- 3500 FESX Dec16 with a trade price of 3245,6

In order to be compliant with a tick size of 1.0 valid for FESX, the user could enter the following two trades:

- 1400 FESX Dec16 with a trade price of 3245
- 2100 FESX Dec16 with a trade price of 3246

Since traders are recommended to enter a TES trade within a defined time frame to avoid late entry fees, the calculation tool will help save time to perform such a split of TES trade.

4.2.13 Display of TES Transaction Size Limit

The transaction size limit will be displayed in a popup near to the *Qty* field once the user sets the keyboard focus into this field.

The displayed *TES TSL* will be the effective maximum TSL for the user (which is the minimum of the member *TES TSL* and user *TES TSL*).

4.2.14 Contract Information Popup

To provide information regarding the minimum lot size (formerly called minimum block trade size) which is defined by the exchange, a mouse over effect to provide additional information in tables will be added.

This information popup will be provided via the Contract field, since the information provided is related to the specified contract of a simple instrument or a complex instrument leg.

4.2.15 Bulk Load Support for All TES Trade Types

TES Bulk load will be provided for all kinds of TES trades (it is currently only provided for block trades and flexible contracts).

The *TES Trade Entry* view will produce a template file via the export functionality which is valid for the currently selected TES trade type and which contains a list of all columns that can be specified for the import.

4.2.16 Full Range of On-Exchange Strategy Types Supported in TES Entry

Trade Entry Services will support the full range of instrument types and instrument sub types for complex instruments which are supported also for on-exchange orders, including all the formerly unsupported strategy types.

4.2.17 Variance Futures Extended Trading Phase

Variance Futures can now also be traded TES during the on-exchange trading phase.

The limitation for the TES entry of variance futures block trades will be removed, so that TES variance futures can be traded during the on-exchange trading phase of variance futures. The TES entry currently supports a conversion backward from clearing to trading notation, which will become obsolete.

4.2.18 TES EFPI Trade at Index Close (TAIC)

The current practice to enter an EFPI Trade at Index Close is to specify the text TAIC in the *RefID* field and to specify the basis in the *MIOrdNo* field. Following the TES migration it will no longer be possible for the initiator to specify the *MIOrdNo* field for the counterparty; instead the *Description* field will need to be used for that purpose:

In order to indicate a TAIC trade in the future, the text TAIC will need to be specified in the *RefID*, the basis needs to be put into the *Description* field (which becomes mandatory).

4.2.19 Automatic Alert Signals for Incoming TES Trades

A trader which is logged in to the T7 Trader GUI will need to be notified about incoming TES trades that require the approval of the trader. In order to provide a full service to notify a user which is using the T7 Trader GUI automatic alerts signals will be generated.

4.2.20 Views

4.2.20.1 Trades View

The currently separated views *Trades* for the display of on-exchange trades and *TES Trades* for the display of TES trades will be integrated into a single *Trades* view. The *Trades* view will also display TES flexible contracts trades.

New: Since the *Trades* view displays the trade information for the decomposed simple instruments, a new *Strategy* column will provide information about the traded complex instrument (before the leg decomposition).

4.2.20.2 TES View

Deleted TES trades will still be displayed in the *TES View* but with the status *Deleted*, in this way traders can see that a TES trade was actually deleted.

4.2.20.3 TES Flex View

The *TEX Flex* view will serve the purpose to display the TES Flex Contracts position as well as unapproved and approved TES Flex Contracts trades of the current business day.

4.2.21 TES Time & Sales

The *TES Times & Sales* will be re-introduced and will replace the report on the website.

4.2.21.1 New Columns

BondId, *NomVal*, *CashPrc*, *SwapStartDate*, *SwapEndDate*, *CpnFixRate* information will now be displayed in the *TES Time & Sales* view.

The missing columns will be added to the *TES Time & Sales* view.

4.2.21.2 Flexible Contracts

The *TES Time & Sales* view will also display public trade information for TES flexible contracts trades.

Please note: The *Time & Sales* and *TES Time & Sales* will not be integrated into a single view because the on-exchange and off-book trades are legally separated.

4.2.22 Fill Counterparty of Trade

Along with the TES migration to the T7 system and the accompanying adaptations of the current TES views of the *TES - Vola Trade Entry* will be improved:

If the *Add Vola Trade* action was used on a TES trade to prefill the *TES - Vola Trade Entry*, the counterparty of the trade will not be prefilled. Since the counterparty of a TES trade is known, it should be prefilled with the trader Id of the counterparty.

4.2.23 TES Types

4.2.23.1 TES EFP-Fin Trade

The *TES EFP-Fin Trade* view will be used by two counterparts to enter, modify, inquire, delete and approve an off-book trade for buying/selling a bond future against a previously executed bond transaction.

The *ExchangeRate* will no longer be displayed.

4.2.23.2 TES – EFS Trade Entry

The *TES - EFS Trade Entry* will be used by two counterparts to enter, modify, inquire, delete and approve an off-book trade for buying/selling a futures contract against a previously executed plain vanilla swap (interest rate swap, interest rate swap or equity index swap).

The *ExchangeRate* and *SwapType* will no longer be displayed. *SwapCust1* will be renamed to *SwapPayer* and *SwapCust2* is renamed to *SwapReceiver*.

4.2.23.3 TES – Vola Trade Entry

The *TES - Vola Trade Entry* will allow the user to enter, modify, delete and approve off-book TES vola trade futures contracts based on pre-negotiated option trades.

The *OptionPrice* will no longer be displayed.

TES - Vola Trade Entry may only base on TES Block Trade

A vola trade (volatility trade) will be used to enter an off-book trade for buying/selling a futures contract against a pre-negotiated bilateral option block trades.

Please note that with the TES migration multilateral trades as well as on-exchange trades will currently not be supported to be used as the pre-negotiated option trade.

4.3 Eurex Admin GUI

4.3.1 User Maintenance Wizard

The *User Maintenance Wizard* will be enhanced to modify TES attributes. Entitlement roles have to be reorganized to reduce the amount of columns.

The following tabs have been reorganized:

- General Attributes
- OnExchange Attributes
- OnExchange Roles & TSL
- TES Attributes
- TES Roles & TSL

5. Report Changes

- **RD135 – Trade Enrichment Rule Status (modified report)**
  The optional field of the flexible account is added to the report.
- **TE545 – Daily TES Maintenance** (new report)
  A new report will be introduced in replacement of the old Eurex Classic report.
- **TA115 – Daily Total Return Futures Parameters** (new report)
  A new report will be introduced for Total Return Futures. The conversion parameters used for the TRF price calculation in Clearing Notation and the corresponding inputs used to establish these parameters are listed on the product and the instrument level for the current and the previous business day.
- **TA113 – Complex Instrument Definition** (modified report)
  This report will be enhanced in order to introduce the flexible instrument creation.
- **TC547 – TES Trd Maint EFP-Fin/EFS/EFPI** (decommissioned report)
  This report will be decommissioned as the relevant information can be found in the new TE545 report.
- **TE810 – T7 Daily Trade Confirmation** (modified report)
  The report will include deals resulting from TES trades for simple, complex and flexible instruments, add original TES Id and the TES types and enhance the list of trade types. The sorting criterion is changed from account to trading capacity for on-exchange and off-book trades.
- **TE812 – Daily Prevented Self-Matches** (modified report)
  In this report the field *SmpDeletedQty* will be added. This field will contain the prevented self-match quantity. The sums at the end of the report will contain the respective sums based on the *SmpDeletedQty* instead of the *execQty*.
- **TE910 – Daily Trade Activity** (modified report)
  The report will include deals resulting from TES trades for simple, complex and flexible instruments, add original TES Id and the TES types and enhance the list of trade Ttypes.
- **TE930 – Daily Trade Statistics** (new report)
  New Report in complement of the Eurex report TD930 Daily Trade Statistics.
- **TC811 – Variance Futures Trade** (decommissioned report)
  This report will be decommissioned since TES trade for variances futures will be directly integrated in TE810.

The following Trading Statistics reports will be decommissioned as the relevant information can be found on the Eurex website www.eurexchange.com > Market data>Statistics:

- **TD960 – Monthly Trd Statistics By Cntr**
- **TD961 – Monthly Statistics By Class**
- **TD962 – Year To Date Trd Stsc By Class**
- **TD963 – Exchange Volume Statistics**

The following Member Statistics reports will be decommissioned:

- **TD970 – Trading Volume & Market Shr - Opt**
- **TD971 – YTD Member Option Trade Volume**
- **TD975 – Trading Volume & Market Shr - Fut**
- **TD976 – YTD Member Future Trade Volume**

6. Appendix

6.1 Total Return Futures – Functional Concept

6.1.1 Introduction

The functionality envisaged for Total Return Futures will be supported with the **T7 Release 4.0**.

6.1.1.1 Abstract

A total return future enables participants to hedge risks associated with the total returns of an underlying index and the costs associated with the replication of the cash basket underlying. The total return futures concept used as a baseline for the implementation in T7 release 4.0 is designed to align with the OTC total returns market to support hedging between OTC and listed contracts and to provide an on-exchange alternative for the OTC trading. Apart from certain convention changes, the accumulated variation margin payments of a total return future position replicates the cash flow of a total return derivative position. Total return futures on indexes represent a new product type for Eurex Exchange.

6.1.1.2 Overview

TRF contracts are associated to an underlying index and replicate the daily performance of a Total Return Swap corresponding to the contract expiration, namely the index price variation, the daily distribution and the daily payment of a funding rate and amount determined by the traded TRF spread.

- The buyer of a Total Return Future is the receiver of the total return (underlying index price movement + distributions) and the payer of the funding rate plus the traded TRF spread.
- The seller of a Total Return Future is the payer of the total return (underlying index price movement + distributions) and the receiver of the funding rate plus the traded TRF spread.

In T7, TRF trading prices are handled in Trading Notation, i.e. as an interest spread given in basis points, denoted as the TRF Spread. Before to be sent to C7, the trading price is converted in Clearing Notation, i.e. a clearing price given in index points, denoted as the Traded Futures Price.

The relation between the trading price and the clearing price depends on some conversion parameters as the Underlying Index value and some accrued amounts since the product launch. They are completed by the Traded Basis calculated from the TRF Spread in general:

Clearing Price = Index + Accrued Distribution – Accrued Funding + Traded Basis

Traded Basis = Index * TRF Spread * 0.0001 * (Days to Maturity / Annualisation Factor)

Total return futures have four distinguished attributes which are not available for the majority of other futures product at Eurex.

- **Different price notation for trading and clearing:**
  Order or quote price maintenance is done in spread (basis points). After each match, the matched total return spread is converted into the clearing notation which is in index points for an index. The cash flows (variation margins) generated by a total return future instrument are based on the clearing notation.
- **Accrued returns and funding on the product level:**
  For each business day during the lifetime of a total return future, the clearing notation contains an accrued amount (for a long position) of holding the equivalent cash basket against its accrued funding cost. These accrued elements when incorporated into the daily variation margin will represent (for a long position) the daily gain in the underlying price index, the daily distributions (such as dividends) associated with holding the underlying and against this would be the amount daily paid in relation to the cost of funding.

- **Trade at Index Close (TAIC) and Trade at Market (TAM):**
  Total return futures will offer two methodologies for trading. For order book and for block trades the ability to enter a Trade at Index Close is possible. In this case the underlying index used as the base reference for conversion from trading notion to clearing notion is the daily closing value of the index. Alternatively block trade entry is permitted where the agreed index value (or strike) reference is pre-determined by the counterparts and is entered alongside the traded spread. In this case all the elements to determine the clearing notation are available and the trade is immediately converted to clearing notation as a regular trade.
- **Preliminary and final total return futures clearing price:**
  For Trade at Index Close trades the conversion from the trading into the clearing notation requires the closing value of the daily underlying index for the current business day. However, the daily underlying index close is only available after the trading session has closed. Therefore, an intra-day conversion is introduced which is based on the index close of the previous business day and result in a preliminary clearing price. Once the index close is known and the clearing notation parameters can be determined the trade with the preliminary clearing price is adjusted with the final clearing price.

6.1.2 Total Return Futures (TRF) Concept

The new product to be launched by Eurex is called generically "**Total Return Futures" (TRF)**:

- The product will be **fully fungible** and trading-in and out will be possible intraday and between different days, regardless how the trades have been executed initially (i.e. Trade at Index Close or Trade at Market).
  - The changes in the futures prices will be settled as a daily loss / profit (variation margin).
- The handling is similar to **basis trading** as the order entry, execution and settlement is based on the **TRF Spread**.
- The total distributions and funding included in the futures price will start accruing from the product launch date.
  - The daily distributions and related funding amounts will be effectively paid out via the daily variation margin.

6.1.2.1 Overview Product Specifications (Index Total Return Futures)

Specification	Index Total Return Futures (TRF)
Underlying Indices	Price Index e.g. an Equity Price Index Distribution Index (where applicable) as related to the Price Index Funding Rate (e.g. benchmark overnight funding rate such as Eonia®)
Quotation	TRF Spread as annualised rate expressed in basis points with one decimal (+ / - / 0)
Minimum TRF Spread Change	+/- 0.5 basis points
TRF Spread Conversion	The TRF Spread will be converted within the T7 Release 4.0 system into TRF futures prices expressed in index points
Trade Types	Trade at Index Close ("TAIC") with an index level based on Index Close Trade at Market ("TAM") with a custom-defined index level
Accrued Distributions & Funding	The distribution and funding rate payments will be accumulated daily (i.e. "Accruals Approach") from the product launch and added to the TRF futures price in index points. The daily changes in the distributions and funding payments are paid out daily via the variation margin by incorporation into the daily settlement price

6.1.3 Detailed Product

The first Total Return Futures envisaged to be launched is the TRF on the EURO STOXX 50® Price Index (SX5E). The TRF required functionality introduced with the T7 release 4.0 shall provide flexible configuration for variable inputs and product specifications.

6.1.3.1 Underlying Indices

- **Price Index**: 2 decimals for the EURO STOXX 50® Price Index (SX5E)
- **Distribution Index**: 2 decimals for the Distribution Index in relation to the SX5E
    - In the case of a TRF with a total return index underlying, there would be no additional distribution index.
- **Funding Rate:** benchmark overnight rate Eonia®.

6.1.3.2 TRF Spread, Multiplier and Quantity

6.1.3.2.1 Quotation "TRF Spread" in basis points

A key feature of the TRF is that it will be quoted as a "**TRF Spread**" i.e. as an annualised rate, expressed in **basis points** which may have a positive, negative or zero value. The **TRF Spread** quoted and traded represents the spread over the benchmark overnight funding rate which represents the full cost of the financing leg. The TRF Spread (basis points) has to be converted in clearing notation (index points).

6.1.3.2.2 Contract Multiplier & Quantities

Standard Futures multiplier: e.g. **10 EUR / index point**. TRF will be traded in number of futures contracts, as with any other futures contracts.

6.1.3.3 Daily & Final Settlement Futures Price

- **Daily Settlement Futures Price** is determined with **2 decimals** (increments of **0.01 index points**).
  This price is determined on any business day t based on:
    - Index Close(t)
    - Accrued Distributions(t)
    - Accrued Funding(t)
    - Daily Settlement Basis(t), calculated based on:
        - Daily Settlement TRF Spread(t)
        - Days to Maturity(t)

- **Final Settlement Futures Price** is determined with **2 decimals (**increments of **0.01 index points).**
  This price is determined on the Expiry Date (T) based on:
    - Final Settlement Price of the related Index futures (T)
    - Accrued Distributions(T)
    - Accrued Funding(T).

6.1.3.4 Daily & Final Profit / Loss

- The **Daily** and **Final Profit / Loss** for TRF is calculated on **Day t** (i.e. approx. at 6 pm CET) and cash settled on **Day t+1 settlement date**, via the variation margin.
    - Day t is generically referred here as the current Business Date / Expiry Date.

6.1.4 TRF Trade Lifecycle

6.1.4.1 Trading Notation versus Clearing Notation

The handling of Total Return Futures order entry, execution and settlement prices is based on the TRF Spread, expressed in basis points (1 bp = 0.0001) as a relative (positive, negative or zero) annualised interest rate applied to the Funding Rate. In the following, this price notation is denoted as Trading Notation.

The **main steps** regarding the trade and post-trade workflow are the following:

- **Order and Quote Entry in Trading Notation:** Orders are submitted using the "TRF Spread" (basis points) for the respective contract month.
- **Matching of Orders and Quotes in Trading Notation:** Orders and quotes are executed based on the TRF Spread value.
- **Trade Handling in both notations:** Once the order or quote is executed, the Eurex T7 system calculates the "**Traded Futures Price**" also denoted as Clearing Notation based on the:
    - Traded TRF Spread in basis points which is converted into **"Traded Basis"** given in index points.
    - Index Close level (Preliminary, Final or Custom)
    - Accrued Distributions and Accrued Funding.

- **Clearing only in Clearing Notation:** The executed trade is cleared immediately via open offer based on the respective "**Traded Futures Price**".
- **Marking-to-Market in Clearing Notation**: The "**Daily Futures Settlement Price**" is calculated end-of-day based on the:
    - Index Close level and "**Daily Settlement Basis**".
    - Accrued Distributions and Accrued Funding.
    - Daily Settlement Basis is determined by the conversion of the Daily Settlement TRF Spread from basis points into index points.

- **Variation Margin (Daily Profit & Loss) in Clearing Notation:** The "**Daily Profit/Loss**" (Variation Margin) is calculated based on the settlement prices. The daily total return component is included in the overall variation margin and settled in cash.
- **Expiration:** At the contract expiration, any remaining open position will be marked-to-market and cash settled based on the "**Final Futures Settlement Price**". At expiration the Traded Basis is zero, hence only the Index Close level and total accruals (i.e. distributions and funding) are taken into consideration.

6.1.4.2 Trade Handling

6.1.4.2.1 Main Principles

- **Total Return Futures will be traded in 2 modalities:**
    - Trade at Index Close (TAIC) based on Index Close level.
    - Trade at Market (TAM) based on a Custom Index level entered in T7 by the member.
- **The contracts executed as TAIC and TAM trades are fully fungible under the same instrument code.**
- **The execution in the order book and off-book is performed as follows:**
    - **Order Book Trades (on-exchange trades):**
        - Only Trades at Index Close (TAIC) will be traded in the order book.
    - **Off-Book Trades (TES trades):**
        - Trades at Index Close (TAIC) are entered as TES type "Block" in T7 and cleared as Block trades in C7
        - Trades at Market (TAM) are entered as TES type "TAM" in T7 and cleared as Block trades in C7.

6.1.4.2.2 Trades at Index Close (TAIC):

- The quotation and matching in the order book is done based on **TRF Spread in basis points** (+/- / 0).
- **Order-book** and **off-book** will be available for trades at index close:
    - The handling in T7 will entail a "Preliminary" trade and a "Final" trade with different trade IDs (T7 Deal IDs), while on C7 side, the transaction ID will be kept the same, with a suffix added after the final trade is recorded in T7.
        1. On the T7 side, there will be 2 Trade Notifications via the ETI interface:
            - "**Preliminary trade**" notification during the trading session (deal ID A)
            - "**Final trade**" notification at the end of the session (deal ID B different from the "preliminary" deal ID A).
        2. On the C7 side, there will be 3 Transaction messages via the FIXML interface:
            - Booking in of the trade "**Preliminary trade**" (suffix "0").
            - Booking out of the trade "**Preliminary trade**" (suffix "1").
            - Booking in the **Final price** (suffix "2") (note: This logic was introduced with C7 Release 3.0)

    Notes:

    - For TAIC trades the **prior day's Index Close** will be used as a proxy of the initial strike level (until the final Index Close is set). This **preliminary index** is static information during the day at the instrument level and it is used as a conversion parameter to determine the **preliminary futures price in index points**. Once the **final Index Close** is validated into the T7 system by Eurex, this will be applied to all executed TAIC trades to recalculate the futures price in index points of the **Final Trade**.

6.1.4.2.3 Trades at Market (TAM):

- In T7 supported as **Off-book trade** with TES type **TAM**:
    - The trade is entered directly based on both the **Custom Index** and **TRF Spread**.
    - The TAM trades will be booked in T7 as **Regular trades** which are not subject to conversion at the end of the day.
        1. On the T7 side, there will only one Trade Notification via the ETI interface:
            - "**New trade**" notification during the trading session
        2. On the C7 side, there will be also one Transaction message via the FIXML interface:
            - Booking in of the trade "New trade" (suffix "0").

6.1.5 Distributions & Funding

6.1.5.1 Main Principles:

The distributions and funding payments will be determined for Index TRF based on the "**Accruals**" handling with **no reset**. Under this approach, the product launch date will be considered as a **fixed reference date** and shall apply to all contracts to be listed in the future:

- Any subsequent listed contracts will have the same accruals amount for all listed contracts regardless of the listing date.
- **No periodic reset** of the accrued distributions and funding is envisaged for the TRF.
- The accruals represent realized amounts and therefore they do not have an impact on the initial margin levels.

6.1.5.2 Daily / Accrued Distributions

Accrued Distributions are the distributions accumulated since the launch date**.**

Accrued Distributions(t) = Accrued Distributions(t-1) + Daily_Distributions(t)

Daily_Distributions(t) = **Distribution Index (t) – Distribution Index (t-1)**

Where:

- **Daily_Distributions(t) and Accrued Distributions(t)** are expressed with **2 decimal points**.
- t = any business day
- **Distribution Index (t-1)** = the distribution index effective on the previous business day
- **Distribution Index (t)** = the distribution index effective on the current business day

Notes:

- **The Daily_Distributions(t)** are calculated and available at the beginning of each business day (t).
- Once the **Distribution Index (t)** index value has been entered in the T7 system on **t**, the daily and accrued distributions are calculated automatically and published via the interface Eurex RDI (Reference Data Interface) and Eurex RDF (Reference Data File) or directly on the T7 Trader GUI.

6.1.5.3 Daily / Accrued Funding

- The daily funding is calculated based on the **funding days** which take into account the **settlement dates** of two subsequent trading / mark-to-market days.
- The settlement days are determined from the **cash/spot market perspective** (i.e. **T+2** settlement days based on TARGET2 calendar i.e. x = 2 days).

Funding_Days(t) = [Trade_Date(t) + x settlement days] – [Trade_Date(t-1) + x settlement days]
Daily_Funding(t) = Rate(t-1) * Index_Close(t-1) * [Funding_Days(t) / 360]
Accrued Funding(t) = Accrued Funding(t-1) + Daily_Funding(t)

Where:
t-1 = business day immediately preceding trade date (t).

- **Notes:**
  - **Daily_Funding(t)** and **Accrued Funding(t)** are expressed in **index points** with **6 decimal points**.
  - Regardless if the trade was executed initially as a TAIC or TAM, the funding calculated for the subsequent days is always based on the **Index Close** from the prior day (i.e. trade date or prior mark-to-market date).
  - **Rate(t-1)** refers to the benchmark overnight funding rate applicable, for instance Eonia(t-1). The Funding Rate(t) entered in the T7 system in the morning before the trading session starts, and used for the daily funding calculation on the current business **day t**, is actually the benchmark **Rate(t-1)** fixed the evening before.
  - The daily and accrued funding are calculated automatically at the beginning of each business day (t). They are published via the interface Eurex RDI (Reference Data Interface) and Eurex RDF (Reference Data File) or directly on the T7 Trader GUI.

6.1.6 Conversion from Trading to Clearing Notation

6.1.6.1 Traded Basis and Traded Futures Price

- **Trade at Index Close (TAIC)**

In case of new TAIC trades executed on the current business day(t), the futures price is determined as follows:

Traded_Futures_Price(t) = Index_Close(t) + Traded_Basis(t) + Accrued Distributions(t) – Accrued Funding(t)

Where:
Traded_Basis(t) = Index_Close(t) * [Traded_TRF_Spread(t)] * (Days_to_Maturity(t)/360)

- **Trade at Market (TAM)**

In case of new TAM trades executed on the current business day, the futures price is determined as follows:

Traded_Futures_Price(t) = Custom_ Index(t) + Traded_Basis(t) + Accrued Distributions(t) – Accrued Funding(t)

Where:
Traded_Basis(t) = Custom_ Index(t) * [Traded_TRF_Spread(t)] * (Days_to_Maturity(t)/360)

- **Notes**
  - Traded_Futures_Price(t) is expressed in **index points** (**2 decimals** with **0.01 index points** granularity).
  - Traded_Basis(t) is expressed in **index points** (**6 decimals** with **0.000001 index points** granularity).
  - Traded_TRF_Spread(t) is expressed as **annualised rate in basis points** (positive / negative / zero)
  - Days_to_Maturity(t) is expressed as **actual number of days** based on the **settlement dates of equities** (i.e. t+2 basis)

Days_to_Maturity(t) = [Expiry Date + x settlement days] – [t + x settlement days]

- **Where:**
  - t = current business date
  - The settlement days are based on TARGET2 settlement calendar

6.1.6.2 Daily Settlement Price

- **Daily Settlement Futures Price (TAIC & TAM Trades)**

Daily_Settlement_Futures_Price(t) = Index_Close(t) + Daily_Settlement_Basis(t) + Accrued Distributions(t) – Accrued Funding(t)

Where:
Daily_Settlement_Basis(t) = Index_Close(t) * [Daily_Settlement_TRF_Spread(t)] * (Days_to_Maturity(t)/360)

- **Notes:**
  - Daily_Settlement_Futures_Price(t) will always use **Index Close** (i.e. for both TAIC or TAM trades). Expressed in **index points** (**2 decimals** with **0.01 index points** granularity)
  - Daily_Settlement_Basis(t) is expressed in **index points** (**6 decimals** with **0. 000001 index points** granularity).

6.1.6.3 TARGET2 SETTLEMENT CALENDAR

The **Days to Maturity** and the **Funding Days** parameters will be calculated based on the Target2 settlement calendar. This calendar contains the list of **Business Holidays** from the Target2 Settlement perspective (and which are not a Saturday or a Sunday).

6.1.7 Reports

6.1.7.1 TRF Parameter Report

The TRF conversion parameters will be published intraday via the interface **Eurex RDI (Reference Data Interface)** and **Eurex RDF (Reference Data File)**. At the end of day, the complete calculation parameters are published via the Common Report Engine (CRE). This TRF information will be summarised in a new Daily report **TA115 Total Return Futures Parameters** similar to the existing report **TA114 Variance Futures Parameters.** Note that the TRF information is published only for the previous and the current business dates.

The following TRF product and instrument information is envisaged to be listed on 2 separate lines in the new report TA115 for the **two consecutive business days** as described below:

- **Product Level**
  - Product ID
  - Business Date
  - Annualisation Factor (i.e. 360)
  - Business Day Offset (e.g. 2 settlement days based on Target2 calendar in case of SX5E TRF)
  - Day Settlement Date (i.e. the settlement date of the current business day, which is t + Business Day Offset(t))
  - Distribution Index
  - Daily Distributions
  - Accrued Distributions
  - Funding Days
  - Index Close (i.e. the index level fixed at the end of that **business day** used as Final Index on the instrument level)
  - Funding Rate (i.e. the benchmark rate fixed on the previous business day which is used to calculate the Daily Funding on that business day)
  - Daily Funding
  - Accrued Funding.

- **Instrument Level**
  - The Instrument ID
  - Business Date
  - Expiration Settlement Date (i.e. the settlement date of the expiry day, which is Expiry Date + Business Day Offset)
  - Days to Maturity (i.e. Expiration Settlement Date - Day Settlement Date)
  - Preliminary Index used on instrument level for TAIC preliminary trades executed on that business date (e.g. the Index Close value fixed on the previous business day)
  - Final Index used on instrument level for TAIC final trades (e.g. the Index Close value fixed on that business day)
  - Daily Settlement Futures Price (i.e. the settlement price in clearing notation expressed in index points)
  - Daily Settlement TRF Spread (expressed in basis points)
  - Daily Settlement Basis (expressed in index points).

Notes:

- As mentioned above, all fields described above are available from the perspective of the **current business day (t)** and the **previous business day** (i.e. t-1) in the same report.

6.1.7.2 TRF Trade Reporting

Regarding the **Trade Reporting**, the Total Return Futures Trades will be reported in the **existing** Trade Report **TE810 T7 Daily Trade Confirmation** based on the Deal Exchange Broadcasts sent intraday to the traders. One line for the Preliminary trade and another one for the Final trade will be taken into consideration.

Where:

- **tradeType** indicates the trade type **Preliminary, Final or regular Trades**.
- **execPrc** contains the order execution price (i.e. **Traded TRF Spread** in basis points)
- **clearingPrc** contains the clearing price when it differs from the order execution price (i.e. **Traded Futures Prices** in index points).
- **parentDeal** contains the parent deal ID of a reversed deal or the parent Deal ID of the Preliminary Trade (in case of Final Trade).

6.2 Definitions and abbreviations

The following are the definitions and abbreviations used in the release notes:

CRE	Common Report Engine
Eurex EMDI	Eurex Enhanced Market Data Interface
Eurex EMDS	Eurex Extended Market Data Service
Eurex EOBI	Eurex Enhanced Order Book Interface
Eurex ETI	Eurex Enhanced Trading Interface
Eurex MDI	Eurex Market Data Interface
Eurex RDF	Eurex Reference Data File
Eurex RDI	Eurex Reference Data Interface
FIX	Financial Information eXchange (Protocol)
ME	Matching Engine
TES	Trade Entry Services
TRF	Total Return Futures
T7	Eurex Exchange’s trading system developed by Deutsche Börse Group

7. Change log

No	Chapter, page	Date	Change
V1.2	General	01-09-2016	• new subsection to clarify details about the migration of participant entitlements (chapter 2.1.2.4) • clarification about the TES trade publication and the non-disclosure limit (chapter 2.1.6.5) • clarification about the accessibility of text fields when initiating or approving a TES trade (chapter 2.1.6.6) • new subsection about TES Trade Traceability added (chapter 2.1.10) • new subsection about the changed instrument state identifier in case of instrument state "auction" (chapter 2.3.6) • additional details about multimarket capabilities for MDI, RDI and RDF • new subsection to point out a changed procedure in launching Eurex Trader GUI on the Eurex Web page for EEX users (chapter 4.1.1)
V1.2.1	§ 5, page 40 § 2.1.7.1, page 18	13-10-2016	• Smaller adaptations in report RD135 and TE810 included. • Replacement of the term “trade closure time” with “time of commencement”.
V 1.2.2	§ 2.1.8.2, page 20	24-10-2016	• Enhanced the example, now same TES Side Id is provided in modification with a different Approving User.