



T7 Release 6.0

Final Release Notes

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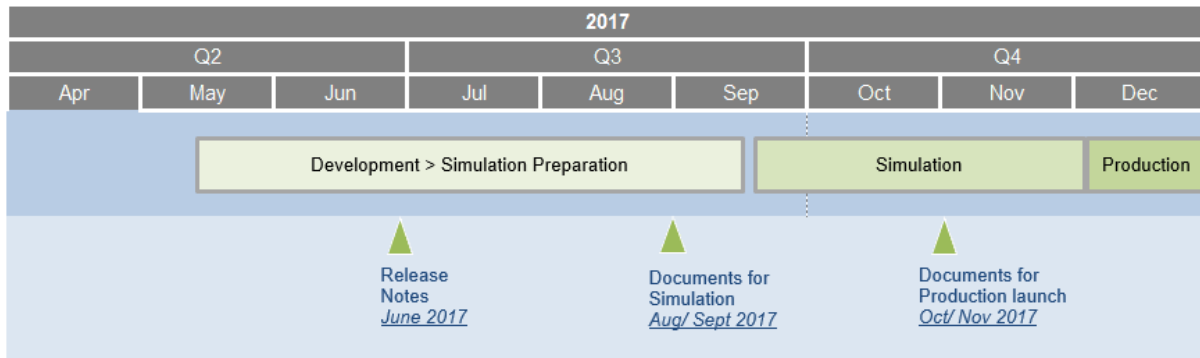
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1. Introduction

Deutsche Börse AG is planning to launch Release 6.0 of T7 on 4 December 2017.

The following diagram gives an overview of the introduction schedule:



Deutsche Börse AG provides a dedicated release simulation environment in order to give Trading Participants the opportunity to perform comprehensive testing of their trading applications, independent from the T7 production environment. The simulation period for T7 Release 6.0 started on 22 September 2017.

In addition to the T7 release simulation, Deutsche Börse AG offers T7 Cloud Simulation in Release 6.0 to allow Trading Participants and Independent Software Vendors 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 environment is available around the clock for a fixed price per hour. The T7 Cloud Simulation for T7 Release 6.0 started on 28 August 2017. 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

The following new features and enhancements will be introduced with T7 Release 6.0:

- Functionality to meet the MiFID II regulatory requirements.
- A new Selective Request for Quote service to negotiate off-book transactions electronically.
- Delta validation for option volatility strategies.
- Entry of leg trade prices for T7 Entry Service (TES) trades in complex instruments.
- Off-book trading of Total Return Futures calendar spreads.
- Individual marketplace calendars.
- Introduction of partition specific gateways.

1.2 Further reading

The following existing documents have been or will be revised for T7 Release 6.0. Preliminary versions (identified by ♦) were published in June 2017, simulation versions (identified by ■) were published in August and September 2017, and final versions (identified by ●) will be published in September, October and November 2017 prior to the production launch.

T7 Release 6.0	Eurex	Xetra	Combined	Q1 2017			Q2 2017			Q3 2017			Q4 2017		
				Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
Release Notes															
T7 Release 6.0, Release Notes	x	x							♦					●	
Simulation															

T7 Release 6.0	Eurex	Xetra	Combined	Q1 2017			Q2 2017			Q3 2017			Q4 2017		
				Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
Participant Simulation Guide	X	X										●			
Overview and Functionality															
T7 Functional and Interface Overview			X									●			
T7 Cross System Traceability			X									●			
T7 Functional Reference			X									●			
Participant and User Maintenance Manual	X	X											●		
Market Model Xetra Continuous Auction		X										●			
Contract Notes Description		X										●			
GUI Solutions															
Trader, Admin and Clearer GUI - Manual	X	X										■		●	
T7 Trader, Admin and Clearer GUI - Installation Manual			X									■		●	
Trading Interfaces															
T7 Enhanced Trading Interface – Manual incl. Repository and Header files			X									■		●	
T7 Enhanced Trading Interface – XML Representation			X									■		●	
T7 FIX Gateway - FIX 4.2 and 4.4 Manual incl. Fiximate and Repository			X									■		●	
Market and Reference Data Interfaces															
T7 Market-, Enhanced Order Book- and Reference Data Interfaces, Manual incl. Fast Message Template and Repository			X									■		●	
Reference Data File – FIXML Schema Files	X	X												●	
Xetra Instrument Reference Data Guide		X											●		
T7 Extended Market Data Services – Manual incl. Fast Message Template and Underlying Ticker Data			X									■		●	
Reports															
XML Reports - Reference Manual	X	X											■		●
Common Report Engine User Guide			X											●	
Network Access															
Network Access Guide			X										●		
Rules & Regulations															
Xetra Rules & Regulations		X													●

The documents will be available on the Eurex website www.eurexchange.com > **Technology > Eurex Exchange's T7 > System Documentation > Release 6.0.**

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

1.3 Contacts

If you have any questions or require further information, please contact your Global Key Account Manager Trading. Alternatively, please contact your Technical Key Account Manager using your VIP number or via e-mail to cts@deutsche-boerse.com.

1.4 Definitions and Abbreviations

Term / Abbreviation	Description
DBAG	Deutsche Börse AG
EMDI	T7 Enhanced Market Data Interface

EMDS	T7 Extended Market Data Service
EOBI	T7 Enhanced Order Book Interface
ESMA	European Securities and Markets Authority
ETI	T7 Enhanced Trading Interface
FIX	Financial Information eXchange (protocol)
GUI	Graphical User Interface
HF	High-Frequency (gateways)
LF	Low-Frequency (gateways)
MDI	T7 Market Data Interface
MiFID II	Markets in Financial Instruments Directive
MiFIR	Markets in Financial Instruments Regulation
RDF	T7 Reference Data File
RDI	T7 Reference Data Interface
RfQ	Request for Quote
SMC	Stressed Market Conditions
Selective RfQ Service (SRQS)	Selective Request for Quote Service is a price discovery service offered by Eurex on the T7 platform to negotiate off-book transactions electronically.
T7	DBAG Trading System
TES	T7 Entry Service

2. Functional Aspects

2.1 Enhancements to meet the MiFID II Regulatory Requirements

In order to satisfy the regulatory MiFID II/ MiFIR requirements, Deutsche Börse AG will introduce several enhancements in the T7 trading system with Release 6.0.

Some reference data will be adapted with the introduction of T7 Release 6.0 because of MiFID II regulatory requirements. Details will be communicated separately with an upcoming Eurex circular.

2.1.1 Pre-Trade Controls

The MiFID II requirements for pre-trade controls for derivatives markets are:

- Price collar check, which prevents orders with a too large price difference to a reference price from entering the order book.
- Maximum order quantity validation, which prevents orders with a too large order size from entering the order book.
- Maximum order value validation, which prevents orders with too large order values from entering the order book.

The price collar check requirement is covered by the existing T7 price reasonability check and extended price range check. The maximum order quantity validation requirement is covered by the existing user transaction size limit functionality in T7.

Maximum Order Value Validation

With T7 Release 6.0, participants will be able to set maximum order value limits for their users. The trading system calculates the value of each order entered into the order book and compares it to the maximum order value defined on user level. If the order value exceeds the defined maximum order value, then the order will be rejected. It will be possible to skip this validation for orders and quotes entered via ETI or FIX gateways. Orders entered via the T7 GUI will always be validated against the maximum order value limits.

The order value will be calculated based on contract value, order quantity and price. For buy limit orders, the order limit price will be used; for sell limit orders and market orders, the last trade price or a reference price will be used. If these are not available, then the validation will be skipped.

Stop orders will be validated based on their trigger price. One Cancels The Other orders will be validated based on their limit price.

For products with currencies different from Euro, the exchange rate will be considered in the order value calculation.

Detailed information and the formulas for order value calculation will be provided in the *T7 Functional Reference* document. For some complex instrument types there will be special calculation rules.

Note that the functionality described above applies also for quotes.

Initially with release introduction, Eurex will set the maximum order value limit to the maximum allowed value for all users.

2.1.2 Pre-trade Transparency Provision

According to the pre-trade transparency regime that is introduced with MiFID II, the aggregated order book information needs to be published for at least the five best bid and offer price levels. With T7 Release 6.0, the market depth for derivatives products will be enhanced to five for all products and will be provided via netted and unnetted market data. With T7 Release 6.0, the minimum lot sizes for TES trading may be adapted to comply with the large-in-scale thresholds for pre-trade transparency.

2.1.3 Post-trade Transparency

With T7 Release 6.0, T7 EMDS is enhanced to report TES trades with deferred publication in a separate replay cycle at 11 pm CET. With T7 Release 6.0, the non-disclosure limits for TES trading may be adapted to comply with the large-in-scale thresholds for post-trade transparency.

2.1.4 Transaction specific ESMA Fields

To be compliant with MiFID II regulations the following fields are introduced in T7:

- **Executing Trader Qualifier** (mandatory, tag 25124):
Qualifier for the field "Executing Trader". It is required to distinguish between natural persons and algorithms. Each transaction which does not contain a valid qualifier but requires the specification of the qualifier is rejected by T7.
- **Executing Trader** (conditional mandatory, tag 25123):
Field (ESMA Field 5 (Section A)) to identify the person or algorithm within the member or participant of the trading venue who is responsible for the execution of the transaction.
In case the *Executing Trader Qualifier* is set to "algo", the field must contain the code to identify the algorithm. A validation in T7 ensures that the field is populated in this case.
In case the *Executing Trader Qualifier* is set to "human", the field can be left empty. However, it is ensured by T7 in this case that the trader entering the transaction is the Executing Trader.
- **Investment Decision Maker Qualifier** (optional, tag 21222):
Qualifier for the field "Investment Decision Maker". It is required to distinguish between natural persons and algorithms.
- **Investment Decision Maker** (optional, tag 20122):
Field (ESMA Field 4 (Section A)) to identify the person or algorithm within the member or participant of the trading venue who is responsible for the investment decision resulting to the transaction.

The aforementioned fields are included to the layout of the order add, order modify, order delete, mass quote add, mass quote delete, quote activation and TES trade approval transactions.

The following field is used by the order add, order modify and TES trade approval transactions:

- **Client Identifier** (optional, tag 20003):
Field (ESMA Field 3 (Section A)) used to identify the client of an order for agent account of the member or participant of the trading venue. For products of the Eurex market, it is validated by T7 that the *Client Identifier* is populated in case the trading capacity (tag 1815) is set to "agency".

Executing Trader, *Investment Decision Maker* and *Client Identifier* are 8 bytes numeric fields and can be filled with short codes maintained outside T7. For more information about the transactions reporting under the MiFID II / MiFIR regime, please also refer to the corresponding documents provided on the Eurex Web page under <http://www.eurexchange.com/exchange-en/resources/eu-regulations/mifid-mifir>.

- **Value Check Type** (mandatory, tag 25126):
The field indicates whether a maximum order / quote value validation (maximum transaction value validation) is performed by the Trading Venue. Each order add, order modify or mass quote add transaction which does not contain a valid qualifier of the *Value Check Type* is rejected by T7.
- **Order Attribute Liquidity Provision Flag** (mandatory, tag 23002):
The field is used as an indication whether an order is submitted to a Trading Venue as part of a market making strategy. Each order add, order modify, mass quote add or TES approval transaction which does not contain a valid qualifier of the *Order Attribute Liquidity Provision Flag* is rejected by T7.
- **Order Attribute Risk Reduction Flag** (optional, tag 23003):
The field is used as an indication whether the transaction reduces risk in an objectively measurable way in accordance with Article 57 of Directive 2014/EU. The field only applies to order add derivative transactions.

For more details, please refer to the Enhanced Trading Interface (“ETI”) Derivatives Message Manual or to the T7 Derivatives Markets Trader and Amin GUI Manual. With the help of the tags mentioned above, the corresponding fields can be identified by the ETI manual.

2.1.5 Market Making Handling

2.1.5.1 Overview

The MiFID II regulations regarding market making aim to introduce predictability to the apparent liquidity in the order book by establishing written agreements for investment firms pursuing market making strategies. Deutsche Börse AG will implement this requirement by an admission requirement for all trading participants who pursue a Market Making strategy according to Article 1 of Commission Delegated Regulation (CDR) (EU) 2017/578. Participants that receive an admission under these rules will be called Regulatory Market Makers. Regulatory Market Makers will be obliged to flag quotes and orders that are submitted under a market making agreement with a **Liquidity Provision Indicator**. Furthermore, trading venues are obliged to provide market making schemes for certain products. These products will be marked with a new **Market Making Obligation flag** in T7. Eurex will provide a Liquidity Provider Framework, which will define the obligations of Liquidity Providers and the corresponding incentives.

The new regulatory relevant states of market conditions for market making will be **normal market conditions**, **stressed market conditions** and **exceptional circumstances**. Stressed market conditions will be established on product level, whereas exceptional circumstances will typically affect the whole market. The product will be in normal market conditions, when neither stressed nor exceptional market conditions apply. The obligations for liquidity providers to provide liquidity on a regular and predictable basis does not apply during exceptional circumstances.

Information on the introduction of a regulatory market-making framework has been published in Eurex Circulars 102/17 and 107/17. Additional information will be provided in a further circular during Q4/2017.

2.1.5.2 Stressed Market Conditions

Stressed market conditions are characterized by significant short-term changes in price and volume. The resumption of trading after volatility interruption is considered as a stressed market condition as well.

T7 will support a Stressed Market Conditions state on product level, although the trigger for Stressed Market Conditions (SMC) may be in a specific simple instrument.

As the currently existing concept of Fast Market is closely related to the regulatory concept of stressed market conditions, the state Fast Market will be aligned into an overall state of stressed market conditions on T7. There will be two types of stressed market conditions in Eurex: **SMC-Fast** that corresponds to the current Fast Market state; **SMC-Auto**: automatically triggered stressed market conditions, which directly correspond to the regulatory concept of stressed market conditions.

The following trigger events for automatically set stressed market conditions will be supported, depending on the type of the affected product:

- Simultaneous significant short-term changes of price and volume – applies to equity index futures, single stock futures and ETF futures.
- End of a volatility interruption – applies to equity index futures, single stock futures and ETF futures.
- Stressed Market Signals in a related product – in case a futures product is in stressed market conditions and there is a corresponding options product with the same underlying, the options product will be automatically set in stressed market conditions (e.g., for OESX the corresponding related product will be FESX). Note that a volatility interruption in such a futures product will also set the corresponding options product to stressed market conditions. Stressed market signals in a related product applies to ETF options, equity options, equity index options.

Automatically triggered stressed market conditions will have a fixed duration of 10 minutes. Ongoing automatically set stressed market conditions will be prolonged, when the trigger conditions are detected again during their duration.

During stressed market conditions, the price range tables and the minimum quote quantities for a product may be adapted, i.e. the same behavior as currently for fast market conditions.

Stressed market conditions will be published in the market view of the T7 GUI and in a dedicated new attribute (*MarketCondition*) on the T7 market data interfaces.

The automatic triggering of stressed market conditions will become effective on MiFID implementation date, 3 January 2018 for SMC eligible products. Stressed market conditions due to fast market will be available beginning with release introduction on 4 December 2017.

2.1.5.3 Exceptional Circumstances

According to the regulatory technical requirements, T7 has to support the state of exceptional circumstances under the following triggering conditions:

- Extreme volatility – a state of extreme volatility is established when the majority of products, which are subject to market making regulation is in stressed market conditions or in a volatility interruption. The state of extreme volatility is set for the whole market.
- War, industrial action, civil unrest or cyber sabotage – this state is declared by the Exchange Management Board with simultaneous effect for the whole market.
- Disorderly trading conditions at the exchange – this state is declared when there is either a significant increase of processing times, or multiple erroneous executions of transactions, or loss of connectivity for many participants. The state of disorderly trading conditions is declared by the Exchange Management Board with simultaneous effect for the whole market.
- Suspension of pre-trade transparency obligation – the declaration of this state rests upon the decision of the responsible regulator. This condition applies per product.

By default, exceptional circumstances will be declared for a period of one hour and will end as soon as the triggering conditions are no longer met. The state of exceptional circumstances may be extended until the end of the business day, if the criteria are repeatedly breached. Exceptional circumstances will end automatically at the end of the business day. In case the triggering conditions remain in effect, they will be declared again on the next business day. Exceptional circumstances will be followed by stressed market conditions which will last 2 hours.

T7 will publish exceptional circumstances only via news messages (Eurex webpage, T7 GUI and ETI).

Exceptional circumstances will not be communicated via the T7 market data interfaces. Thus, there might be situations where stressed market conditions in a product are set during a state of exceptional circumstances. In this case, exceptional circumstances always trump stressed market conditions, regardless of the sequence of setting the regulatory trading conditions.

Exceptional circumstances will not be declared before MiFID implementation date, 3 January 2018.

2.1.5.4 Liquidity Provision Indicator

According to the regulatory requirements, Regulatory Market Makers are obliged to flag orders, quotes and TES trade sides which are entered under a market making agreement or in a liquidity provisioning capacity (**liquidity provision activity**). As outlined in the related ESMA guidelines for MiFID II, the following scenarios of liquidity provision activities are defined:

- Participant performing algorithmic trading to pursue a market making strategy (*Trading Capacity* set to Market Making or Proprietary).
- Participant performing a liquidity provision activity (not denoted as a market making strategy), dealing on own account (*Trading Capacity* set to Market Making or Proprietary).
- Participant performing a liquidity provision activity executes orders on behalf of clients (*Trading Capacity* set to Agency).

T7 will introduce a **Liquidity Provision Indicator** to allow the flagging of orders and quotes used in a liquidity provision activity. Additionally, the Liquidity Provision Indicator will be available in TES trading per TES trade side.

The user can maintain the Liquidity Provision Indicator on order or quote entry or maintenance. The Liquidity Provision Indicator can be set by the approving user of a TES trade side.

2.1.5.5 New Product Parameters

T7 will indicate the applicability of the MiFID II market making regulations by the following new product parameters:

- Market Making Obligation flag – indicates whether a product is subject to incentives for quotation during stressed market conditions. This flag will be set for all equity index derivatives and all products that have a liquid equity or ETF instrument as underlying (according to the definition of ESMA). Products with market making obligation will always support automated stressed market conditions.
- SMC Eligibility flag – indicates whether a product supports automated stressed market conditions. This flag will be set for equity index derivatives, single stock options and futures, ETF derivatives.

The Market Making Obligation flag and the SMC Eligibility flag are published in RDI and RDF and in the product and instrument files on the Eurex webpage.

2.1.6 Audit Trail Reporting

According to the MiFID II requirements for Audit Trail reporting, Deutsche Börse AG is obliged to store relevant data for all transactions resulting from an order, a quote or a TES trade. This applies to all instruments which are traded on the T7 system for the Eurex and EEX derivative markets. The data will be provided to the National Competent Authority (NCA) on request and on short notice. The requested reports will be prepared internally by Deutsche Börse AG, containing the requested fields and according to the format specified by the regulator.

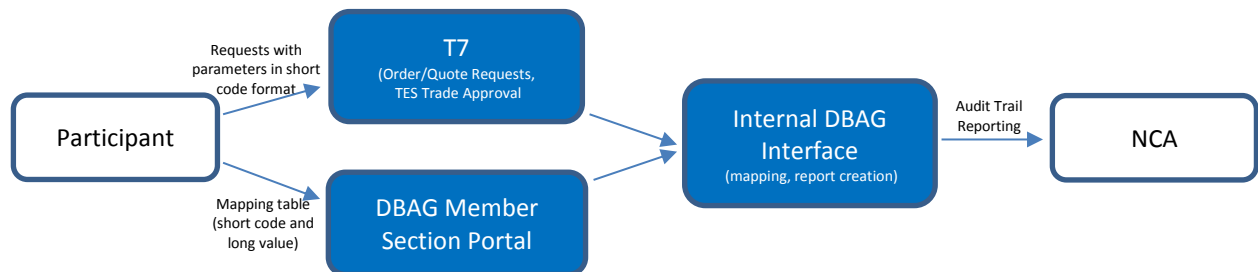
In order to comply with the regulatory reporting requirements, the following regulatory parameters for orders, quotes and TES trades need to be provided by the participants with T7 release 6.0:

- Client Identification Code
- Investment Decision within Firm
- Execution Decision within Firm
- Liquidity Provision Indicator
- Commodity Hedging

These parameters are described in the following. As an exception, the liquidity provision indicator is described in chapter 2.1.3 about Market Making Handling.

New attributes on orders and quote maintenance requests and TES trade approval requests will be introduced with T7 Release 6.0, which can be used by the participants to set the new regulatory parameters. The new attributes will be available and need to be filled by the participants for new orders, quotes and TES trades with the introduction of T7 Release 6.0 on 4 December 2017. This applies irrespective that the implementation date of MiFID II is on 3 January 2018. For existing orders in the order book, the new attributes will be initially set by the exchange with release introduction (cf. chapter 2.1.5). Participants should check and, if necessary, update the values for the new attributes before the implementation date of MiFID II in order to ensure a correct regulatory reporting. From 3 January 2018 onwards, the information in the attributes must be in accordance to regulatory requirements.

There are several new parameters which will not be provided directly on order or quote maintenance, respectively TES trade approval, but need to be specified by so called **short codes**. The short codes are mapped to their final long values in the format required by the regulator (alphanumeric long values) according to a mapping table, which the participants need to provide to their central coordinator. The central coordinator will need to upload the mapping table before the implementation date of MiFID II in the Member Section on the Eurex website www.eurexchange.com. Deutsche Börse AG will map the short codes from the order or quote maintenance request or TES trade approval request to the information provided via participants' uploads and will create the Audit Trail Reporting for the regulator accordingly.



Client Identification Code

ESMA requires a Client Identification Code (alphanumeric value with up to 35 characters) in the Audit Trail Reporting with the following values:

- the Legal Entity Identifier (LEI), if the client is a legal entity,
- the National Identifier (NationalID), if the client is not a legal entity,
- AGGR, if the order is an aggregation of multiple client orders,
- PNAL, pending allocation.

This information, together with a corresponding short code, has to be part of the mapping table which has to be uploaded by the participants in the newly introduced upload portal in the Member Section.

In order to comply with this requirement, the parameter *ClientID* will be introduced in T7 as an optional 8-byte unsigned numeric value, which can be used for the entry of the before mentioned short code. For orders in financial markets which are sent from an agent account (i.e. the parameter Trading Capacity is set to “Agent”), the *ClientID* is mandatory in the Order Entry and Modification Request. For orders or TES trades with other trading capacities and quotes, the *ClientID* field may remain empty.

Investment Decision within Firm

ESMA requires the reporting of the person or algorithm on participant’s side responsible for the investment decision. The Investment Decision within Firm parameter (alphanumeric value with up to 35 characters) will provide either the National Identifier (NationalID) of the person responsible for the investment decision, or the algorithm identifier (AlgoID), to identify the algorithm responsible for the order/ quote entry, respectively modification, or TES trade approval. Note that the person responsible for the investment decision may be different from the trader who enters the order or quote.

Two new optional parameters will be introduced with T7 Release 6.0 to support the required functionality:

- *Investment Decision Maker* – an 8-byte unsigned numeric value that will be the input for the long alphanumeric value for Investment Decision within Firm as required for the regulatory reporting. The parameter can be filled directly with the algorithmic identifier or with the short code of the person responsible for the investment decision in case the investment decision qualifier refers to a human, it may also remain empty as reference to the entering user.
- *Investment Decision Qualifier* – optional 1-byte parameter that indicates the origin of the investment decision: algorithm or human otherwise.

Execution Decision within Firm

ESMA also requires that the trading venue provides the identification of the person (Trader) or algorithm within its Participants, who is responsible for the execution of the transaction. The Execution Decision within Firm parameter (alphanumeric value with up to 35 characters) will provide either the National Identifier (NationalID) of the person responsible for the execution decision, or the algorithm identifier (AlgoID), to identify the algorithm

responsible for the transaction. Note that the person responsible for the execution decision may be different from the trader who enters the order/ quote or TES trade.

T7 will introduce two parameters to support this requirement:

- *Executing Trader* – an 8-byte unsigned numeric value that will be the input for the long alphanumeric value for Execution Decision within Firm as required for the regulatory reporting. The parameter may be filled directly with the algorithmic identifier or in case the execution decision qualifier refers to a human with the short code of the person responsible for the execution decision, it may also remain empty as reference to the entering user.
- *Executing Trader Qualifier* – a mandatory 1-byte parameter that indicates the origin of the execution decision: algorithm or human otherwise.

Additional information about the required reference data from Participants and the enhancement of order records is provided in 'Circular 040/17: Participant reference data and enhancement of order records' from 3 May 2017 on the Eurex webpage.

Commodity Hedging

The regulation concerning commodity derivatives requires that order transactions with risk-reducing characteristics can be identified. In order to comply with this requirement, T7 will introduce a *Commodity Hedging* flag for orders.

2.1.7 Conversion of Existing Orders in the Order Book

For release introduction, new regulatory order attributes will be initially set by the exchange for existing non-expiring book orders as follows:

- *ClientID*
The *ClientID* is not filled for all orders.
- *Liquidity Provision Indicator*
The *Liquidity Provision Indicator* is set to indicate no liquidity provision activity for all orders.
- *Executing Trader Qualifier*
The *Executing Trader Qualifier* is set to "24" for all orders, indicating that the decision was taken by a natural person.
- *Executing Trader*
The *Executing Trader* is not filled for all orders.
- *Investment Decision Qualifier*
The *Investment Decision Qualifier* is not filled for all orders.
- *Investment Decision Maker*
The *Investment Decision Maker* is not filled for all orders.

2.1.8 Trading Venue Transaction Identifier Code (TVTIC)

ESMA requires that the trading venue assigns a code to transactions on the maintenance of data relating to orders, quotes and TES trades. This code is denoted as **Trading Venue Transaction Identifier Code (TVTIC)**. The T7 TVTIC will be formed from the following T7 information:

- Environment Indicator
The environment indicator is set to 1 for the standard T7 environment, and set to 2 for the T7/FX environment.
- Security ID
The security ID corresponds to the instrument ID assigned by T7. The security ID is a 20-character string padded with leading zeros. The security ID can be determined from the corresponding ETI or FIX messages.
- Transaction Timestamp
The transaction timestamp refers to the time in the Unix epoch measured in nanoseconds. The

transaction timestamp is a 20-character string, padded with leading zeros. The transaction timestamp can be determined from the corresponding ETI or FIX messages.

- On/Off-book Indicator
The on/off-book indicator is set to 0 for on-book transactions, and to 1 for off-book transactions.

T7 will concatenate the components into a 42-character string as follows:

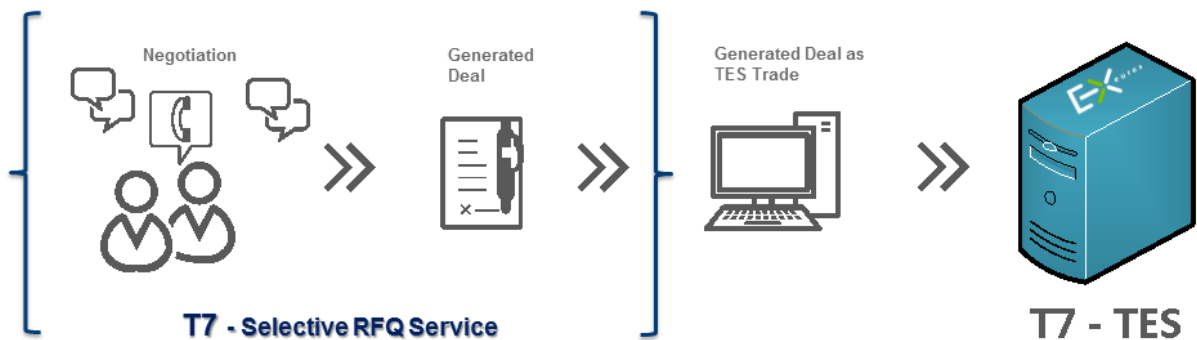
Environment Indicator	SecurityID																				Transaction Timestamp																				On/Off-book Indicator
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41	42

2.2 Selective Request for Quote Service

2.2.1 Overview

With the upcoming MiFID II regulation there will be an increased requirement on investment firms to prove Best Execution. Eurex wants to provide its members tools to meet these challenges. For this purpose, T7 will be enhanced with a price discovery service to negotiate off-book transactions electronically. Aimed are both Brokers and Market Makers in Fixed Income Options for the initial release, but the new Selective RfQ service will be available for other products as well. The service helps to provide all necessary data to prove Best Execution, while also streamlining the current voice driven market.

The new service in T7 will provide a workflow oriented functionality with a private/ closed order book for the participants. The participant is sending out a RfQ to selected other participants and will be owner of the order book of the instrument the RfQ is referring to. After receiving quotes, the owner of the order book can choose a specific quote by sending an order with the details of the that quote to match, thus creating a deal within the context of the Selective RfQ service.



T7 Selective Request for Quote Service Scope

A single Selective RfQ service will be available for the complete Eurex market. Individual products can be enabled to use this service. The service schedule and list of the products enabled for it will be available on the Eurex website. It's service time will be covering the off-book trading time in T7 in all enabled products.

A deal generated by this service is a non-binding agreement between two Eurex participants, and it is not registered as a trade at the Exchange. The deal generated by the Selective RfQ service can be transferred into a binding trade registered at Eurex by entering it as a Block Trade in T7 and by approving this Block Trade by the parties involved in the deal.

2.2.2 User Concept and Migration of User Entitlement

The Selective RfQ service will use the existing participant, business unit, user and session concept. For details, please refer to the document "Participant and User Maintenance Manual", published on the Eurex webpage.

2.2.2.1 Users

Every request send to the service must carry the identifier of a T7 user. In the context of the Selective RfQ service, a T7 user plays the following functional roles:

- Requester – a user who sends a Request for Quote (RfQ) to the service and thereby starts the Negotiation Event. The requester is the owner of this Negotiation Event.
- Respondent – the target user of a Negotiation Event. The requester specifies the respondents in the RfQ to the service and thus grants the respondent role to one or more T7 users. The respondent owns the quote he or she sends in response to the Negotiation Event.

The ownership of a Negotiation Event and an order or a quote sent to the service is attached to a single user at a time. The deal generated in the service has the owning requester and owning respondent user information.

The **head trader** of a trader group may update the Negotiation Event, enter orders within the Negotiation Event and cancel deals on-behalf of the **requester** belonging to the same trader group. The head trader may enter/ update/ delete quotes to the service and approve or reject deals within the Negotiation Event on-behalf of the **respondent** belonging to the same trader group.

A **supervisor** of a business unit may update the Negotiation Event, enter orders within the Negotiation Event and cancel deals on-behalf of the **requester** belonging to the same business unit. The supervisor can also enter/ update/ delete quotes to the service and approve or reject deals on-behalf of the **respondent** belonging to the same business unit.

2.2.2.2 Roles and Activity

TES roles as already known in T7, will also be used in the Selective RfQ service and will define if a user can send a RfQ request, start a Negotiation Event and provide a quote to a Negotiation Event. If a **TES Broker** or a **TES Trader** role is assigned to a user within a business unit, then the user can do the following activity in context of the Selective RfQ service:

- send a RfQ request and hence start a Negotiation Event,
- update the Negotiation Event,
- be a target respondent in the RfQ request to the service or Negotiation Update request,
- send a quote,
- update or delete own quote,
- send an order,
- update the status of the deal.

TES brokers and TES traders can be both requesters and respondents..

2.2.3 Product and Instrument Information

The definition of a complex instrument is currently published immediately upon its creation by the T7 market data interfaces. For the Selective RfQ service, the definition of a complex instrument will be published to the market during the TES trade entry.

The requester will send the RfQ request to the service for a particular product and instrument combination. In case of a complex instrument, the complete definition of that instrument including leg instruments, their side and ratio must be provided in the request, instead of providing a T7 generated instrument identifier. For the underlying leg, the underlying product and underlying instrument must be provided.

The product and instrument, or instrument leg information of the Negotiation Event is communicated to all the respondents of the event and remains constant throughout the life cycle of the Negotiation Event.

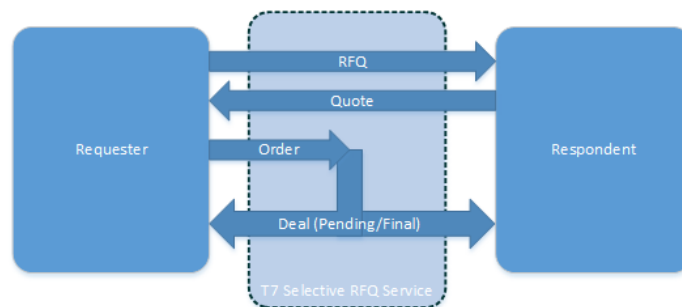
2.2.4 Process Workflow in the Selective Request for Quote Service

The process workflow in the Selective RfQ service is divided in two parts: *Negotiation Event workflow* and *Deal workflow*.

2.2.4.1 Negotiation Event Workflow

The Negotiation Event workflow has the following steps:

1. The requester (typically a broker) sends an RfQ request to the service and hence starts a Negotiation Event.
2. The service informs the targeted respondents (market makers) about the start of the Negotiation Event with the details about the RfQ.
3. The respondents provide quotes using the Quote Entry request of the service. The requester receives information about each quote.
4. Based on the quotes received, the requester can decide to target a specific quote and to send an order to the service for a quote side that results into a deal in the service.



Negotiation Event Workflow

2.2.4.2 Request for Quote

A RfQ sent to the service can be targeted to various users. The same user cannot be targeted multiple times in the same Negotiation Event. For each respondent, the business unit name and the user name (e.g. ABCFRTRD001), must be provided. Additional respondents can be added during the lifetime of the Negotiation Event. Existing respondents cannot be removed by the requester.

The requester can define the **type of the Negotiation Event** as *Indicative* or *Firm*. If the Negotiation type is *Indicative*, then the respondent has the possibility to do a Final Check, i.e. update the deal status in the service to *Final* from *Pending*. Otherwise, if the Negotiation Type is *Firm*, then an order of the requester based on the quote of the respondent leads to a *Final* deal immediately in the service.

The requester can provide a **common reference price** as part of the RfQ, which will be communicated to all respondents. The reference price can be used to provide the underlying reference price for an option, when the instrument is an options strategy. The reference price can also be used to provide the custom index price (used for Trade At Market) in case of Total Return Futures product.

If the requester wants to trade a particular delta, then she or he needs to set the **Delta Exchange** flag and provide the underlying leg ratio, side as well as the underlying reference price (which can be the common reference price described above) as part of the RfQ request.

The Negotiation Event can be started without providing the **Side** (Buy or Sell) as part of the RfQ request sent to the service. The Side can be provided until the first order is sent by the requester. The Side for the Negotiation Event is fixed once it is disclosed to a respondent or when the first order is sent.

The requester can provide the **total quantity** to be negotiated within the context of the Negotiation Event. The total quantity can be provided at any time as long as the Negotiation Event status is *Open*. The total quantity can be reduced at any time by the respondent, but cannot be increased once it is disclosed to any one of the respondents.

The requester can provide **indicative prices** to the respondents at any time during the lifetime of the Negotiation Event.

2.2.4.3 Negotiation Event Identifiers

The Selective RfQ service generates a **Negotiation Event Identifier** for each Negotiation Event, such that each Negotiation Event can be uniquely identified for the business day. This identifier must be present on every request for a particular Negotiation Event. The requester can provide an alphanumeric **Negotiation Event Report Identifier** for the Negotiation Event. This report identifier is not validated for uniqueness. Both identifiers are fixed for the lifetime of the Negotiation Event and are visible to all Participants of the Negotiation Event.

2.2.4.4 Negotiation Event Status

The Negotiation Event is started with the initial status **Open**. The status Open implies that it is possible to place quotes and orders for the Negotiation Event.

When the Negotiation Event status changes to **Closed**, the state of the quotes and the *Pending* deals in the service are set to *Rejected* and it is not possible to enter new orders and quotes for this Negotiation Event. The requester and respondents are informed about the change of the status. The Negotiation Event status is changed to *Closed* in the following scenarios:

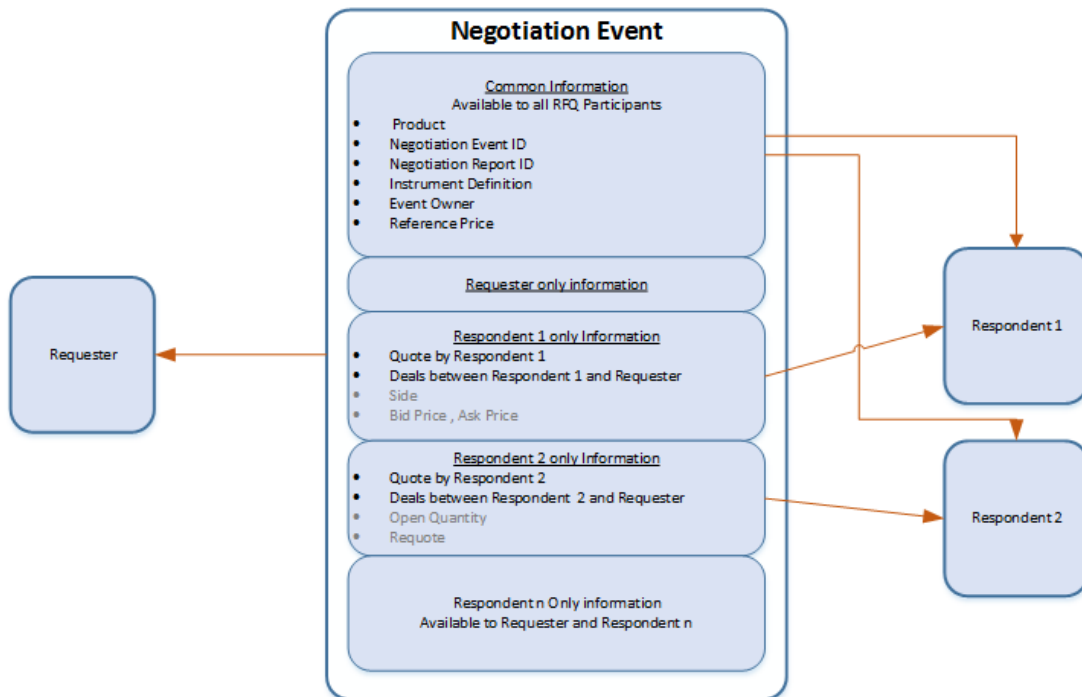
- The requester, i.e. owner of the Negotiation Event ends the Negotiation Event by updating its status to *Closed*.
- The requester has once disclosed the open quantity to a respondent and the open quantity is reduced to zero
 - due to the deals, or the owner has reduced the total quantity such that the open quantity is reduced to zero, the Event Type is Firm.
 - due to the deals, or the owner has reduced the total quantity such that the open quantity is reduced to zero, the Event Type is Indicative and all deals generated within the Negotiation Event have status Final.

2.2.4.5 Selective Disclosure of Information

The requester decides when and to whom to disclose information. The requester can provide selective information to the selected respondents by setting the following flags for the corresponding respondents:

- **Show Quantity** – if this flag is set, then the respondent is shown the open quantity as part of the Negotiation Event Notification generated due to the update request.
- **Show Side** – if this flag is set, then the respondent is shown the Side as part of the Negotiation Event Notification generated due to the update request.
- **Show Price** – if this flag is set, then the respondent is shown the bid and ask price as part of the Negotiation Event Notification generated due to the update request.
- **Requote** – if this flag is set, then the requester would like the respondent to quote again.

The requestor maintains these attributes. the Selective RfQ service uses them to send the corresponding information to the respondent. If information that has already been disclosed to a respondent has changed, the requester may decide not to inform the respondent again about the update.



Information Flow in Selective RfQ service

2.2.4.6 Quotes in the Selective Request for Quote Service

Each respondent can have only one quote (single- or double-sided) for a particular Negotiation Event. Such a quote can be sent only for an open Negotiation Event and only by a user (or head trader, or supervisor), who is specified as a respondent in the Negotiation Event.

Price of a Quote

In case of complex instruments, the price on each quote side is the price for the complete complex instrument, i.e. quoting the individual legs is not supported.

For selected products, the Selective RfQ service will allow trading in **Subticks**, i.e. it is possible to enter a quote in the service with price in finer increments as compared to the tick size defined for the product. The allowed granularity or **Subticks** is defined by a **Subtick Factor**. The list of the products for which trading in **Subticks** is allowed and the corresponding **Subtick Factor** will be published on the Eurex website.

$$\text{Subtick} = \frac{\text{TickSize}}{\text{SubtickFactor}}$$

When a quote sent to the service has a price with granularity in **Subticks**. Then the system validates if the price divided by the tick size of the product and multiplied by the provided quantity is an integer. If this validation fails then the quote is rejected.

$$\text{If } \left(\frac{\text{Price}}{\text{TickSize}} \right) \times \text{Order Quantity is integer}$$

Quantity of a Quote – in case of complex instruments, the quantity on each quote side is the quantity for the complete instrument, i.e. no separate quantity for the individual legs is provided.

Free Text Field – the Enter Quotes request of the service will support a free text field, which can be used by the respondent to provide a specific information to the requester.

Quote Deletion – the respondent can delete his or her quotes as long as they are active, i.e. not deleted by the service. Both quote sides of the quote are deleted together, i.e. it is not possible to delete an individual quote side in the Selective RfQ service. Once a quote is deleted and the Negotiation Event status is still *Open*, then the respondent can quote again.

Quote Update – the Enter Quote request can also be used to update the existing quote of the respondent. All quote sides that are part of such Quote request have to be updated together. It is not possible to update a quote side in the Selective RfQ service individually. A Quote update in the service is in essence a quote deletion and entry of a new quote.

Quote Identifier – the Selective RfQ Service generates an identifier with every successful processing of the Quote Entry request that leads to a new or updated quote side. The identifier is unique for the combination of Negotiation Event and the respondent.

2.2.4.7 Orders in the Selective Request for Quote Service

Once the respondents have provided quotes, the requester can send an order to the service to trade with one of the quote sides. The respondent and the price of the quote side must be specified in the order, so that a specific quote side of the respondent can be targeted. The service will match the order with the targeted quote side, with the price and quantity provided in the order and thus generate a deal.

The service accepts only one order in response to a particular quote side from a particular respondent. Once a quote side is targeted, it is not available for consideration for a new order, i.e. the remaining quantity of the quote side is deleted.

Restriction on Order Quantity – the quantity provided in an order blocks the same amount of quantity from the open quantity of the Negotiation Event. This quantity will be released if the *Pending* deal is *Rejected*. The quantity should be less than or equal to the Negotiation Event open quantity. The quantity has to be equal or less than the quantity provided by the respondent in the quote at the price of the order and with side opposite to the order.

Validity Time – to speed up the ‘Final Check’ process, it is possible to provide **validity time** on the order for *Indicative* Negotiation Event type. This validity time will be set on deals with status *Pending*. If the status of a *Pending* deal is not changed to *Final* or *Rejected* and the validity time is reached, then the deal status is changed to *Rejected* by the service.

Order Side – the side of the order must always be the same as the side provided as part of the Negotiation Event. If no side is provided on the Negotiation Event when the order is entered, then the side of the order is considered as the side of the Negotiation Event.

Free Text Field – the Enter Order request for the Selective RfQ service supports a free text field, which can be used by the requester to provide specific information to the respondent. This information will be part of the Deal notification generated by the service.

Targeting Quote Side with Subtick Price

When there is an order with a subtick granularity, the Selective RfQ service will generate two deals: one with a price rounded down to the next valid price according to the tick size; another one with a price rounded up to the next valid price according to the tick size. The quantities of the deals will be calculated as follows:

$$\text{Deal Quantity at a Higher Tick} = \left(\frac{\text{SubtickPrice} - \text{RoundedDownPrice}}{\text{TickSize}} \right) \times \text{Order Quantity}$$

$$\text{Deal Quantity at a Lower Tick} = \text{Order Quantity} - \text{Deal quantity at a Higher Tick}$$

Example:

The product OGBL has tick size 0.01. The *Subtick Factor* may be configured as 4, i.e. 0.0025 as Subticks. If an order in Call JAN 2018 Strike 163.50 with price 0.0925 and quantity 450 is placed in the Selective RfQ service in

response to a quote with price 0.0925 and quantity 500. Then the order will be rejected indicating that the provided quantity cannot be used for subtick prices. An order with quantity 440 would result in two deals: one deal with price 0.10 and quantity 110; another deal with price 0.09 and quantity 330.

Deal Report Identifier – the requester can provide as part of the order an alphanumeric identifier. The service generates a deal from this order with Deal Report Identifier set to this value. The identifier is not validated for uniqueness.

2.2.4.8 Deal Workflow in the Selective Request for Quote Service

The Deal workflow in the Selective RfQ service starts with the creation of a deal and also contains updates to deals.



Deal Workflow in the Selective Request for Quote Service

Deals – the service generates a deal when an order is allocated to a quote side. The deal will be communicated both to the requester and the respondent. Once it is generated, the corresponding quote side is set to *Executed* and is removed from the order book of the service.

Pending Deal – a deal generated within an *Indicative* Negotiation Event will have the status *Pending*. The respondent can set the status from *Pending* to *Final* or to *Rejected*. The requester can set the status from *Pending* to *Rejected*.

A deal with status *Pending* can have an attribute *Validity Time* based on the order *Validity Time*. In case the validity time is reached, the service changes the deal status from *Pending* to *Rejected*.

Once the status of the deal is changed to *Rejected* or *Final*, it cannot be updated any more.

Final Deal – a deal generated within a *Firm* Negotiation Event always has the status *Final*.

Deal Identifier – the Selective RfQ service will generate a Deal ID, which if provided on the TES Trade as *Trade Description* and can be used by Participants to link the TES Trades and the deal. In order to provide a reliable linkage, the Deal ID is unique for the product during the business day.

2.2.4.9 Update of the Deal Status in the Selective Request for Quote Service

For an *Indicative* Negotiation Event, the service allows an update of deal status by both requester and respondent. Every update of the deal status will be communicated to both parties.

The respondent can update the deal status from *Pending* to *Final* or *Rejected*, whereas the requester can update the deal status from *Pending* only to *Rejected*.

Once a deal status is set to *Rejected*, the Negotiation Event open quantity is increased by the quantity of the deal.

2.2.5 Functional Audit Trail

In order to help participants to meet the upcoming regulatory requirements, all messages sent between a Participant and the Selective RfQ service will be recoverable and will serve as a functional audit trail of the Participant's activity.

2.2.6 TES Profile Validations

The Selective RfQ service will not perform any validations with respect to TES profiles, such as if a product-instrument type combination is allowed for TES trading, or *MinimumLotSize* validations. The Eurex Trader GUI will support these validations.

2.3 Delta Validation for Option Volatility Strategies

The currently available delta validation procedure in T7 verifies the underlying leg delta against a global maximum value. With T7 Release 6.0, Eurex will introduce a new alternative way to validate the delta for options volatility strategy, which can be enabled per product. The new procedure will allow a stricter validation of the delta neutrality of options volatility strategies in on-book trading. The new validation is called **Delta Neutrality Validation** and will allow on-book trading of an options volatility strategy only when the delta of the underlying leg compensates the delta of options legs in the concerned strategy within a pre-defined range at the time of the creation of the strategy. Effectively, the delta neutrality validation compares the underlying leg ratio against the common multiplier of the options legs ratios (leg ratio multiplier). The delta neutrality validation is based on the most recent traded price of the underlying and the associated theoretical delta for the options legs.

Note that the possibility to create an options volatility strategy for TES trading will remain unchanged, independent of whether the new delta neutrality validation is applied for on-book trading.

The delta neutrality validation for options volatility strategies will check that the overall delta of a position in the defined strategy is near zero. The position delta of an options volatility strategy is the sum of the deltas of the underlying leg and the options legs, which by construction have opposite signs. The position deltas consider the monetary value, which is associated with a price movement. Thus, the contract value is considered in the calculation of the positions delta. T7 calculates the delta for an individual leg with an options price model using the most recent traded price of the underlying at the time of the requested creation of an options volatility strategy. Applying the delta neutrality validation, T7 will reject the creation of an options volatility strategy for on-book trading when the position delta of the underlying leg differs more than a maximum allowed deviation from the position delta of the options legs. In this case, the requested options volatility strategy would be available for TES trading only.

Example:

A user wants to create a CALL-U options volatility strategy for an option using the front month of the related futures product as underlying leg. Assume that:

- the applicable maximum allowed deviation is 5% for the requested strategy,
- the futures contract value is 10 Euro and the options contract value is 10 Euro,
- the requesting user sets the underlying leg ratio to 76 when having a leg ratio multiplier of 100,
- the current options theoretical delta is 0.783 at the time of requesting the strategy creation.

Then, the delta of the underlying leg is 0.760, which deviates less than 5% from the options theoretical delta (0.783). In this case, the requested options volatility strategy can be created for on-book trading. If the applicable maximum allowed deviation would be set to a sufficient small value (e.g. 1%), the difference between the options legs delta and the underlying leg delta would exceed the maximum allowed deviation.

With release introduction, the existing delta validation will remain in effect for all products initially. A future activation of the new delta neutrality validation for a product will be announced separately.

2.4 Other Functional Enhancements

2.4.1 Entry of Leg Trade Prices for TES Trades in Complex Instruments

2.4.1.1 Overview

Currently, the trade price of a TES trade in a complex instrument is entered for the complete complex instrument and after execution of the TES trade, the trade price of the complex instrument is decomposed by T7 into leg trade prices. As TES trades result from TES order information and the Participants may have already determined the leg trade prices, these leg prices may differ from the leg trade prices determined by T7. To increase the flexibility of the TES functionality, with T7 Release 6.0, Eurex will allow the initiating user of a TES trade to enter leg trade prices.

The TES profile will be enhanced with an attribute *LegPricesAllowed* that determines if the entry of leg trade prices is allowed or even mandatory.

Depending on the relevant TES profile, it will be possible to provide leg prices at leg instrument level on TES trade entry. Similar to the TES trade price, leg prices can only be modified by the initiating user via TES modify request. It is possible to modify a TES trade from one without predefined leg prices to one with predefined leg trade prices and vice – versa. A change in a leg price is treated as a substantial modification similar to the TES trade price modification and will require again an approval from all TES trade sides.

2.4.1.2 Price Validation

The TES trade price is subjected to the price boundary validations based on the Price Validation Rule specified in the corresponding TES Profile. Each instrument leg price is also validated to be within the boundary price of the instrument, which is based on the Price Validation Rule specified in the TES profile for the complex instrument. If the price validation for one of the legs fails, then the whole request is rejected with an error message specifying which leg failed the validation and the boundary prices for that leg.

2.4.1.3 Trade Price decomposition

To monitor and distinguish whether the leg trade prices were determined by T7 or the leg price provided on the TES trade is used, the TES Trade broadcast is enhanced with an attribute *PriceDecomposition*.

2.4.1.4 Publication of Leg Trade Prices

With T7 Release 6.0, the market data messages on T7 Market Data Interface (MDI) and T7 Enhanced Market Data Interface (EMDI) will contain the leg trade prices of a TES traded complex instrument supplementing the already provided information on leg instrument level (e.g. traded leg volume) derived from the complex instrument trade.

2.4.2 Off-book trading of Total Return Futures Calendar Spreads

With T7 Release 6.0, it will be possible to enter TES trades on a calendar spread in a Total Return Futures product. On TES trade entry for calendar spreads of Total Return Futures, the leg prices must be provided apart from the overall TES trade price. TES trades on Total Return Futures calendar spreads can also be entered, as a broker trade i.e. initiating user is not involved in the TES trade as a counter party.

On-book trading of the calendar spread in Total Return Futures product is not allowed.

3. Technical Enhancements

3.1 Partition Specific Gateways

With T7 Release 6.0, Deutsche Börse AG will introduce partition specific gateways, which will replace the currently existing high frequency (HF) gateways in a stepwise approach.

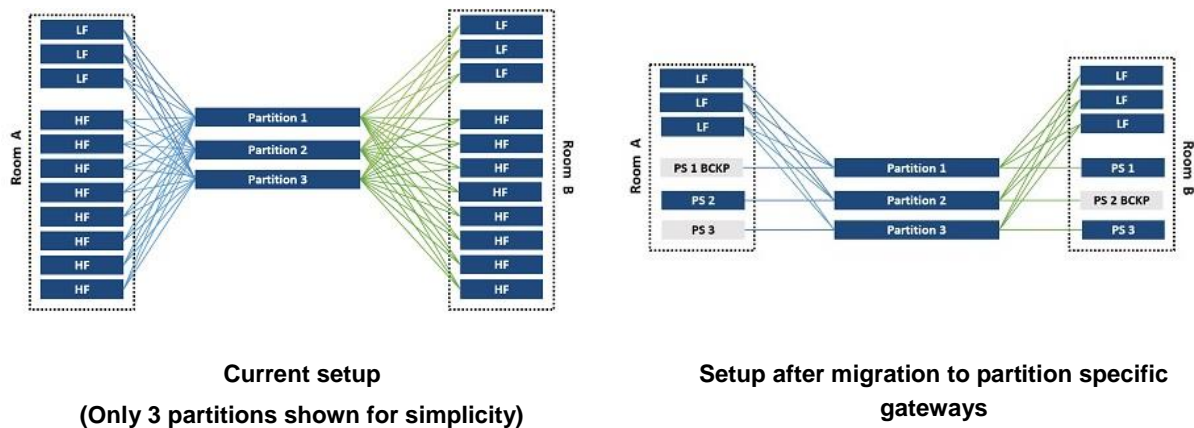
3.1.1 Introduction

Currently, the T7 trading system offers multiple paths into the matching engine via its 22 gateways (16 high frequency, 6 low frequency). In recent years, the development in technology has massively decreased processing times of exchanges and reaction times of Trading Participants. This leads to several issues with the multi-gateway architecture, such as:

- latency-variance between the Trading Participants' installations and the exchange matching engine,
- some Participants using statistical advantages by sending equivalent requests multiple times. This leads to short-term system overload and longer delays in processing on exchange level.

With T7 Release 6.0, the above issues will be addressed by reducing the number of gateways to one fast gateway per Matching Engine (Partition) and by guaranteed ordering within these gateways. This will increase predictability, reduce multiplicity and mitigate the challenges for trading surveillance. HF gateways will be replaced by partition specific gateways step by step until end of March 2018, i.e. they will be activated partition by partition. During this phase, some HF gateways will remain active. As a next step, routing to these partitions will be disabled on HF gateways. After partition specific gateways have been activated for all partitions, the HF gateways will be switched off. Thus, after the migration phase, the Eurex¹ market will use a combination of LF and partition specific gateways.

Only HF sessions can successfully login to partition specific gateways or HF gateways as long as these (co)exist. Handling of LF sessions will remain unchanged. The ordering process of a session via the Deutsche Börse Member Portal will remain unchanged as well.



With T7 Release 6.0, it will be possible to enter lean GTC limit orders via HF sessions that will survive the trading day depending on the order validity.

3.1.2 Session Scope and Login Handling

A session may only login to one gateway, i.e. there will be a one-to-one mapping of session ID to TCP connection at any given point in time.

¹ Note that the EEX market will use only LF gateways.

For each active partition specific gateway, there will be a standby partition specific gateway for failover purposes. The standby gateway will accept TCP connections and session login requests in order to allow network setup checks. Partition specific gateways will accept no other requests in standby mode. The initial list of partition specific gateways will be published in the 'Network Access Guide', which is part of the T7 system documentation. Intra-release changes will be announced via the 'Implementation News'.

Parallel operation of partition specific and HF gateways will be possible during the migration phase. HF gateways will continue to route transactions to some partitions during this period.

A new limit on the maximum number of sessions per business unit that can login to a single partition specific gateway at any given point in time will be introduced. This limit will be published in the system documentation.

3.1.3 Failover and Session Handling

Upon a failure of a partition specific gateway, the standby partition specific gateway will take over. As with current gateways, sessions that were logged in on a failed gateway will be logged out and all quotes and non-persistent orders will be deleted.

To allow orderly and fair order management, there will be a predefined period in which order management is suspended via the partition specific gateway on affected partitions after a partition specific gateway fails over. Deutsche Börse AG will provide a dedicated Focus Day for partition specific gateways failover test in the T7 simulation environment.

The session login process after failover follows the existing logic described in Section 'Connectivity and Session Parameters' of the Eurex Enhanced Trading Interface Manual. Upon a failure of a partition specific gateway (or the loss of connectivity), the session needs to reinitiate connection by sending a connection requests to the connection gateway. The details of partition specific gateway failover will be described in the "Incident Handling Guide" for T7.

As there will be a single active partition specific gateway for each given partition, in case of a loss of network connectivity on this network side, participants using only one connection line will be able to reach the gateways in room A via B network with a certain delay.

3.2 Individual Marketplace Calendars

There are four international marketplaces setup on the T7 trading system currently:

- Eurex/ EEX Derivatives²
- Xetra Cash
- Vienna Cash
- Dublin Cash.

This leads to high flexibility requirements towards the system. For example, Dublin cash plans to be open for trading on 1 May 2018, while at the same time, other marketplaces will be closed due to a public holiday. In order to minimize the operations efforts on customers' side, Deutsche Börse AG will enhance the trading calendar logic in T7 by introducing individual marketplace trading calendars with Release 6.0. Based on these calendars, the architecture components of T7 supporting marketplaces that are closed will remain down, or their activities will be suppressed. Thus, T7 will not distribute any data (e.g. broadcasts, reference data, reports) for these marketplaces. Participants and Operations departments of exchanges that are closed on a certain day will not be affected by the fact that other exchanges are open for trading on the same day.

² The Eurex market and the EEX market are set up on one marketplace called „Eurex/ EEX Derivatives“.

3.3 T7 Enhanced Trading Interface and FIX Interface

With T7 Release 6.0, the T7 Enhanced Trading Interface (ETI) will move to version "6.0". Release "6.0" is a mandatory release. ETI version "5.0" will no longer be supported, i.e. T7 ETI will not be backwards compatible to the ETI version for Release 5.0.

Detailed information about the ETI changes and enhancements in T7 Release 6.0 will be provided in the Trading Interfaces documentation on the Eurex webpage.

The T7 FIX interface will not be backwards compatible to the FIX interface for Release 5.0.

The referenced attribute names (*written in italics*) refer to the ETI interface.

3.3.1 Enhancements regarding the MiFID II Regulatory Requirements

The following enhancements in the ETI messages will be introduced in order to support the MiFID II regulatory requirements:

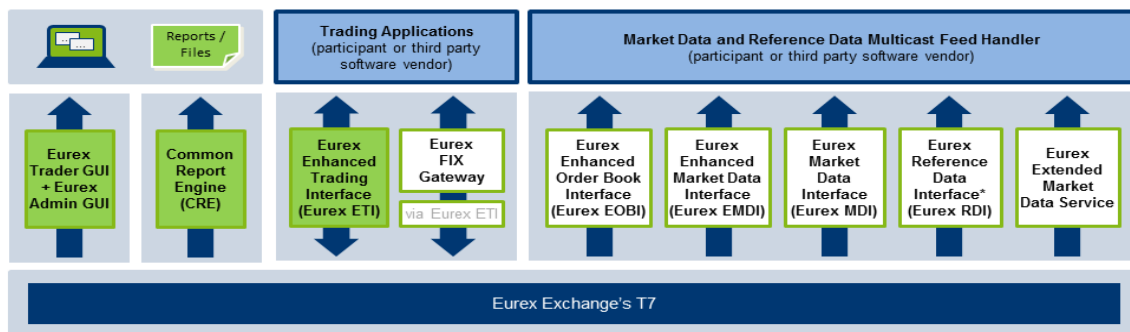
- For pre-trade Controls – there will be a new flag (*ValueCheckTypeValue*) to allow the skipping of the Maximum Order Value validation in the following messages:
 - New Order Single (short and regular layout)
 - New Order Multi Leg
 - Replace Order Single (short and regular layout)
 - Replace Order Multi Leg
 - Mass Quote
- For Market Making Handling – T7 will publish exceptional circumstances and stressed market conditions via ETI news messages.
- For Market Making Handling – the Liquidity Provision Indicator (*OrderAttributeLiquidityProvision*) will be introduced in the following messages:
 - New Order Single (short and regular layout)
 - New Order Multi Leg
 - Replace Order Single (short and regular layout)
 - Replace Order Multi Leg
 - Mass Quote
 - Approve TES Trade
- For Audit Trail Reporting – T7 will introduce new fields for the input of the investment decision within firm and execution decision within firm (*PartyIDInvestmentDecisionMaker*, *PartyIDInvestmentDecisionMakerQualifier*, *ExecutingTrader*, *ExecutingTraderQualifier*) in the following messages:
 - New Order Single (short and regular layout)
 - New Order Multi Leg
 - Replace Order Single (short and regular layout)
 - Replace Order Multi Leg
 - Order Mass Cancellation
 - Mass Quote
 - Quote Mass Cancellation
 - Quote Activation
 - Approve TES Trade
- For Audit Trail Reporting – T7 will introduce a field for client order identification (*PartyIDClientID*) in the following messages:
 - New Order Single (short and regular layout)
 - New Order Multi Leg
 - Replace Order Single (short and regular layout)
 - Replace Order Multi Leg

- For Audit Trail Reporting – T7 will introduce a field for commodity hedging applying to commodity products (*OrderAttributeRiskReduction*) in the following messages:
 - New Order Single (short layout)
 - New Order Multi Leg

Note that the new attributes for audit trail reporting will not be included in response messages or notifications. The FIX interface will be enhanced correspondingly, provided it supports the referenced requests.

3.3.2 Selective Request for Quote Service Interface Landscape

The T7 Enhanced Trading Interface, will be enhanced to support the Selective RfQ functionality. Existing low frequency sessions for on-exchange trading can also be used for the transactions on the Selective RfQ service without any modifications. The service supports activities only via low frequency sessions.



*In addition to the multicast based solution there is also a file based solution for reference data (RDF).

The following new requests on T7 ETI will be introduced to support the Selective RfQ functionality:

- **Open Negotiation Request** (RfQ Request on the service) – the requester can use this request to send a RfQ and start the Negotiation Event workflow.
- **Update Negotiation Request** – the requester can update the Negotiation Event with this request, it can also be used by the requester to *Close* an *Open* Negotiation Event.
- **Enter Quote Request** – the respondent can use this request to provide quote in response to the RfQ (Negotiation Event), it can also be used to update or delete the quotes.
- **Hit Quote Request** (Order Request) – the requester can send an order for a specific quote side of a quote belonging to a respondent with this request.
- **Update Deal Request** – the requester and the respondents can use the request to update the deal status.

3.3.3 Entry of Leg Trade Prices for TES Trades in Complex Instruments

The following requests and broadcasts will be enhanced with an instrument leg price group containing the pair of leg instrument identifier *LegSecurityID* and leg price *LegPrice*:

- Enter TES Trade
- Modify TES Trade
- TES broadcast
- Approve TES Trade broadcast
- TES Trade Upload broadcast

The entered leg prices are communicated to the approving users via the TES broadcast. The Approve TES Trade broadcast and TES Trade Upload broadcasts will also be enhanced with leg instrument identifier and leg trade price.

The TES Trade Confirmation and TES Trade broadcast will be enhanced with this new TES deal attribute *PriceDecomposition*.

3.3.4 Support of non-persistent GTC order via both, HF and LF sessions

Non-persistent GTC orders will survive the current trading day. On the next day, these non-persistent GTC orders will become part of the T7 order book (and get restated) independent from the availability of the owning session.

This leads to a changed system behaviour for HF sessions. At the T7 system start an order book restatement will take place caused by the support of non-persistent GTC orders. There will be Extended Order Information messages for each restated order and end of the restatement messages per product (even for HF sessions not submitting/owning GTC orders).

3.4 Market Data and Reference Data Interface Changes

Detailed information on the enhancements and changes to be introduced in the T7 Market and Reference Data Interfaces with Release 6.0 will be provided in the respective interfaces documentation on the Eurex webpage.

Note that the T7 market and reference data interfaces provide no backward compatibility between releases.

3.4.1 Enhancements regarding the MiFID II Regulatory Requirements

Market Making Handling – T7 will introduce the parameter *MarketCondition* to indicate stressed market conditions via MDI, EMDI and EOBI. The following messages will be enhanced with *MarketCondition*:

- Product State Change (applies to: MDI, EMDI, EOBI)
- Instrument State Change (applies to: MDI, EMDI, EOBI)
- Depth Snapshot (applies to: MDI, EMDI)
- Mass Instrument State Change (applies to: MDI, EMDI)
- Product Summary (applies to: EOBI)
- Instrument Summary (applies to: EOBI)

The following new dedicated instrument attribute types will be introduced in the Instrument Snapshot message of RDI and RDF:

- Flag to indicate the Market Making obligation of a product (*InstrAttribType* Value: 113)
- Flag to indicate the eligibility of a product for automatically triggered stressed market conditions (*InstrAttribType* Value: 115)
- Flag to indicate illiquid products that are eligible to the corresponding deferral of regulatory post-trade transparency obligations (*InstrAttribType* Value: 112).

3.4.2 Publication of Leg Trade Prices for TES trades

With T7 Release 6.0, the Depth snapshot and Depth Incremental messages will also contain the leg trade prices based on the TES trade in a complex instrument supplementing the already provided information on leg instrument level (e.g. traded leg volume) derived from the complex instrument trade. Please note that an instrument leg trade resulting from a TES trade of a complex instrument is indicated by the field *MultiLegReportingType* (tag 442) set to 2 – “Individual Leg of a Multi Leg Security” and the field *MultiLegPriceModel* (tag 28750) provides additional information about the quality of the leg trade price. In case the leg trade prices are provided by the entering TES trader, the field *MultiLegPriceModel* is set to 1 – “User Defined” and in case the leg trade prices are derived by the exchange the field *MultiLegPriceModel* is set to 0 – “Standard”.

4. T7 Trader and Admin GUI

4.1 Enhancements regarding the MiFID II Regulatory Requirements

The T7 Trader and Admin GUI will be enhanced to support the MiFID II regulatory requirements:

- Participants Admin users will have the possibility to set the Maximum Order Value per user in the T7 Admin GUI, the changes are effective immediately.
- The entry of the *ClientID*, *Investment Decision Qualifier* and *Investment Decision Maker* will be supported in the Order Entry and Modification panels, as well as in the TES panels.
- The *Executing Trader Qualifier* and *Executing Trader* will be automatically set by the T7 GUI for order entry and modification and TES trade approval, indicating that the execution decision was taken by a natural person corresponding to the entering user.
- The Liquidity Provision Indicator will be provided in the Order Entry and Modification GUI panels, in the TES GUI panels, in the Order View and Order History View.
- The status of stressed market conditions will be shown in the views for Market and Product Statistics, indicating when stressed market conditions or Fast Market is set.

4.2 Enhancements regarding the Selective Request for Quote Service

The Eurex Trader GUI will support the functionality provided by the Selective RfQ service for both requestor (Broker) and respondent (Market Maker) and will act as the reference client implementation. The Eurex Trader GUI will efficiently streamline the process of entering a Selective RfQ service deal as a TES trade.

4.3 Enhancements regarding Leg Trade Prices for TES Trades in Complex Instruments

The TES Block Trade Entry window in the T7 Trader and Admin GUI will be enhanced to provide the price field at leg level for the TES trades in the complex instruments. The new TES Deal attribute *PriceDecomposition* is added to the T7 GUI Trade view, the TES view and to the TES Time & Sales view, in case the information is public.

5. Reports

The following new reports will be introduced with T7 6.0:

- TD954 – Stressed Market Conditions – a daily report for the fulfilment of market making requirements during Stressed Market Conditions per member and product.
- TD983 – Regulatory Market Making – a daily report for the fulfilment of the market maker requirements per business unit and product.
- TE600 – Daily Selective RfQ Service Maintenance – a daily report for the SRQS activity per business unit. The report contains all the details of the Negotiation Events and Deals per product.
- TE610 - Daily Selective RfQ Service Best Execution Summary - a daily report for the SRQS activity per business unit. The report presents the necessary data captured at the point of each deal struck in order to assist users in proof of BestEx to clients
- TR100 – Order to Trade Ratio Report – a daily report providing the Order to Trade Ratio per product. Additionally, all the parameters required to calculate the Order to Trade Ratio are also included in this report.
- TR102 – Excessive System Usage Report – a daily report containing the excessive system usage per product per limit type. All the parameters required to calculate the Excessive System Usage (ESU) Fee are included in this report. This report additionally shows the ESU Fee in Euro for the systematic violations as well as the accidental violations.
- TR160 – Identifier Mapping Error – this is a daily mapping status report per business unit. Whenever for any T7 order the mapping of short codes to long values for *ClientID* returns an error, “missing”, “not unique”, “PNAL” or “AGGR”, the respective data will be included in this error report for verification and correction by the participant.
- TR161 – Identifier Mapping Status – this is a daily mapping status report per business unit. The defined valid mappings of short codes to long values will be stored for the regulatory Audit Trail Reporting.
- TR162 – Algo HFT Error – this is a daily report per business unit. Whenever the used AlgoID for any given order is not contained at the EoD in the certificate storage for the respective member, the AlgoID data will be included in the error report for verification and correction by the participant.
- TR163 – Algo HFT Status – this is a daily report per business unit. The report contains the algo certificates that have been stored, incl.valid from date.
- TR902 – Daily Order and Quote Transactions – a daily report containing the aggregation of transactions under the definition for within the definition of Article 4(1)(40) of Directive 2014/65/EU.

There will be changes in the following existing reports:

- CB069 – Transaction Report - a new tag *Trades Count* which provides the total number of trades is introduced.
- TD980 – Excessive System Usage Report – a new tag *SMC-fulfilled* is added to the report.
- TE540 – Daily Order Maintenance – several new tags are added to the report: *Client Identifier*, *Investment Identifier*, *Investment Qualifier*, *Execution Qualifier*, *Execution Identifier*, *LiquidityProvActivity*, *Commodity Hedging Flag*, *RegOrderEvent*. *Compliance ID* is removed.
- TE545 – Daily TES Maintenance – the report is enhanced to show the leg prices in case they are entered by the initiating user. The report is also enhanced with the tags: *Client Identifier*, *Investment Identifier*, *Investment Qualifier*, *Execution Qualifier*, *Execution Identifier*, *LiquidityProvActivity*. *Compliance ID* is removed.
- TE550 – Open Order Detail – several new tags are added to the report: *Client Identifier*, *Investment Identifier*, *Investment Qualifier*, *Execution Qualifier*, *Execution Identifier*, *LiquidityProvActivity*. *Commodity Hedging Flag*.

- TE810 – T7 Daily Trade Confirmation – is enhanced to provide information whether the leg trade price of the TES trade in complex instrument was decomposed by the system, or was provided by the initiating user. A new tag *Trading Venue Transaction Identification Code (TVTIC)* is introduced.
- TE910 – Daily Trade Activity – the XML layout of the report and the sorting criteria will be changed.
- RD110 – User Profile Maintenance - tags *TES Type* and *TES Eligibility* have been moved to a separate group.
- RD115 – User Profile status - tags *TES Type* and *TES Eligibility* have been moved to a separate group and new cash market specific attributes have been added, *MaxOrderValue* will also be used in derivative markets.
- The instrument group in all TE reports has been enhanced with the cash market specific attributes.

Several existing Market Making reports will be renamed:

- TD941 – Daily Basis Building Block Liquidity Provider Quote Request Performance
- TD943 – Daily Strategy Building Block Liquidity Provider Quote Request Performance
- TD945 – MTD - Regular Market Making Quote Request Performance
- TD946 – MTD - Basis Building Block Liquidity Provider Quote Request Performance
- TD948 – MTD - Strategy Building Block Liquidity provider Quote Request Performance
- TD955 – Building Block Liquidity Provider Measurement
- TD956 – Basis Building Block Liquidity Provider
- TD957 – Package Building Block Liquidity Provider Measurement and Advanced Designated Liquidity Provisioning

Details regarding these reports, as well as all other reports based on trading data from T7 will be published in the “T7 Trading Reports Reference Manual” that will be available on the Eurex webpage.

Note that there will be changes in the structure of the T7 reports manual in comparison to previous releases. The T7 reports documentation will contain cash and derivatives reports based on trading data only and exclude reports based on clearing data. These changes are due to the integration of the cash market on T7, as clearing is not relevant for cash markets. For example, the Fee reports for Xetra will be included in the “T7 Trading Reports Reference Manual”, however the Fee reports for Eurex will not be part of the T7 report manual. Eurex participants need to refer to the clearing documentation published on the Eurex Clearing webpage: www.eurexclearing.com.

6. Change log

No	Chapter, page	Date	Change
V1.0	General	02-10-2017	Initial Version
V1.1	2.1, 2.2, 2.3, 3.3	13-10-2017	Integrated Review Comments
V1.2	2.1.4	07-11-2017	Add chapter 2.1.4