T7 Release 8.0 Börse Frankfurt

Participant Simulation Guide

Version   1.1

Abstract

This document describes the timeline and focus days for the T7 Release 8.0 Börse Frankfurt simulation. Trading participants should use this document to plan and prepare their T7 Release 8.0 Börse Frankfurt simulation participation. This document should be read alongside the **T7 RELEASE 8.0 RELEASE NOTES**, all required technical interface descriptions, the **Börse Frankfurt SIMULATION CALENDAR** and the regularly updated **IMPLEMENTATION NEWS** on:

www.xetra.com > Technology > Implementation News

www.xetra.com > Trading > Trading calendar and trading hours

Keywords

T7 Enhanced Trading Interface, T7 Enhanced Market Data Interface, T7 Enhanced Order Book Interface, T7 Extended Market Data Service, T7 Reference Data Interface, T7 FIX Gateway, Common Report Engine, T7 Trader GUI, T7 Admin GUI, T7 Clearer GUI, T7 Trade Entry Services

7 Market Technology

Today's global markets demand new standards of flexibility and performance. 7 Market Technology series from Deutsche Börse Group offers a range of innovations in trading, clearing, risk management and connectivity – advanced infrastructure that lets you adapt to whatever the future brings.

Table of Contents

1. Definitions and Abbreviations

Term	Explanation
BF	Börse Frankfurt
BFZ	Börse Frankfurt Zertifikate
CCP	Central Counter Party
CRE	Common Report Engine
DBAG	Deutsche Börse AG
EOBI	T7 Enhanced Order Book Interface
ETI	T7 Enhanced Trading Interface
FIX	Financial Information eXchange protocol
FWB	Frankfurter Wertpapierbörse
GUI	Graphical User Interface
ISV	Independent Software Vendor
MDI	T7 Market Data Interface (netted)
RDI	Reference Data Interface
RDF	Reference Data File
TES	T7 Entry Services
T7	T7 trading system developed by Deutsche Börse Group

2. Börse Frankfurt Simulation Overview

2.1 Introduction

The purpose of the "T7 Release 8.0 Börse Frankfurt "PRE-PRODUCTION EXECUTION GUIDE" document was to introduce participants and ISVs to the Börse Frankfurt-specific functionality. The pre-production environment provided the possibility to test in a production-like environment with a full set of instruments. The pre-production environment will become the actual production environment with the launch of T7 Börse Frankfurt on 9th March. This simulation guide is intended for use with the permanent Börse Frankfurt simulation environment.

The key objectives of the T7 Release 8.0 Börse Frankfurt permanent simulation are as follows:

- Provide high quality information to support participant and ISV readiness.
- Familiarize participants with the T7 trading services functionality and particularly the special attributes of the Börse Frankfurt market.

The start of the simulation period of T7 Börse Frankfurt is planned **from 17 February 2020**.

In addition to the Börse Frankfurt T7 Release 8.0 simulation, Deutsche Börse AG offers a T7 Release 8.0 Cloud Simulation to allow trading participants and ISVs to test against the T7 Börse Frankfurt production and simulation software. Participants can initiate predefined market scenarios and test specific strategies more easily in the Cloud Simulation than in a shared environment. The Cloud Simultion is available around the clock for a fixed price per hour and started on 9 August 2019.

Please note that there will be one common simulation guide for all Cash and Derivatives Markets from the next Release, which is T7 Release 8.1 scheduled for simulation from 4 May 2020.

2.2 Further Information

Please note and be aware of the following T7 Börse Frankfurt Release 8.0 simulation condition:

The T7 Börse Frankfurt Release simulation is a shared simulation environment with the purpose of providing participants the opportunity to test functional enhancements for the forthcoming T7 Börse Frankfurt Release 8.0. Following a release, the environment will be available with the current software for further testing of all T7 related functionality. The T7 simulation is not designed for very extensive or even performance testing. Participants who would like to test scenarios involving an unusually large amount of order and quote transactions and/or trades shall contact their TKAM. The TKAM will ask for the purpose of the test and a detailed description of the participants test scenario (including number of expected orders, quotes and trades). The TKAM together with the participant will evaluate the request and attempt to find a solution which can realistically be provided together with a potential date and time for the execution.

At the start of the Börse Frankfurt Simulation on 17 February 2020, the current member and user set up (including service providers and ISVs) for Börse Frankfurt simulation environment including their entitlements will be copied from the existing Börse Frankfurt simulation trading system. For this purpose the member and user data from the existing Börse Frankfurt simulation as of 30 January will be used.

2.3   Intended audience

This document serves as the guide for all simulation participants, i.e. current and future users of the T7 system. In particular, the following participants will be involved in the simulation :

- Exchange trading participants
- ISVs (Front, Middle and Back office)

2.4   Timeline

Deutsche Börse AG is planning to launch Börse Frankfurt T7 Release 8.0 of T7 on 9 March 2020.

The following timeline gives an overview of the introduction schedule:

T7 8.0 Pre-Production Execution	28 October 2019 – 28 February 2020
T7 8.0 Börse Frankfurt Simulation Start	17 February 2020
T7 8.0 Börse Frankfurt Production Migration	1 March 2020 - 8 March 2020
T7 8.0 Börse Frankfurt Production Launch	9 March 2020

Please Note: The procedures up to the production introduction of T7 Release 8.0 for Börse Frankfurt are described in the T7 Release 8.0 Börse Frankfurt Pre-Production Execution Guide which can be found on the Xetra webpage under:

<u>www.xetra.com</u> > Technology > T7 Trading architecture > System documentation > Release 8.0
> Pre-Production Börse Frankfurt

2.5   T7 Cloud Simulation

In addition to T7's Release simulation participants can also use the T7 Cloud simulation which allows trading participants and ISVs to test against the current T7 production and simulation software version. In this environment participants can initiate predefined market scenarios and test specific strategies more easily than in a shared environment. The T7 Cloud Simulation is available 24/7 for a fixed price per hour and is accessible using an SSL-encrypted internet connection.

For more information on the T7 Cloud Simulation please refer to:

<u>www.xetra.com</u> > Technology > T7 Trading Architecture -> Cloud Simulation

2.6   Simulation Calendar

The Simulation Calendar for T7 Börse Frankfurt is available under the following path:

<u>www. xetra.com</u> > Trading > Trading calendar and trading hours

2.6.1 Guiding principles for the Simulation Calendar

- The simulation will be set up and run from both a functional and technical perspective as production-like as possible to help simulate business processes under realistic conditions. In order to provide a production-like system environment, the different T7 components will be set up as an integrated simulation environment. Nevertheless, system availability and technical performance will be scaled to simulation requirements and will differ from production.
- The T7 Börse Frankfurt Release 8.0 simulation is planned to start on **17 February 2020.** All functional and technical preparations should be completed before the start of the simulation.
- On batch days, calendar days correspond to actual business days. The following days until the next batch day have the business date of this forthcoming batch day. Here several calendar days (with 24 hours trading availability) constitute one business day.
- Weekends are generally open for simulation, but no technical and functional support will be available.

2.7 Liquidity for selected products in the simulation environment

The instrument scope available in T7 Börse Frankfurt simulation is reduced compared to production. The assignment to a specialist will be according to production setup for most of these instruments.

2.7.1 Supported Instruments

Cash Market Operations will be able to enter matching Quotes via the MS Control GUI to generate trades on participant request. For following instruments a DBAG member will be the Specialist (and Issuer) during simulation:

Supported Instruments:
- DE0001142693
- DE0001102408
- DE0001104743
- XS0205545840
- XS0553728709
- SE0002829192
- AU000000AUZ8
- CA25260V1031
- USY384721251
- AT00000VIE62

DE0007018509

DE000A1E8G88

AU0000XCLWV6

DE000A1Z3XR4

DE000A0MS7D8

DE0005152375

DE000DZ42N68

DE000DGE1WG2

DE000TR18QN0

DE000VF1D5N7

XS2028085731

DE000HVB3LY4

DE000GT6SC28

XS2029617979

DE000SG06BX1

DE000CU42B50

DE000CP51988

AT0000A22PL4

DE000VL3TBC7

DE000VA5MY28

DE000HY3X0E1

DE000PZ8BEX6

2.7.2   Liquidity provision for Börse Frankfurt Simulation

Liquidity is provided for a selection of instruments by DBAG.

The list of all instruments also including the test scenario instruments can be found on the Xetra website under the following path:

3. Reports

3.1 Report Distribution

T7 report distribution for simulation is done exclusively via the Common Report Engine. All trading reports will be available as of 03 March 2020 Details can be found in the document COMMON REPORT ENGINE USER GUIDE and the XML REPORTS – REFERENCE MANUAL with the accompanying MODIFICATION NOTES.

Please note: Börse Frankfurt simulation report filenames start with '62'.

The following reports will be available during simulation:

- Specialist-Performance Reports

Report	Frequency	Format	File Name (Example)
PR001	daily	TXT	62RPTPR001MEMID20190710XFRAT7.TXT.ZIP
PR002	daily	TXT	62RPTPR002MEMID20190710XFRAT7.TXT.ZIP
PR003	daily	TXT	62RPTPR003MEMID20190710XFRAT7.TXT.ZIP
PR004	daily	TXT	62RPTPR004MEMID20190710XFRAT7.TXT.ZIP
PR005	monthly	TXT	62RPTPR005MEMID20190710XFRAT7.TXT.ZIP
PR006	daily	TXT	62RPTPR006MEMID20190710XFRAT7.TXT.ZIP
PR007	daily	TXT	62RPTPR007MEMID20190710XFRAT7.TXT.ZIP
PR008	weekly	TXT	62RPTPR008MEMID20190710XFRAT7.TXT.ZIP

- RTS24 Short-/long code & Algo Reports

Report	Frequency	Format	File Name (Example)
TR160	daily	XML	62RPTTR160MEMID20190613XFRAT7.XML.ZIP
TR161	daily	XML	62RPTTR161MEMID20190613XFRAT7.XML.ZIP
TR162	daily	XML	62RPTTR162MEMID20190613XFRAT7.XML.ZIP
TR163	daily	XML	62RPTTR163MEMID20190613XFRAT7.XML.ZIP

- OTR Reports

Report	Frequency	Format	File Name (Example)
TR101	daily	XML +TXT	62RPTTR101MEMID20190710XFRAT7.TXT.ZIP

Further Trading Reports (same filename description as above) available as of 03rd March 2020.

Trading RDS Reports

RD110

RD115

RD130

RD135

Order and Quote Maintenance

TC230

TC540

TC545

TC550

TC600

TC610

TC810

TC812

TC910

Trading Volumes And Performance

TD930

TD965

Trading Regulatory

TR901

Entitlement and Security

TT133

TT135

For more information please refer to the **XML REPORTS REFERENCE MANUAL** on:

www.xetra.com > Technology > T7 Trading architecture > System documentation > Release 8.0 > Reports

3.2 Reference Data Files

During simulation participants will receive the Instrument Reference Data either as a Reference Data File via the Common Report Engine (CRE) and by accessing the Cash Market Member Section or via the Reference Data Interface (RDI).

On the Common Report Engine the Reference Data Files (T7 RDF) will be available for all simulation business days via the existing CRE simulation destination 62 for Börse Frankfurt. They are generated one time per day and created during each Start-Of-Day. The following file names should serve as an example:

Static Files (common for BF and BFZ)

62FILRDF02PUBLI20190506XFRA.ZIP

RDF listing all instruments (XML) + All Tradeable Instruments File listing all instruments (CSV)

62FILRDF01PUBLI20190506XFRA6CMHD000.XML.ZIP

62FILRDF01PUBLI20190506XFRA6CMHD000.CSV.ZIP

RDF listing only instruments of Börse Frankfurt (XML) + All Tradeable Instruments File listing only instruments of Börse Frankfurt (CSV)

62FILRDF03PUBLI20190506XFRA6CMHD000.XML.ZIP

62FILRDF03PUBLI20190506XFRA6CMHD000.CSV.ZIP

RDF listing only instruments of BFZ (XML)+ All Tradeable Instruments File listing only instruments of BFZ (CSV)

62FILRDF04PUBLI20190506XFRA6CMHD000.XML.ZIP

62FILRDF04PUBLI20190506XFRA6CMHD000.CSV.ZIP

RDF listing only instruments of BFZ assigned to Specialist BALFR (XML) +All Tradeable Instruments File listing only instruments of BFZ assigned to Specialist BALFR (CSV)

62FILRDF05PUBLI20190506XFRA6CMHD000.XML.ZIP

62FILRDF05PUBLI20190506XFRA6CMHD000.CSV.ZIP

RDF listing only instruments of BFZ assigned to Specialist ICFFR (XML) +All Tradeable Instruments File listing only instruments of BFZ assigned to Specialist ICFFR (CSV)

62FILRDF06PUBLI20190506XFRA6CMHD000.XML.ZIP

62FILRDF06PUBLI20190506XFRA6CMHD000.CSV.ZIP

Reference Data Files available in the Cash Market Member Section:

In the Cash Market Member Section the Reference Data Files (T7 RDF) will be available for all simulation business days on the path:

www.xetra.com > Member Section > Cash Market Member Section > Cash Market Resources > Instruments > T7 Börse Frankfurt

Static Files (common for BF and BFZ)

62FILRDF02PUBLI20190506XFRA.ZIP

RDF listing all instruments

62FILRDF01PUBLI20190506XFRA6CMHD000.XML_ZIP

RDF listing only instruments of Börse Frankfurt

62FILRDF03PUBLI20190506XFRA6CMHD000.XML_ZIP

RDF listing only instruments of BFZ

62FILRDF04PUBLI20190506XFRA6CMHD000.XML_ZIP

Reference Data Interface (T7 RDI)

The Reference Data Interface provides reference data for products and instruments that are available for trading on T7.

3.3   Upload of RTS24 Short- / long code and Algo certificates

Upload via the Cash Market Member Section:

In the "Client Identification Upload" mask the participant selects the market "XFRA" and the environment "Simulation". After uploading, these files will be processed for the CRE XFRA simulation destination (62).

Upload via the SFTP server:

The participant selects the simulation IP address of the SFTP clifent (via Internet: 194.36.239.242 Port 24, via Leased Lines 193.29.90.72 or 193.29.90.104 Port 2242).

The files are uploaded to the Cash_Market_XETR_XFRA folder.

Using the MIC code in the name of the files, DBAG can distinguish the files for XETR from XFRA (for example, RTS2420191028XFRAMEMID…csv_zip

After uploading, these files will be processed here for the CRE XFRA simulation destination (62). The "Response/Error Files" contain the T7 indicator in their name

(e.g. 62RPTTR161MEMID20191028XFRAT7.TXT).

4.   Focus Day and Test Scenarios – Overview

In the overview below, all focus days offered during the simulation are listed and described. These chapters outline which focus days will be offered and the general concept of these. The exact dates for the focus days are displayed in the simulation calendar available on the website:

www.xetra.com > Trading > Trading calendar and trading hours

Focus days are planned and triggered by the Exchange. Specific actions must be done by the Exchange to enable the scenario of the focus days. Focus days can be of a technical nature (e.g. system failure), or of a functional nature (e.g. corporate action). In either case participants cannot test without the Exchange taking action first.

Recommended test scenarios on the other hand can be done by the participants without any initiating action by the Exchange. Participants can run through these scenarios at their own discretion. These scenarios usually highlight new or changed features of the current release and participants are highly advised to perform these scenarios and verify their procedures and software used to be fit for these scenarios.

Technical Focus Days : triggered by DBAG:
- Matching Engine Failover and Failure, EOBI Failure
- FIX Gateway Failover
- Market Data Services Failure
- GUI (forced user log out)

Functional Focus Days: triggered by DBAG:
- Special Auction (On request only)
- Corporate Actions
- Market Halt (On request only)
- Trading Halt on Product level (On request only)
- Instrument Stop (On request only)
- Instrument Suspend (On request only)
- Trade Reversals (On request only)

Recommended Test Scenarios:
- Locked Stock
- Non-CCP eligible Instruments

Please note: The simulation Focus Days in simulation are planned for the period after the production launch in March 2020. All focus days offered during pre-production were announced in advance via the "PRE-PRODUCTION EXECUTION GUIDE" in October 2019.

4.1 Technical Focus Days – Triggered by DBAG

Technical focus days will be offered on several occasions during the simulation and will be triggered by DBAG. Participants should use this opportunity to test the behaviour of the T7 trading and market data interfaces in conjunction with their own front office applications as well as their orderbook- and session management systems.

4.1.1 Matching Engine Failover and Failure, EOBI Failure

The T7 Börse Frankfurt simulation system runs on separate partitions. Every process in the partition has a standby partner process that can take over in case the primary process fails. During simulation, a failover and a failure of a matching engine will be simulated.

Matching Engine Failover

As a precondition, specialists are advised to enter standard quotes in the simulation environment before the matching engine failover takes place.

In this test scenario, the existing matcher processes in the partition will be terminated and the standby partner process will take over. Shortly after the takeover, participants will receive a 'Market Reset Event' message, stating the technical problem and including the message key which is the last reproducible order message.

Because of the failover, the products from the failed partition will still be tradable. A Market Reset Event message will be triggered. Standard quotes which were inserted earlier will be deleted after the restore of the order book.

Afterwards an order book replay will be sent. Participants with low frequency sessions (via ETI or FIX) will receive an extra end of replay message on product level.

The Matching Engine failover triggers automatically an EOBI failover.

Matching Engine Failure

For the execution of a matching engine failure both matcher processes will be crashed for a partition in simulation. The test case will have an impact on all products available on this partition in permanent simulation. As long as the partition is not available, i.e. not restarted by the exchange, participants will neither be able to receive public market data for products linked to that partition, nor will they be able to enter orders.

A Market Reset Event message will be sent out to participants, when the matching engine has been restarted. Additionally the market data service will still be available but will send only unchanged data to participants.

The Matching Engine failure triggers automatically an EOBI failure as well.

T7 Enhanced Order Book Interface (EOBI) Failure

Prior to the focus day, participants should check whether they are able to receive market data from the T7 Enhanced Order Book Interface (EOBI), i.e. they should try to send orders on any instrument belonging to the respective partition. Public market data information from T7 EOBI will be provided in packages/UDP datagrams marked with a MarketSegmentID, i.e., product identifier; PartitionID; ApplSeqNum (continuous numbering format); Packages are sent over redundant multicast address and port combinations. Each package is uniquely identified by its MarketSegmentID and ApplSeqNum combination. In addition to the packet sequence numbering, individual messages are sequenced by MsgSeqNum, which is contiguous per MarketSegmentID.

In case of an EOBI Failure, both the ApplSeqNum and the MsgSeqNum for a specific MarketSegmentID will restart from 1.

An EOBI Failure is triggered by a matching engine failure. Participant applications should notice this, whenever an ApplSeqNum is received which is smaller than one which has already been received for a specific MarketSegmentID and multicast address:port combination. Whenever a participant application detects a restart of the MsgSeqNum as well, it must rebuild all order books for this MarketSegmentID again from the T7 EOBI snapshot channel.

All standard quotes entered prior to the failover will be deleted. The receiving application needs to invalidate its view of the order book and refresh once an explicit message has been received containing new information.

4.1.2   FIX Gateway Failover

In case of a FIX Gateway Application Failover, all FIX sessions connected to this FIX Gateway will be disconnected and the corresponding port will be closed.

Participants should then activate the connection to the secondary FIX Gateway. The first FIX session logon to the secondary FIX Gateway may take some seconds. So if a conection or a session logon fails or is not responded to immediately, a second attempt should only be made after a few seconds (30 seconds recommended).

Schedule: Update/Input for IPs needed

- 15:00 CEST: Application Failover FIX Gateway

    IP address: 90.152.253.197 becomes unavailable

- 15:15 CEST: Restart of FIX Gateway

    IP address: 90.152.253.197 available again

- 15:30 CEST: Application Failover FIX Gateway

    IP address: 90.153.253.198 becomes unavailable

- 15:45 CEST: Restart of FIX Gateway

    IP address: 90.153.253.198 available again

These tests are recommended for all T7 participants (Members/Vendors) using the T7 FIX Interface.

In the event of a FIX Gateway failure, active FIX sessions will be disconnected. FIX sessions may be resumed for the same SenderCompID (49) on the secondary FIX Gateway, using the secondary IP address and port number.

Recovery notes:

In the event that the disconnection was due to an outage on the FIX Gateway side, members should consider the following recovery mechanisms:

- After reconnection of the FIX session, the FIX Gateway may receive a sequence number higher than the one expected and sends a Resend Request (2) message to the member.
- The member should resend all potentially missing messages with PossDupFlag (43) ="Y", to indicate that a message may have been previously transmitted with the same MsgSeqNum (34).
- Please note: No Gap Fill messages should be sent by the member during the resend series for application messages. Application messages should always be re-transmitted since the T7 FIX Gateway requires all missing application messages for reconciliation with T7 Exchange's T7 trading system fall-back.
- If a participant sends Gap Fill messages during the resend series for application messages the related orders might not be accessible any more via the FIX Gateway and related order specific information will not be forwarded to the FIX session.

4.1.3   Market Data Services Failure

Prior to the focus day participants should check whether they receive market data from T7, i.e. they should try to send some orders on products which are available in permanent simulation. Market data information will be provided in packages marked with a SenderCompID; PartitionID; PacketSeqNum (continuous numbering format); the MessageSeqNum (continuous per SenderCompID multicast address and port combination) and a MarketSegmentID. The SenderCompID always remains constant for a product during the whole business day, if there is no failover.

When the market data failure is initiated by DBAG, a crash will be simulated within the partition for market data services. During this time participants can try to insert new orders and quotes for that product. As a result, they will receive a message that the associated partition is not available. As long as the partition is not available, i.e. not restarted by the exchange, participants will neither be able to receive market data for products linked to that partition, nor be able to enter orders. In this test scenario, all partitions in simulation will be affected and therefore the test will refer to all products, which are available at that time in the permanent simulation.

Participants can identify this failover scenario by comparing the SenderCompID value with the previous value. A new SenderCompID, which is available in the packet header and in each data message for incremental and snapshots, indicates the partition failure. Additionally, the PacketSeqNum will be reset to 1.

Once this condition is observed, it can be assumed that a fail-over scenario took place and the rebuild of the order book can be started. All standard quotes entered prior to the failover will be deleted. The receiving application needs to invalidate its view of the order book until an explicit message has been received containing new information.

4.1.4   GUI (forced user log out)

The GUI Focus Day scenario is provided primarily to make participants aware of a function within T7 whereby in an emergency/exceptional situation T7 Operations can not only send messages directly to the users screen but also force the termination of the GUI itself. In addition, the focus day is also provided to make participants aware of the effects of a full GUI environment restart. The GUI (forced user log out) focus day will be sub-divided into three parts:

- Send Admin Message only

- Admin Message + Forced Trader GUI Shutdown

- Full GUI environment restart

Send Admin Message only

All GUI instances (both Admin and Trading) logged in at the point when the focus day is initiated will receive a message "T7 Focus Day: Focus day "GUI (forced user log out)" started". This message will appear in a new popup window.

This window can be closed by pressing the Confirm button.

Admin Message + Forced Trader GUI Shutdown

After this first message the following message will be send 10 minutes prior to the GUI environment shutdown: "T7 GUI Focus Day: Automatic GUI shutdown has been triggered and the GUI environment will be restarted". On the Trader and Admin GUI the following pop-up windows will be

displayed:

The colour of this popup window will turn to yellow 15 seconds prior to the forced shutdown and turns red for the last 5 seconds.

Full GUI environment restart

Following a full restart of the GUI environment in simulation will be performed. On the scheduled focus day, participants will be encouraged to suspend orders so that the effect on suspended orders caused by a GUI restart can be observed. Suspended orders will all be deleted, the rest of the order book will be unchanged after a restart.

4.2   Functional Focus Days – Triggered by DBAG

Functional focus days will be offered on several occasions during the simulation and will be triggered by DBAG. Participants should use this opportunity to test the behaviour of new and older functional features.

4.2.1   Corporate Actions

Simulation Business Day 1:

DBAG maintains the Cum-Indicator, Ex date and the dividend amount of the instruments.

Simulation Business Day 2:

The Cum-Indicator is set and visible for participants. The participants should now have open orders in POSTR. These orders will be deleted during the following batch run. Furthermore, the deletion messages including the order deletion reasons will be sent.

Simulation Business Day 3 (Ex-day):

The participants see the Ex indicator and the reference price is reduced accordingly by the dividend amount.

Instruments used:

DE0005936124

DE000A2AAA75

The exact dates and products of the Corporate Actions scenario are displayed in the current simulation calendar available on Exchange's website.

4.2.2   Special Auction (*On Request Only*)

To support participants during their testing of the trading restriction "Special Auction (SA)", DBAG will initiate the special auction for the following instruments on request:

DE0001030542

DE0001030567

DE0001102309

DE0001102325

DE0001102341

DE0001102366

DE0001102382

DE0001102408

DE0001102424

DE0001102440

DE0001102465

DE0001102481

DE0001135176

DE0001102374

DE0001104768

DE0001134922

DE0001135069

DE0001135143

DE0001135226

DE0001135325

4.2.3   Market Halt (On Request Only)

As a possibility to reflect a market halt in T7, DBAG offers to schedule the simulation of the market halt scenario on request.

Test scenario and expected result:

Prior to the planned Market Halt participants are recommended to enter orders and quotes in any products in the affected market. As a result of the market halt, products will not be tradable between the given times. In this scenario all standard quotes will be deleted after the market reset and Specialists must re-enter those quotes. Orders will stay in the system.

4.2.4   Trading Halt on Product level (*On Request Only*)

As a possibility to reflect a product halt in T7, DBAG offers to schedule the simulation of the product halt scenario on request.

Test scenario and expected result:

Prior to the planned Product Halt participants are recommended to enter orders and quotes in the affected products. With the transition of the trading phase to HALT, this product will not be tradable between the given times in T7. In this scenario, all standard quotes will be deleted after the market reset and specialists must re-enter them. Orders for the affected product will stay in the system.

4.2.5   Instrument Stop (*On Request Only)*

As a possibility to reflect an instrument stop in T7, DBAG offers to schedule the simulation of the Instrument Stop scenario on request.

Test scenario and expected result:

Prior to the planned Instrument Stop, participants are recommended to enter orders and quotes in the affected products. With the transition of the trading phase to STOP, this instrument will not be tradable between the given times in T7. In this scenario, all standard quotes will be deleted after the market reset and Specialists must re-enter them. Orders for the affected product will stay in the system.

4.2.6   Instrument Suspend (On request Only)

As a possibility to reflect an Instrument Suspend in T7, DBAG offers the simulation of the following focus day on request.

DBAG will suspend single instruments and if requested also all instruments, which share the suspended instruments as underlying.

Test scenario and expected result:

Prior to the planned Instrument Suspend participants are recommended to enter orders and quotes in the affected instrument. As a result this instrument will not be tradable between the given times in T7. In this scenario all orders and all quotes will be deleted after the market reset and participants must re-enter them.

4.2.7   Trade Reversals (*On request Only*)

As a possibility to reflect trade reversals in T7, DBAG offers the simulation of trade reversals on request. Participants can contact DBAG, name the trade side (buy or sell), ISIN or short code, MemberID and TraderID and the time of trade and have the trade reversed.

4.3   Recommended Test Scenarios

4.3.1   Locked Stock

Locked Stock refers to the condition when the order book is frozen by the Specialist for a price

determination. During Freeze, all order transactions that can impact the potential execution price/quantity, will be kept "Pending" in Locked Stock. After unfreeze, the processing of these order transactions will be performed (if applicable). As the T7 approach for Locked Stock differs slightly from the current Börse Frankfurt system, participants are recommended to test the functionality intensively during simulation.

All relevant scenarios, which can occur in connection with order add, modify, and delete messages on Locked Stock, as well as basic information about order notifications created per action before, during and after Freeze, are listed in the document **FUNCTIONAL REFERENCE** ,chapter 3.2.5.1, available on the following path:

www.xetra.com > Technology > System documentation > Release 8.0 > Overview and Functionality

4.3.2   Non-CCP trading

With T7 Release 8.0, it will be possible to perform CCP and non-CCP trading in one market. Each instrument is flagged by the exchange whether it is CCP eligible or not. The information is available in the reference data interface (T7 Xetra, T7 Börse Frankfurt) and in the Reference Data File (T7 Xetra, T7 Börse Frankfurt) and in the All Tradeable Instruments File (T7 Xetra, T7 Börse Frankfurt).

It is recommended to test in non-CCP instruments during simulation as of 03 March, 2020.

5.   Communication & Support

5.1   Contacts and support hours

The standard support times of the Exchange will be in effect during the simulation phase. The helpdesk departments and further information sources are provided in the following section.

The following helpdesks provide first level support for specific topics from Monday till Friday:

5.1.1   Key Account Managers and Global KAMs

Phone: individual number to your Group Client Key Account Manager   (09:00 - 18:00 CET)
- Participants readiness activities
- Participant preparation requirements
- Participant setup questions for simulation and production
- Participant data changes for simulation and production
- ISV related queries

5.1.2   Functional Helpdesk Börse Frankfurt

Phone: +49-69-211-1 10 50   (09:00 – 20:00 CET)
- Functional trading related issues
- Functional focus days
- Product data management
- Market Control
- Simulation participation and execution

5.1.3   Helpdesk Clearing Data Control

Phone: +49-69-211-1 24 53   (08:00 - 20:00 CET)
- Clearing functionality
- Entitlement Management
- Participant- and user data management

5.1.4   Technical Key Account Management

Phone: individual VIP number   (Monday 01:00 CET – Friday 22:00 CET business days)

- All Technical issues related to the simulation environment (e.g. connectivity issues)
- Technical focus days

5.2   Further sources of information

Changes and further information regarding the T7 simulation will be provided via the following channels:

- Circulars
- Readiness Newsflashes
- Implementation News on the Xetra website for T7 under following path:

  www.xetra.com > Technology > Implementation News