Xetra® Release 15.0

Release Description

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1 Introduction

Deutsche Börse AG is planning to introduce Xetra Release 15.0 on 1 December 2014. This release will be mandatory for the participants of all Xetra markets.

With Xetra Release 15.0, functional and technical enhancements in the areas of risk management, market model, market integrity and system stability will be introduced. The major developments and changes that will be implemented with Xetra Release 15.0 are outlined in this document.

Where the changes require amendments of the rules and regulations of the Frankfurter Wertpapierbörse (FWB®, the Frankfurt Stock Exchange), they are subject to corresponding resolutions of the FWB Exchange Council and approval by the Exchange Supervisory Authority.

The obligation of flagging algorithmic orders as part of the German High Frequency Trading Act has been in force since 1 April 2014. It has become apparent that an extension of the field "RegulatoryID is desirable. Therefore, the length of field will be extended with Xetra 15.0. Also, it will be renamed to "Compliance ID" across all interfaces, in accordance with the new FIX naming convention.

A new "Trading Risk Limits" functionality is introduced with Xetra 15.0. It offers Members a system-based risk management system allowing them to reduce their operational risks and market risks. Members will be able to define threshold values on trader subgroup level, which trigger a warning or a halt of trading of the subgroup.

Two enhancements of the trading model Continuous Trading with Auctions are planned with Xetra Release 15.0 for passive investment products traded with Designated Sponsors. The Mini Auction will enable processing of updated orders and quotes prior to a price determination and thus executions at limits close to the market. A Mini Auction is characterised by a very short call phase which is triggered as soon as there is a crossed order book and can be terminated either through the time lapse or by update of a quote by a licensed Designated Sponsor. Secondly, the Liquidity Interruption will be introduced. In instruments configured for Liquidity Interruptions an auction call phase will be triggered as soon as an executable situation occurs during Continuous Trading without having a Designated Sponsor quote available on the relevant side of the order book. The call phase can then be terminated either through time lapse or by quote entry of a licensed Designated Sponsor. A combination of Mini Auction and Liquidity Interruption in the same instrument is possible.

In Xetra 15.0 a threshold value will be introduced for the TOP order. Similar to the functionality of TOP+ orders the TOP Order will in future be accepted and added to the order book, even if orders on the same side of the order book have equal or better limits than the TOP Order. However, the volumes of these orders must be lower than a threshold value defined by Deutsche Börse. For TOP and TOP+ orders different threshold values will be configured.

The new Opt Out feature in Xetra 15.0 will allow members to decide on an order-by-order basis if they like their midpoint orders to be shown to the Block Agent totally anonymously and foster their execution probability or not to display it at all. With the introduction of the new feature all Midpoint orders which are in the Midpoint order book on 28 November 2014 after the close of trading will be deleted.

In the Order-to-Trade-Ratio Report RPTTL100 two new fields will be introduced to provide the member with the ordered and executed quantities as a total on member level.

With Xetra Release 15.0, customers who use the Xetra FIX Gateway can de-select the “Order Book Restatement” which is distributed every morning via the FIX trading session, in the Xetra Member Section. Furthermore, the FIX Client Order ID will be forwarded via the Enhanced Transaction Solution interface to the Xetra backend, which enables improved reconciliation of the FIX order portfolio.

In addition to aforementioned innovations, improvements in the Common Report Engine will be introduced and a mandatory upgrade of the Java Runtime Engine from version 1.6 to version 1.7 will be made.

With Xetra Release 15.0, support of the operating systems Windows XP and Windows 2003 Server will be discontinued. With respect to Windows XP, which has no longer been supported by Microsoft since 7 April 2014, we recommend migrating to another operating system supported by Xetra before the release change to Xetra 15.0. As of 1 December 2014, classification of Windows XP and Windows Server 2003 will change from “supported” to “possible”.

Xetra Release 15.0 will be a mandatory release without backward compatibility.

2 Functional Enhancements of Xetra Release 15.0

2.1 Flagging for Algorithmic Trading

The German High Frequency Trading Act foresees measures and procedures to regulate algorithmic trading and high frequency trading by introducing various measures (see Xetra circular 023/13). Thus with Xetra Release 14.0 a new field "Regulatory ID" was introduced to enable customers to add the necessary information to their orders, quotes, quote requests and cross requests.

Since the obligation to fill in the field since April 1st, 2014 it is in place, it became clear that with the current design it is difficult to fulfil the respective duty when having algorithms of different vendors in place.

Therefore with Xetra Release 15.0 the "Regulatory ID" will be enhanced to 8 byte and it will be renamed to "Compliance ID" in accordance with the new FIX naming convention.

The "Compliance ID" will be provided via VALUES API, Enhanced Transaction Solution interface and FIX Gateway in the requests belonging to the following areas (if applicable via the respective interface):

- Enter, Modify, Delete (Stop) Order
- Enter, Delete Quote
- Enter Mass Quote (once per mass quote)
- Enter Quote Request
- Enter Cross Request

In RPTTC540 the "Compliance ID" will be reflected accordingly.

2.2 Trading Risk Limits

The new trading risk limits functionality of Xetra 15.0 allows all Xetra members to safeguard their trading activities by defining two individual thresholds, i.e. the trading risk limits. During the business day, the trade volumes of a trader subgroup will be continuously monitored with regards to these limits. Any breach will trigger a warning message send to the member or a halt message in conjunction with halting all traders of the respective subgroup and deleting all their open orders and quotes, giving the member the possibility to rethink its trading strategy and to adapt the risk limits if necessary.

2.2.1 Maintenance of Trading Risk Limits

Two trading risk limits and a calculation method can be configured per trader subgroup and exchange.

A warning limit (synonym: trading risk limit 1) as well as a halt limit (synonym: trading risk limit 2) need to be defined whereby the warning limit has to be less than the halt limit. Both limits are defined in Euro and are then used by the Xetra system to monitor the trade volumes of the trader subgroup and if necessary to trigger the respective actions.

For the calculation method one can opt either for netted trade volume or total trade volume. While the total traded volume sums up all on-exchange trades without considering buy or sell side, the netted trade volume is calculated as the difference of buy and sell trades taking into account that the volume cannot be negative to ensure the safeguarding in both directions.

Following overview helps to distinguish between both calculation methods and its respective purpose:

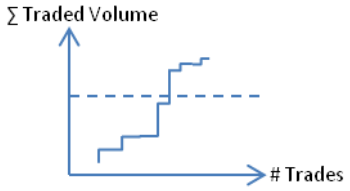
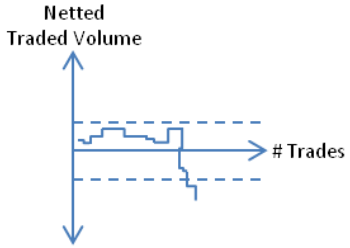
Calculation Method	Formula	Safeguarding
Total Traded Volume	∑ Qty * Price	Trader subgroup 'TRD' on market FFM 
Netted Traded Volume	|(Buy ∑ Qty * Price) – (Sell ∑ Qty * Price)| (no negative value)	Trader subgroup 'TRD' on market FFM 

Table 1: Differences between Calculation Methods

Both calculation methods (total/netted) always take all the trades related to orders or quotes of a trader subgroup at a certain exchange into account. There is no possibility to define different calculation methods for the same trader subgroup at the same exchange.

When setting up the trading risk limits for the first time they will only be activated on the next business day. Afterwards the respective threshold values can be changed intra-day (especially to reactivate a halted trader subgroup) while modifying the calculation method will be effective the next business day. Additionally, new trading risk limits can be defined for the next day while keeping the current set of thresholds still valid for actual business day.

The once defined parameters are valid as long as the member does reset them completely or not redefine anything else.

If no trading risk limits for a trader subgroup are defined the functionality is disabled for the respective traders and they can trade as usual without safeguarding.

A member can determine its parameters similar to the following example:

Calculation Method	Next Business Day	Warning Limit	Halt Limit	Trader Subgroup	Market
Total Traded Volume [X] Netted Traded Volume [ ]	[ ]	50.000	100.000	AGT	XETR
Total Traded Volume [ ] Netted Traded Volume [x]	[x]	10.000	50.000	AGT	XETR
Total Traded Volume [X] Netted Traded Volume [ ]	[ ]	50.000	100.000	TRD	XETR
Total Traded Volume [X] Netted Traded Volume [ ]	[ ]	50.000	100.000	PFS	XETR

Table 2: Set up of Trading Risk Limits Functionality

The maintenance of trading risk parameters is established via ETS interface and J-Trader GUI only.

A new resource access level is introduced allowing the respective user to maintain trading risk limits per trader subgroup.

All intra-day or next business day changes to the trading risk limits will be reflected in a new report RPTT133 'Maintain Trading Risk Limits'. The report can be selected via report selection accordingly.

2.2.2 Monitoring & Actions

Once trading risk limits for a trader subgroup are defined for an exchange, the volume of all trades, i.e. on-exchange, midpoint and Xetra BEST trades, are summed up depending on the configured calculation method, independent of the interface the respective order/quote was entered (J-Trader, VALUES, Enhanced Transaction Solution interface or FIX Gateway), the instrument , the account type, etc.

OTC trades are not considered in general nor are calculated trade volumes updated in the course of a trade reversal.

The calculation method total traded volume then sums up the volumes of all trades without considering buy or sell side. For the netted traded volume the buy and sell side are considered with different leading signs: buy volumes are taken into account as positive volumes while sell positions are reflected with a negative sign. However, in the end the resulting position is treated as an absolute value to ensure the safeguarding in both directions in terms. Trades in instruments with trading/settlement currency different than Euro are converted with the respective exchange rate and the resulting Euro amount is considered.

The main principle in the monitoring of trading risk limits is not to intervene in the matching process. Therefore the new trade volume is calculated only after an incoming order or quote is processed completely. For example, in case of an incoming order that would match three sitting orders even at different price levels, the check against the trade volume is carried out after the execution of the incoming order together with the generation of the respective trade confirmations/notifications which is done sequentially after the matching. This is also valid during auctions and Volatility Interruptions where the traded volume is newly calculated considering the complete auction result even if orders/quotes have been executed against several times during this price determination.

As soon as the calculated (total or netted) trade volume violates the configured warning limit, a warning message is sent to the member's subscribed Enhanced Transaction Solution interface and FIX sessions as well as to his MISSes. The notification includes the affected subgroup and its exceeded warning limit.

There will be no new notification if the calculated reference number falls below the warning limit again which is possible in case of netted traded volumes only.

If further trades throughout the day lead to a breach of the halt limit as well, the following will happen:

- A stop notification is transferred to the member's subscribed Enhanced Transaction Solution interface and FIX sessions as well as to the MISSes including the information which trader subgroup has breached its specific halt limit.
- All users in the trader subgroup are stopped from trading. Any attempt to enter (or modify) orders/quotes of a trader of the stopped subgroup will be rejected with a respective error message.
- All open orders/quotes of the affected trader subgroup are deleted from the order book. The deletions triggered because of this reason are declared with the specific reason code 'TRL: Deletion due to Trading Risk Limits' which will also be reflected in the respective reports for quote and order maintenance (RPTTC530, RPTTC535 and RPTTC540).
- The deletion will be done on best-effort basis, i.e. it may occur that further (incoming) order transactions cause further executions even after stopping the traders of a subgroup if a huge amount of orders are effected across different instruments and instrument sets. Particularly, in case of the netted traded volume method, it may happen that some of these 'not intended' executions decrease the volume again. As a result the trader subgroup is then stopped, all order/quotes are deleted but the trade volume is below the halt limit.

  Please note further that the deletion of orders and quotes does not take place if the instruments' state does not allow this action.

After stopping the traders in the subgroup, it is possible to release them again for trading. The member will receive again a released notification similarly to the stopped notification but this time with the information 'released'.

Basically, the member has the choice to readjust both trading risk limits. But the trader subgroups reactivation depends on the halt limit only. This has to be greater than the trader subgroup's current total/netted traded volume as no resetting takes place.

Regarding the warning limit, it depends on the new level whether the member receives a new warning message or not. As long as the limit is still below the current total/netted traded volume, a new warning message is not necessary as the member has received it already. If the new level is greater than the total/ netted traded volume, a new warning message is sent again at the stage when the member exceeds this new level again.

If the halt limit or both limits are not adapted or are still below the total/ netted traded volume even after the modification, no reactivation of the respective subgroup will take place until next business day.

The scenarios are illustrated below:

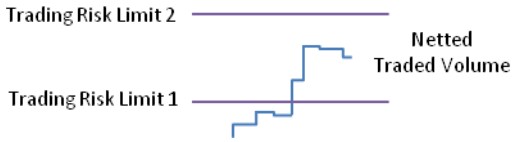
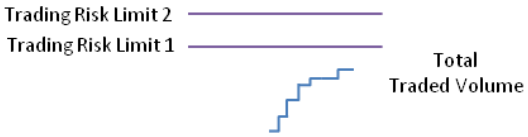
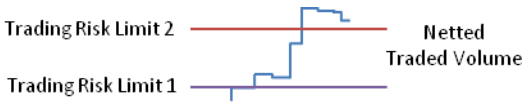
Intraday Change	Change After Stop	Result
Trading Risk Limit 2 > Netted Traded Volume > Trading Risk Limit 1		• Reactivation subgroup • No warning message
Trading Risk Limit 2 > Trading Risk Limit 1 > Total Traded Volume		• Reactivation subgroup • Warning message if exceeding limit 1
Netted Traded Volume > Trading Risk Limit 2 > Trading Risk Limit 1		• No reactivation subgroup • No warning message

Table 3: Intraday Update Trading Risk Limits After Stop

2.3 Mini Auction

The „Mini Auction“ is introduced with Xetra Release 15.0 as an enhancement in Continuous Trading with Auctions trading model and is intended to improve the price quality in passive investment products. A short call phase which is triggered as soon as an executable situation comes up, allowing the processing of updated orders and quotes prior to a price determination and thus executions at limits close to the market.

2.3.1 Basic Principles

As soon as an incoming marketable order or quote, i.e. an order or quote which is directly executable, is entered into the order book of an instrument configured for Mini Auction, a short call phase will be triggered. During this phase submissions of orders/quotes or modifications of existing orders/quotes are processed.

In case there is still a crossed order book at the end of the call phase of this Mini Auction the order book is uncrossed by performing a matching according to auction price determination rules (principle of highest executable volume). After the matching, or in case there is no crossed book anymore at the end of the Mini Auction, the trading phase is switched back to Continuous Trading.

The overall trading day (see Figure 1) for such instruments could thereby consist of a variable number of brief call auctions, triggered each after a crossed order book situation occurred. This trading concept shall be surrounded by a standard opening and closing auction (including the standard length for their respective call phase) and may be interrupted by a scheduled intraday auction.

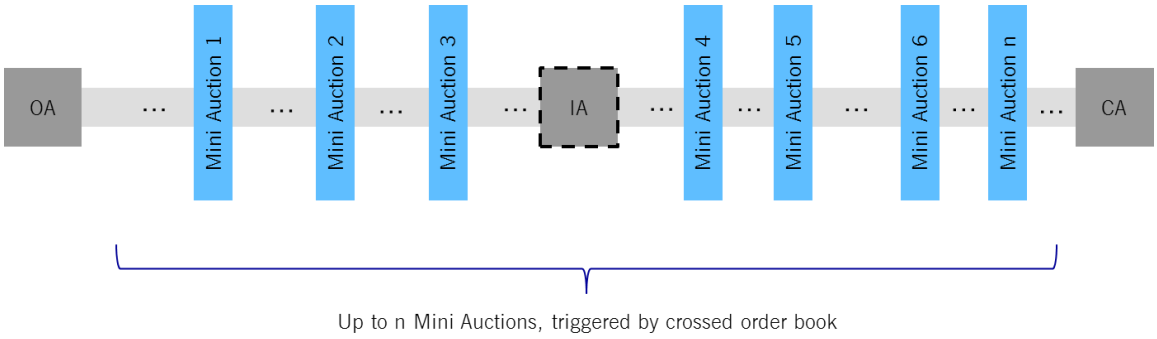


Figure 1: Potential trading day.

The end of the Mini Auction can either be reached if the scheduled duration of the Mini Auction (incl. random end) has elapsed or ahead of time immediately if a quote is received from the licensed Designated Sponsor that was the owner of the best passive quote in the book prior to the Mini Auction call.

This means, as soon as this licensed Designated Sponsor is adding a new quote, i.e. is updating his quote, the call auction is ended and the order book is uncrossed. The quote itself does not necessarily have to be executable or even executed.

In case there are several passive quotes by licensed Designated Sponsors available in the order book prior to the Mini Auction, the ‘best’ quote on the relevant side of the order book is determined according to price-time priority. Example: For an incoming marketable buy (sell) order, the quote with the best ask (bid) limit would be considered. See also examples below.

Examples:

	Vol	Bid	Ask	Vol	
	250	10.1	10.2	100	
DS	500	10.0	10.2	400	DS
	500	10.0	10.3	400	
	400	9.8	10.5	500	

Incoming Sell Market Order, Volume 500
- Continuous Trading only:
  250@10.1, 250@10.0
- Continuous Trading with Mini Auction:
  - Mini Auction triggered due to crossed book
  - Price determination after time elapsed, or
  - Price determination ahead of time if DS adds new quote.
  - Any other order book event received in the meantime is processed

Figure 2: Standard case with one DS

	Vol	Bid	Ask	Vol	
DS1	250	10.1	10.2	100	
DS2	500	10.0	10.2	400	DS2
	500	10.0	10.3	400	DS1
	400	9.8	10.5	500	

Incoming Sell Market Order, Volume 500
- Continuous Trading only:
  250@10.1, 250@10.0
- Continuous Trading with Mini Auction:
  - Mini Auction triggered due to crossed book
  - Best passive quote on relevant side by DS1
  - Quote update by DS2 is processed but does **not** terminate Mini Auction
  - Price determination after time elapsed, or
  - Price determination ahead of time if DS1 adds new quote.

Figure 3: Several DS

A quote deletion event shall not terminate the auction ahead of time. Therefore, in this situation Designated Sponsors should not send first a deletion and then a new quote.

If no quote of a licensed Designated Sponsor was in the book prior to the Mini Auction call phase, the auction can only be terminated by time.

As in the trading model Continuous Trading, Volatility Interruptions might occur. Therefore a price that is potentially determined in a Mini Auction is to be validated against the dynamic and static price range. If at the end of a Mini Auction[1] the potential price deviates too much from the static or dynamic reference price, a Volatility Interruption shall be triggered, i.e. the call phase shall be enlarged accordingly. Further processing in the Volatility Interruption is conducted the same way as in current trading model Continuous Trading with Auctions.

If during the call phase of a Mini Auction a scheduled auction is to start, the trading phase shall directly switch to the scheduled auction phase and enlarge the duration of the call accordingly.

Since matching will only be executed in auctions orders with Order Restrictions Fill-Or-Kill, Immediate-Or-Cancel, Book-Or-Cancel, TOP or TOP+ will not be supported in instruments having Mini Auctions. Iceberg orders and Hidden orders, if existing, will participate in Mini Auctions according to the same rules as they do in normal auctions. Xetra BEST is not supported in these instruments.

A combination of Mini Auction and the other market model enhancement introduced with Xetra 15.0, the Liquidity Interruption (see section 2.4), is supported.

[1] Regardless whether the end of the auction if reached due to time lapse or a quote event submitted by a licensed Designated Sponsor.

2.3.2 Market Information & Order Book Transparency

The market is informed about instruments supporting Mini Auction by a new flag within the reference data available via Enhanced Broadcast Solution interface, Common Report Engine or Internet. For more details on reference data changes please refer to the document "Xetra Instrument Reference Data Guide".

As long as no executable order is entered, the order book is open and the instrument is in Continuous Trading. Up to the defined level of order book depth, bid and ask limits are displayed with aggregated volume and number of orders.

Once a crossed order book occurs, trading phase switches to the Mini Auction call phase. Typically, transparency in auction calls is limited. The order book is closed and only indicative auction price, indicative volume and potential surplus are displayed. In case the crossed book situation does no longer exist in the call phase, best bid and ask limits as well as volumes are shown to the market.

The Mini Auction call phase will be distributed to the market as a VOLA with new indicators identifying Mini Auctions with or without potential Volatility Interruption.

A new price type will be introduced marking the prices determined in Mini Auctions in the respective All Trade Price broadcasts. Prices determined in Mini Auctions will update the Last Trade Price but not the Last Auction Price.

2.4 Liquidity Interruption

For passive investment products in Continuous Trading model with a licensed Designated Sponsor another enhancement will be introduced to maintain price quality and to limit unintended price movements. The new Liquidity Interruption feature is triggered anytime an executable situation comes up with no Designated Sponsor quote in the book. Continuous matching will then be interrupted and a call phase is triggered to provide the opportunity to market participants, and in particular to Designated Sponsors, to replenish liquidity by refreshing orders or quotes. By this the incoming marketable order will not cause such a strong price movement and may potentially receive better prices.

2.4.1 Basic Principles

In instruments configured for Liquidity Interruption, Continuous Trading will be interrupted as soon as an executable order book situation arises without having a quote of a licensed Designated Sponsor on the relevant order book side, regardless of the price level.

So, if an executable order or quote is entered into the order book it is checked if a quote of a licensed Designated Sponsor is somewhere on the opposite side of the order book. If yes, the incoming order/quote is executed against the sitting (passive) orders/quotes in Continuous Trading according to price-visibility-time priority.

If no quote of a licensed Designated Sponsor exists in the book or as soon as the last part of the last quote of a licensed Designated Sponsor was already executed against the incoming marketable order and an additional execution would lead to a new Last Trade Price, the Liquidity Interruption is triggered. I.e. the pre-conditions for a Liquidity Interruption are not only checked when the marketable order enters the book but will also be evaluated throughout the processing of an executable order. The complete decision scenario is depicted in Figure 4.

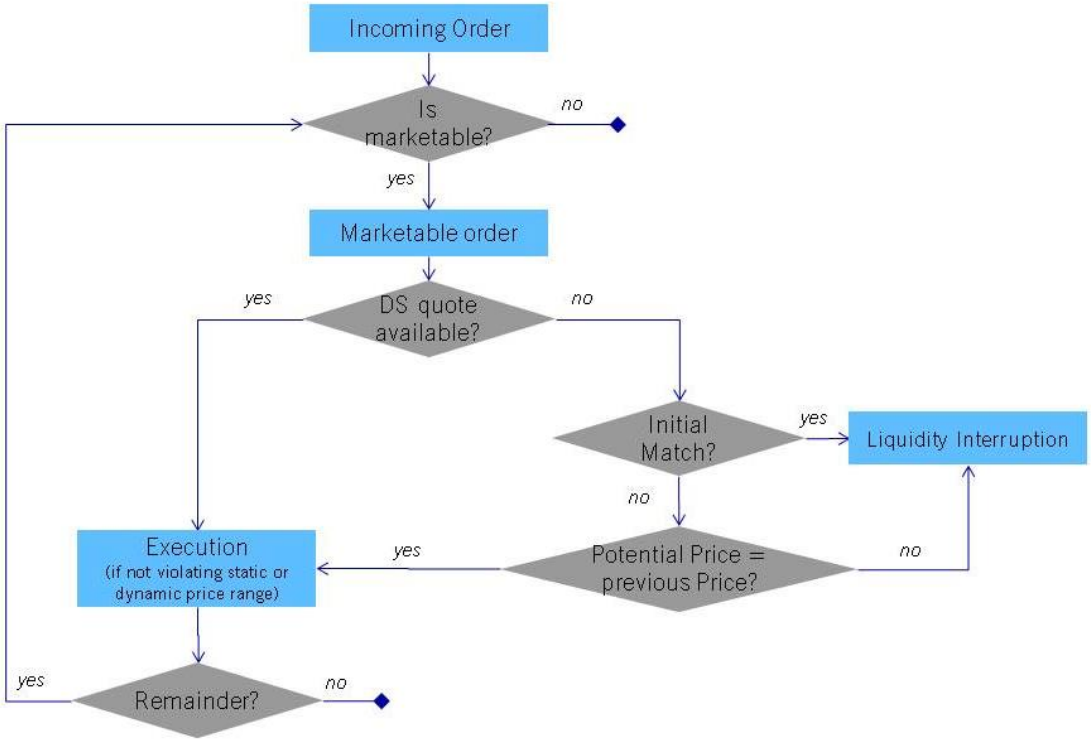


Figure 4: Evaluation Process

The triggered Liquidity Interruption will be ended either if the scheduled duration (incl. random end) elapsed, or as soon as a new quote of a licensed Designated Sponsor for the relevant order book side is submitted. In both cases the auction price determination is initiated and takes place according to the principle of highest executable volume. The instrument afterwards switches back to Continuous Trading.

If during the call phase of a Liquidity Interruption a scheduled auction is to start, the trading phase shall directly switch to the scheduled auction phase and enlarge the duration of the call accordingly.

As in the trading model Continuous Trading, Volatility Interruptions might occur. Therefore a price that is potentially determined in a Liquidity Interruption is to be validated against the dynamic and static price range. If at the end of the Liquidity Interruption call phase[2] the potential price deviates too much from the static or dynamic reference price, a Volatility Interruption shall be triggered, i.e. the call phase shall be enlarged accordingly. Further processing in the Volatility Interruption is conducted the same way as in current trading model Continuous Trading with Auctions.Orders Restrictions Book-Or-Cancel, TOP and TOP+ are further supported in instruments traded with Liquidity Interruptions but those orders, according to their nature, are deleted as soon as the call phase of the Liquidity Interruption is triggered.

Parts of an Immediate-Or-Cancel (IOC) order which are executable without triggering a Liquidity Interruption will be executed immediately. If at least a part of an IOC order would cause a Liquidity Interruption this part is deleted while the rest is executed.

[2] Regardless whether the end of the auction if reached due to time lapse or a quote event submitted by a licensed Designated Sponsor.

Fill-Or-Kill (FOK) orders need a special handling regarding the Liquidity Interruption. Only if the complete FOK order passes the decision tree in Figure 4 without triggering a Liquidity Interruption, then the order is accepted and gets executed. Otherwise the FOK order is rejected and no Liquidity Interruption is triggered.

Iceberg orders and Hidden orders, if existing, will participate in Liquidity Interruptions according to the same rules as they do in normal auctions. Xetra BEST is not supported in these instruments.

A combination of Liquidity Interruption and the other enhancement of Continuous Trading, the Mini Auction (see section 2.3), is supported.

2.4.2 Market Information & Order Book Transparency

The market is informed about instruments supporting Liquidity Interruption by a new flag within the reference data available via Enhanced Broadcast Solution interface, Common Report Engine or Internet. For more details on reference data changes please refer to the document “Xetra Instrument Reference Data Guide”.

During Continuous Trading in the respective instruments the order book is open but within the Liquidity Interruption, standard auction transparency will be applied. I.e., the book is closed and only market imbalance information is distributed, i.e. indicative auction price, indicative volume and surplus. If no indicative auction price can be calculated, best bid and ask are displayed.

The Liquidity Interruption call phase will be distributed to the market as a VOLA with new indicators identifying Liquidity Interruptions with or without potential Volatility Interruption.

A new price type will be introduced marking the prices determined in Liquidity Interruptions in the respective all trade price broadcasts. Prices determined in Liquidity Interruption will update the Last Trade Price but not the Last Auction Price.

2.5 TOP Order Enhancement

With Xetra 15.0 the behaviour of the TOP order will be changed. Similar to the TOP+ order a threshold value will be defined for TOP orders. I.e. also TOP orders will be accepted if the volume of orders on the same side of the book having equal or better limit than the TOP order is below the defined threshold. Otherwise the TOP order is rejected.

The TOP order is still rejected if it is executable immediately and it will still be deleted as soon as an auction call phase is triggered.

Entry of TOP orders is only supported in the Enhanced Transaction Solution interface, this is not changed as well.

The threshold for TOP and TOP+ orders will be configured differently.

2.6 Opt-Out for Midpoint Orders

In Midpoint trading a new feature will be introduced with Xetra Release 15.0, the Opt-Out functionality. With this new feature Xetra members can choose on an order-by-order basis if they want to show the respective Midpoint order to block agents connected to the Xetra Midpoint book totally anonymously and foster their execution probability or if they want to neglect this opportunity.

To support this function a new trading restriction “Opt-Out” (OO) is introduced. It can be used via all interfaces, i.e. VALUES, Enhanced Transaction Solution interface and FIX Gateway as well as the J-Trader GUI.

The new trading restriction will only be available for entering Midpoint orders. It will not be possible to modify Midpoint orders in the book to have the new trading restriction or to reset the trading restriction accordingly.

Due to the introduction of the new Opt-Out functionality it becomes necessary to delete all Midpoint orders existing in the Midpoint book at the end of the business day 28 November 2014. The exchange will take care that all orders are deleted.

2.7 Order-to-Trade-Ratio Report Enhancements

With Xetra 15.0 the Order-to-Trade-Ratio (OTR) Report RPTTL100 will be enhanced.

The already existing field "OTR MTD" will be extended from two digit decimal place to four in order to give the members a more granular figure.

Furthermore, there will be two new fields, which are the sum of the "Total Trader OTR Order Quantity" per ISIN ("SUM OTR Order Qty") and the sum of the "Total Trader Executed Order Quantity" per ISIN, ("SUM OTR Executed Qty"). These two new fields provide the member with the ordered and executed quantities as a total on ISIN level. Previously these quantities were only provided per trader in an ISIN.

3 Continuation of the Xetra Interface Strategy

Besides the functional changes to the whole Xetra system described above and their effect on the customer interfaces, some technical changes and interface extensions are planned with Xetra 15.0 to further support the interface strategy of Deutsche Börse as announced in September 2010.

3.1 Enhanced Transaction Solution Interface

The major changes to the Enhanced Transaction Solution interface done in addition to the impact from the functional changes outlined above are described in this section. Further changes and more details on all the enhancements can be found in the document "Enhanced Transaction Solution – Interface Specification Modification Announcement".

3.1.1 FIX Client Order ID

A new field for the FIX Client Order ID ("fixClOrdId") is introduced to improve the reconciliation of the FIX order portfolio. The field is optional and should only be used by the FIX Gateway when sending transactions related to the following message flows on the Enhanced Transaction Solution interface:

- (User) Enter Order
- (User) Modify Order
- (User) Delete Order
- (User) Retransmission
- (Foreign Event) Delete Order or Quote
- (Foreign Event) Modify Order
- (Match Event) Order
- (Persistent Order Event) Member Level
- (User) Inquire Order or Quote
- (User) Inquire Single Order

3.2 FIX Gateway

In the following chapters the major changes and enhancements to the Xetra FIX Gateway done in addition to the impact from the functional changes outlined above can be found. More details can be taken from the document "Xetra FIX Gateway - FIX 4.2 and 4.4 Modification Announcement".

3.2.1 Configurable FIX Order Book Restatement

The Order Book Restatement functionality for the transmission of all active orders of the business day can be deactivated by the members via Xetra Member Section for a FIX Trading session.

3.2.2 "Unknown Order State" for pending Order Transactions

If the Xetra backend response to a New Order Single, Order Cancel Replace Request or Order Cancel Request is missing within a certain time a FIX response will be generated in FIX Gateway itself.

The response will be a "pending" Execution Report with ExecRestatementReason (378) = 100 (Unknown Order State). This message will indicate that the member needs to check the status of the respective order.

No rejection message will be send out anymore at the end of the day for pending transactions where the FIX Gateway did not receive an answer from the Xetra backend.

3.2.3 ClOrdID in Drop-Copy messages

Orders will contain the field ClOrdID (11) in Execution Reports for Drop Copy messages delivered via back office session if the related order was entered or modified via FIX Gateway after the launch of Xetra 15.0.

3.3 Enhanced Broadcast Solution Interface

The most important changes to the Enhanced Broadcast Solution interface in addition to the impact from the functional changes outlined above are described in this chapter. Further changes and more details on all the enhancements can be found in the document "Enhanced Broadcast Solution – Interface Specification Modification Announcement".

3.3.1 Packet Header

TID will be changed to 33.

3.3.2 Instrument Reference Data

The Issuer Mnemonic ("xetraIssrMnem") is added to the instrument reference data for bonds.

For more details on reference data changes please refer to the document "Xetra Instrument Reference Data Guide".

3.4 Xetra Market Data Interface

The most important changes to the Xetra Market Data Interface in addition to the impact from the functional changes outlined above are described in this chapter. More details can be found in the document "Xetra Market Data Interface – Interface Specification Modification Announcement".

3.4.1 Packet Header

Packet header message TID is increased to 37.

3.5 Common Report Engine

With Xetra Release 15.0 all reports will be transferred to the Common Report Engine (CRE) as zipped files. This will allow faster transfer of reports to the CRE and is the basis for versioning which planned to be introduced shortly after the launch of Xetra 15.0. Members will be informed as soon as possible in separate circulars.

4 Technical Implications

Xetra Release 15.0 will be a mandatory release without backward compatibility.

Please be aware that all Members have to install the (update) kits on their existing and new MISS servers or workstations. By means of these kits, the Xetra Release 15.0 software with the latest version of the Xetra J-Trader GUI will be installed.

A mandatory upgrade of the Java Runtime Environment from version 1.6 to version 1.7 will be made.

For Xetra Release 15.0, installation of GATE 3.5 is required, as has been for Xetra Release 14.0.

Furthermore will the support of the operating systems Windows XP and Windows 2003 Server be discontinued. With respect to Windows XP, which has no longer been supported by Microsoft since 7 April 2014, we recommend migrating to another operating system supported by Xetra before the release change to Xetra 15.0. As of 1 December 2014, classification of Windows XP and Windows Server 2003 will change from “supported” to “possible”.

Existing own or third-party applications using VALUES API, Enhanced Transaction Solution interface, FIX Gateway, Enhanced Broadcast Solution interface or Xetra Market Data Interface have to be adjusted.