

## **Xetra® Release 9.1**

### **Release Description**

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## Table of Contents

|          |   |          |
|----------|---|----------|
| <b>1</b> | <b>Introduction</b>                               | <b>3</b> |
| <b>2</b> | <b>Midpoint Order</b>                             | <b>4</b> |
| 2.1      | Order Processing                                  | 4        |
| 2.1.1    | Order Entry                                       | 4        |
| 2.1.2    | Order Modification                                | 5        |
| 2.1.3    | Order Deletion                                    | 5        |
| 2.2      | Matching Rules                                    | 5        |
| 2.3      | Data Dissemination                                | 6        |
| 2.4      | Midpoint Orders and Mistrades                     | 6        |
| <b>3</b> | <b>Multi Currency Trading</b>                     | <b>7</b> |
| <b>4</b> | <b>Xetra Frankfurt-2 Enhancements</b>             | <b>8</b> |
| 4.1      | CCP Connectivity                                  | 8        |
| 4.2      | Enhanced Data Distribution via CEF                | 8        |
| 4.3      | XQS Enhancement for new instrument types          | 8        |
| <b>5</b> | <b>Introduction of Funds on Xetra Frankfurt 2</b> | <b>9</b> |
| 5.1      | Products and Segmentation                         | 9        |
| 5.2      | Fundamental Principles of the Market Model        | 9        |

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## 1 Introduction

This document describes improvements and developments which will be implemented in Xetra Release 9.1. The Release Description is focused on the scope for the members of the Frankfurt Stock Exchange and is written for Xetra project coordinators, system administrators and trading department personnel. It provides an outline of the new functionality and technical changes. The production start for this release is planned for November 24, 2008.

Xetra Release 9.1 is characterized by the introduction of the "Midpoint Order". The Midpoint Order is a new order type for the electronic trading system Xetra which is completely hidden and thus not disclosed to the market. This order type offers the possibility of order executions at the midpoint of the Xetra best bid/ best ask spread. Since a Midpoint Order interacts only with other Midpoint Orders Xetra becomes a dark pool crossing network which allows order executions without any market impact at actual market prices.

Apart from the Midpoint Order furthermore enhancements are made to facilitate the introduction of additional products on Xetra Frankfurt 2 including the capability of various currencies, CCP connectivity and an enhanced data distribution via CEF.

As a first step of introducing additional products roughly 3,100 funds are planned to be moved from XONTRO to Xetra Frankfurt 2 shortly after the production launch of Xetra Release 9.1.

Xetra Release 9.1 is a mandatory release and not backwards compatible. Please be reminded that members will be required to install the "new" Xetra 9.1 Release with the help of the installation kits that will be provided to the members. The new release will include the updated files for Xetra Release 9.1, including the VALUES API enhancements and the latest version of the Xetra J-Trader GUI. Furthermore, existing in-house and third-party applications have to be adjusted where necessary.

As for Xetra Release 9.0, installation of GATE 3.5 is required for Xetra Release 9.1.

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## 2 Midpoint Order

The Midpoint Order is a new Xetra order type. Different to all the existing Xetra order types, the Midpoint Order is completely hidden concerning pre-trade information, i.e. neither limit nor volume of midpoint orders is disclosed to the market. Midpoint Orders only interact with other Midpoint Orders but not with orders of the Xetra open order book.

This order type facilitates execution of orders on Xetra without any market impact at actual market prices, i.e. all executions will take place at the midpoint of the Xetra best bid/best ask spread. In case of execution the corresponding price, quantity and timestamp of the match event as well as the daily accumulated traded volume and the accumulated number of trades in that instrument will be disseminated separately.

### 2.1 Order Processing

Midpoint Orders are available for continuous trading model instruments only. They can be entered, modified or deleted by members.

#### 2.1.1 Order Entry

A Midpoint Order can be entered with or without a limit. They are always executed at midpoint price which is either equal or better than the specified limit price respectively without a limit at midpoint price.

The validity of Midpoint Orders can be determined by means of further constraints:

- Good-for-day: Order only valid for the current exchange trading day.
- Good-till-date: Order only valid until a specified date (up to a max. of 90 days from the date of entry).
- Good-till-cancelled: Order only valid until it is either executed or deleted by the originator or the system on reaching its maximum validity of 90 days.

Furthermore it will be possible to enhance Midpoint Orders by the following execution conditions:

- An immediate-or-cancel order (IOC Order) is an order, which is executed immediately and fully or as fully as possible. Non-executed parts of an IOC order are deleted.
- A fill-or-kill order (FOK Order) is an order, which is executed immediately and fully or not at all. If immediate and full execution is not possible, the order is deleted.

Trading restrictions (e.g. opening auction only or closing auction only) are not available.

Midpoint Orders are not considered in Xetra BEST. Thus, Xetra BEST offers only a price improvement against the Xetra open order book and not against available Midpoint Orders.

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### **2.1.2 Order Modification**

The modification of a Midpoint Order will be supported.

An order modification leads to a new time priority if either the limit is changed or the order modification has a negative impact on the priority of the execution of other Midpoint Orders in the order book (e.g. increase of the volume of an existing Midpoint Order). If the volume of an existing Midpoint Order should be decreased, the current valid time priority will remain.

If a Midpoint Order is partially executed the time stamp remains unchanged.

### **2.1.3 Order Deletion**

The deletion of a Midpoint Order will be supported.

A senior trader is allowed to delete Midpoint Orders of the traders of his subgroup. A trader can only delete his own Midpoint Orders.

After the Midpoint Order is deleted the trader receives a deletion confirmation message.

## **2.2 Matching Rules**

Midpoint Orders interact only with other Midpoint Orders and do not interact with other orders in the Xetra open order book.

The Midpoint Order is only valid in continuous trading. No execution of Midpoint Orders will take place during Auctions.

Midpoint Orders can be entered with or without a limit. Nevertheless, the limit serves only as a boundary and shows only up (down) to which midpoint price the respective buy (sell) order shall be executed. All buy orders with a limit exceeding or equal to the current midpoint and all sell orders with a limit below or equal to the current midpoint are considered for execution.

Matching always takes place at the midpoint of the Xetra best bid/best ask spread and will be rounded to the third decimal place if necessary.

If two or more Midpoint Orders compete for execution, the following volume/time priority rule applies:

1. Prioritization of the largest order.
2. If two or more Midpoint Orders have the same order volume, the Midpoint Order of those with the oldest time stamp has priority.

To assure the quality of Midpoint Order executions, matching of Midpoint Orders is only carried out if an execution at the midpoint of the Xetra best bid/best ask spread would not result in a volatility interruption. Midpoint Orders themselves do not trigger volatility interruptions.

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### 2.3 Data Dissemination

Data dissemination provides the market with all the relevant information concerning trades, which have been generated in Xetra. In case of execution the corresponding price, quantity and timestamp of the match event as well as the daily's accumulated traded volume and the accumulated number of trades in that instrument will be disseminated.

This information will be distributed for Midpoint trades as well. However Midpoint trades will not update fields in the inside market that are updated in case of normal order book executions (e.g. Last Trade Price). Instead, a new trade type for Midpoint trades will be introduced. For this trade type additional fields will be implemented in the inside market (as it is for Xetra BEST) which will be updated in case of Midpoint Order executions (e.g. Last Midpoint Trade Price).

Furthermore, the process will be similar to Xetra BEST (e.g. a midpoint execution will not lead to an updated reference price and will not trigger stop orders).

### 2.4 Midpoint Orders and Mistrades

If the matching of two Midpoint Orders is the result of a previous mistrade in the Xetra open order book (e.g. which triggers a stop order cascade) the respective Midpoint Order executions will be cancelled as well.

The mistrade process will be handled as usual, i.e. Market Supervision will decide manually if the respective trade was a mistrade.

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### 3 Multi Currency Trading

With the production launch of Xetra Release 9.1 on November 24, 2008, trading and settlement in foreign currencies, i.e. currencies different from the exchange currency (EURO), will technically be possible on Xetra Frankfurt and Xetra Frankfurt 2.

In a first step the following currencies will be supported: Swiss Franc, U.S. Dollar, Pound Sterling, Canadian Dollar, Japanese Yen, Australian Dollar and Swedish Krona (in addition to EURO, which will remain, of course).

In general the settlement process for transactions in foreign currencies will be the same as for transactions in EURO except to the cash settlement accounts. Products in foreign currencies will be settled in Commercial Bank Money contrary to products in EURO, settled in Central Bank Money. Since settlement will always be in the trading currency, it is assumed that clients have CBF foreign cash accounts hosted by CREATION for commercial bank money ("6-series accounts") depending on their trading activity.

CCP-eligible products (e.g. stocks, ETF) are processed via the CCP system. The process for non-EURO instruments is supported for the whole clearing and settlement process chain since CCP Release 4.0.

For Non-CCP-eligible products (e.g. structured products) in EURO or any of the currencies listed above, settlement can then be done via LION. CBF will include LION trades in the reservation and cash settlement process valid for CASCADE OTC transactions against payment of foreign currencies.

With this enhancement, Xetra will be prepared to trade new products in the supported currencies in a later step in 2009.

The production introduction of instruments in a currency different to EURO will be communicated to all members in due time to prepare member readiness activities.

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## **4 Xetra Frankfurt-2 Enhancements**

### **4.1 CCP Connectivity**

Currently CCP is connected to Xetra Frankfurt (XETR) and Frankfurt Floor (XFRA) for cash market business.

With the production launch of Xetra Release 9.0 on April 28, 2008, a new Xetra back-end, Xetra Frankfurt 2 (FRA-2) was introduced. Starting with this date, structured products (certificates, warrants and reverse convertibles) have become tradable on this back-end.

In order to launch additional instruments on Xetra Frankfurt 2 to be cleared via CCP, the Xetra Frankfurt 2 system will be connected to the CCP system with the introduction of Xetra Release 9.1.

### **4.2 Enhanced Data Distribution via CEF**

With the introduction of Xetra Release 9.1 it is intended that a selection of instruments which are traded on Frankfurt Floor (XONTRO) shall be traded on Xetra Frankfurt 2 back-end. To assure the dissemination of market data for these instruments an enhanced data distribution via Consolidated Exchange Feed (CEF) will be implemented.

In general, CEF will be able to publish market data for the new products in Xetra Frankfurt 2. Besides pre trade and post trade information as well as state change messages, CEF will be prepared to deal with quotes and market depth messages. The changes affect CEF internal processing and the connection between XQS and Xetra on the one side and CEF on the other.

### **4.3 XQS Enhancement for new instrument types**

As described for CEF (cp. 4.2) XQS system will be enhanced to send quotes for new instrument types (e.g. mutual funds) via XQS to CEF.

Technically seen, quotes for funds must be sent over a separate IP connection to XQS. Within XQS quotes for mutual funds will be processed separately from the quotes for SCOACH instruments. Software changes for sender API are not planned.

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## 5 Introduction of Funds on Xetra Frankfurt 2

With Xetra Release 9.1 the technical and functional capability is set to introduce further products on the new trading platform Xetra Frankfurt 2. As of December 1, 2008, Deutsche Börse AG is planning to introduce mutual funds trading in the “Continuous Auction with Specialist” trading model on Xetra Frankfurt 2.

### 5.1 Products and Segmentation

#### Product Offering

About 3,100 open-ended mutual funds (Publikumsfonds) will initially be traded in the “Continuous Auction with Specialist” trading model. All of these funds are included in Deutsche Börse AG’s Regulated Unofficial Market (Open Market). ETFs listed in the Regulated Market are not part of this offering.

#### Product Segmentation

The mutual funds offering is segmented on basis of the funds’ investment focus and initially features the following segmentation:

- Equity funds exclusively or predominantly investing in German or West European securities
- Equity funds predominantly investing in non-European or East European securities, or in special industry sectors or special strategies
- Fixed-income funds
- Money market funds
- Real estate investment funds
- Mixed funds and
- Other funds

### 5.2 Fundamental Principles of the Market Model

The following fundamental principles for mutual funds trading were determined when designing the market model:

#### General

1. Trading takes place in the “Continuous Auction with Specialist” trading model.
  2. There is exactly one Specialist per instrument.
  3. Order routing is possible via Xetra VALUES API and XONTRO system connection (SAKI). The trading venue Frankfurt (EDF) will be used for order routing via SAKI.
  4. The accounting cut-off is performed daily after the post-trading phase.
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## Orders

1. All order sizes can be traded which have a determined minimum lot size for the specific security. The specific lot size may be one.
2. The order is valid for a maximum of 90 calendar days (including the current day) from the date of entry.
3. Market orders, limit orders, stop limit orders and stop market orders are supported.
4. Order types can be specified further by entering additional validity constraints (good-for-day, good-till-date und good-till-cancelled). Execution constraints (i.e. FOK and IOC) and trading restrictions (e.g. opening auction only, closing auction only) are not allowed in the "Continuous Auction with Specialist" trading model.
5. Specialists may enter orders on their own behalf and on behalf of other trading participants (in those instruments assigned to them).
6. Stop orders can be triggered by the Specialist quote.

## Quotes

1. Quotes can only be entered by Specialists. Three different types of Specialist quotes are supported:
  - standard quotes,
  - matching quotes, which are used to terminate a freeze phase and
  - price without turnover quotes (pwt quotes), which are used to determine a price without turnover.
2. Specialists are obliged to enter standard quotes which have to fulfill minimum requirements defined by Deutsche Börse AG.

## Transparency

1. Pre-trading starts at 7.30 a.m., post-trading ends at 8.30 p.m. The main trading phase is between 9.00 a.m. and 8.00 p.m.
  2. Trading is anonymous, i.e. market participants cannot identify which market participant entered an order pre-execution. Only the Specialist is able to identify the originator of an order.
  3. During the pre-trading phase, the order book is partially closed for participants. Only the Specialist quotes are displayed to the market (not via the trading system but via CEF (Consolidated Exchange Feed of Deutsche Börse AG) and connected data vendor platforms).
  4. During the main trading phase, the order book is partially closed for participants (independently of the auction phase), i.e. only the Specialist quote is displayed.
  5. During the main trading phase, the Specialist provides quotes to the market. Specialist quotes can be modified or deleted (this only applies to standard quotes). Specialist quotes may have a volume of equal to or greater than zero, must be double-sided and must have a limit on the bid side of greater than zero. The limit on the ask side must be equal to or higher than the limit on the bid side.
  6. The (matching) quote is deleted after price determination.
  7. During post-trading phase, the order book is closed for market participants.
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### Price Determination

1. Trading hours are from 9.00 a.m. to 8.00 p.m.
2. Prices are determined only within or at the Specialist (matching) quote, in line with the modified principle of highest execution volume.
3. If there are several possible limits with the same surplus on the bid and the ask side, or if there is no surplus on hand, the midpoint of the possible prices is taken into account as an additional criterion.
4. Orders in the order book are executed according to price/time priority.
5. There is always exactly one price per instrument for a dedicated point of time.

Further details regarding the launch of funds trading on the Xetra Frankfurt 2 back-end will be published in corresponding documents at a later point in time.

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