

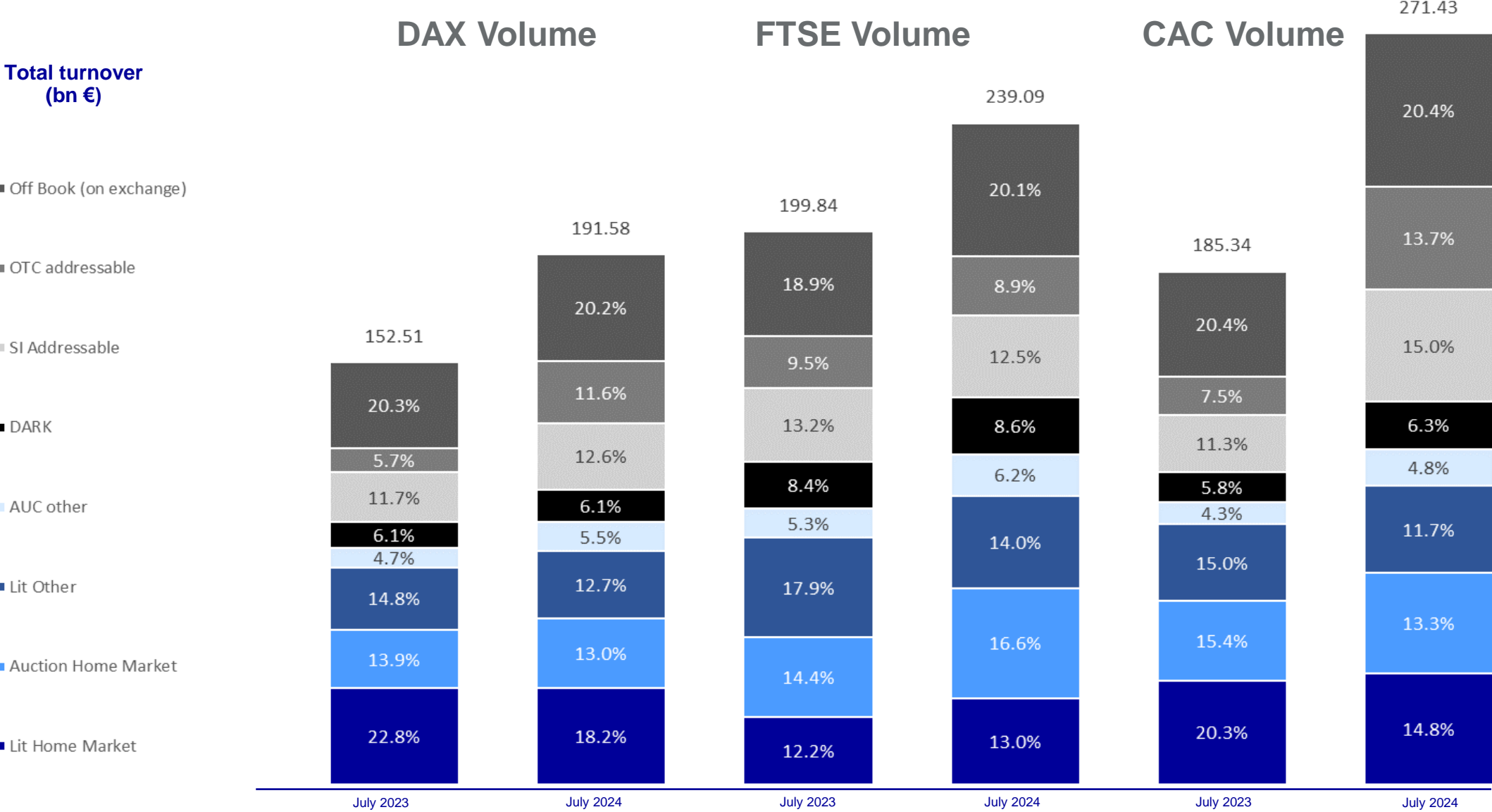
Xetra Midpoint

Dark Pool integrated in Reference Market

27/09/24

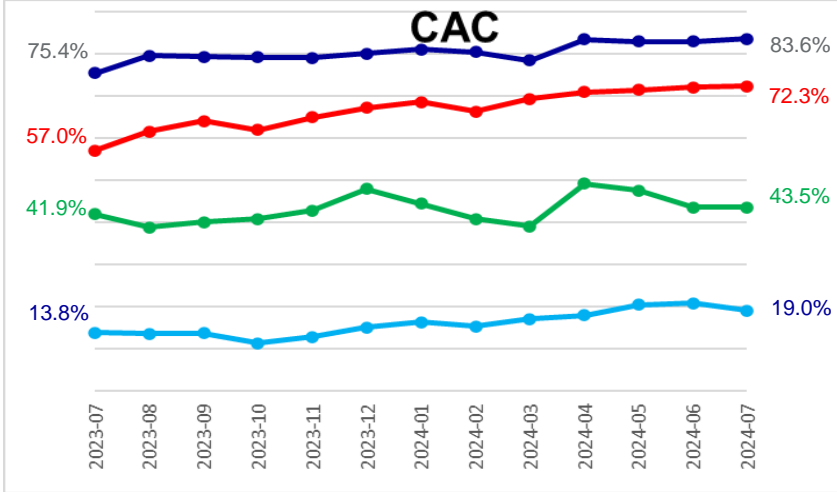
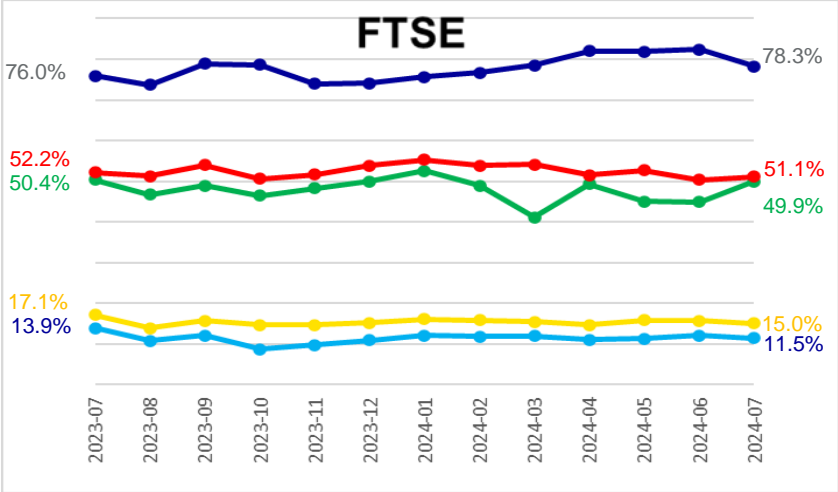
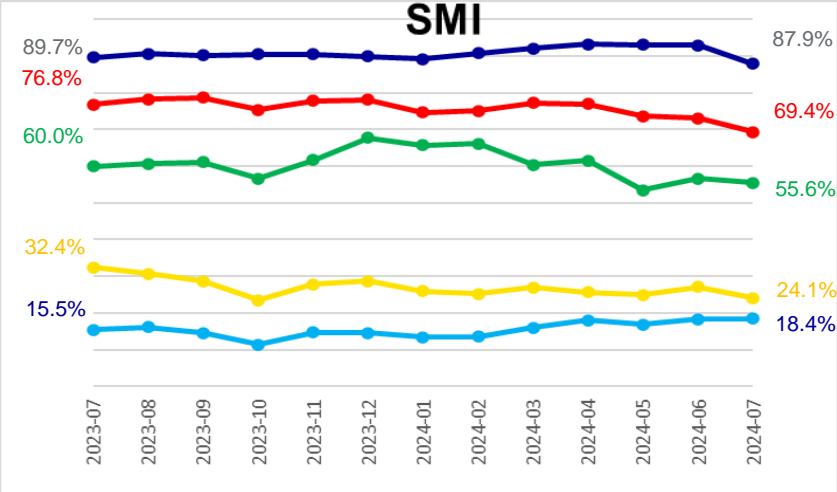
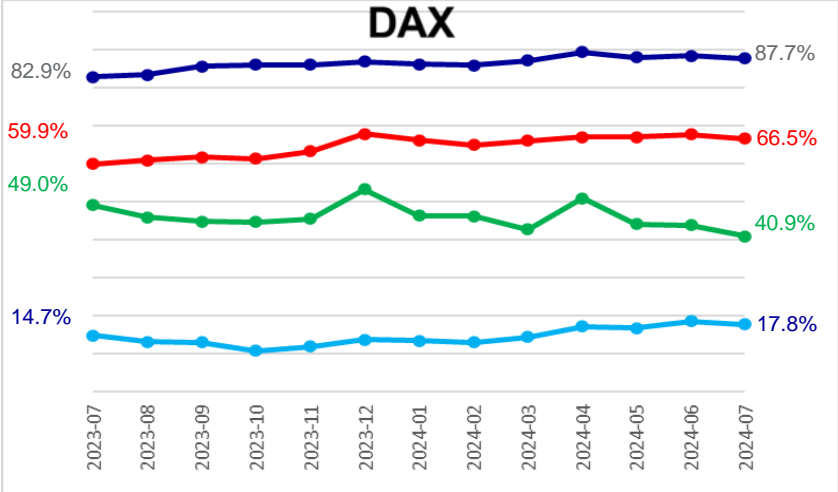
Market Environment and Strategic Rationale

European Indices and Fragmentation



* Data provided by big xyt

Likelihood to obtain best execution price for 10kEUR Order in European Indices



■ Home Market: DAX=Xetra, CAC=Euronext, FTSE=London, SMI=SIX
 ■ Turquoise
 ■ Cboe BXE
 ■ Cboe CXE/Cboe
 ■ Aquis

*Data provided by big xyt – Figures provided are the average of the latest calendar month

Functional Overview and Value Proposition

Xetra Midpoint: Dark pool integrated in global reference market for German equities

Maximize Liquidity

Xetra Midpoint enables participants to seamlessly trade selected equities and ETFs in the dark order book, pegging orders to Midpoint and executing Dark-Lit Sweep to Xetra CLOB with zero latency.

Matching Logic

Execution maximization based on volume-time priority. Protect your orders with MAQ (minimum acceptable quantity).

Price Improvement

Profit from significant price improvement by saving half the spread compared to aggressive CLOB orders.

Confidentiality and Speed

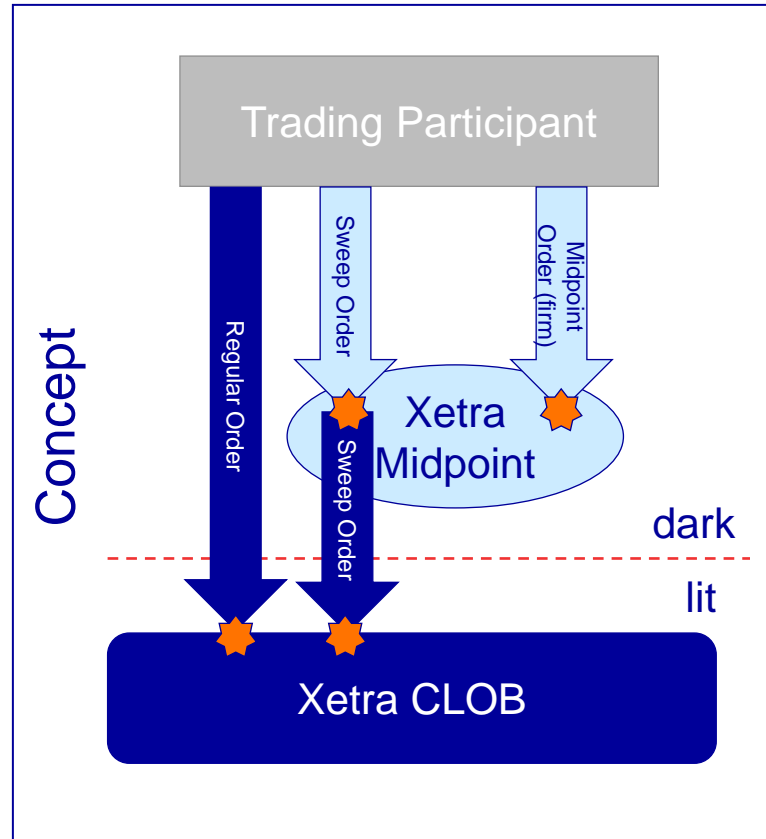
With no pre-trade transparency, safeguard your intentions while enjoying zero latency connectivity to the reference market Xetra.

Efficient Reporting

Benefit from Separate Reporting MIC Codes and segment MICs under operating MIC XETR, ensuring streamlined reporting processes under MiFIR Reference Price Waiver*.

Advanced Order Options

Benefit from order limits, Immediate or Cancel (IOC), Fill or Kill (FOK) functionalities, empowering you with flexible trading strategies.



XETRA

Midpoint at a glance

- Integrated midpoint solution in the heart of price discovery
- Simplify trading with a single order accessing two liquidity pools, boosting operational efficiency for clients.
- Unlock enhanced matching opportunities at more favorable prices, maximizing trading outcomes.
- Pricing: Midpoint orders: 0.3bps
Sweep orders: Standard pricing (details on slide 4)

Be part of Xetra Midpoint as of **25 November 2024**

Member Simulation available

ETI Short Layout support starting in SIMU on October 1st

Midpoint Orders vs Midpoint Sweep Orders

Midpoint Orders

- Will be inserted into the midpoint order book only
- Any remaining quantity is saved in the midpoint order book
- Safeguard: Self-Cross Prevention
In case of a cross (SMP ID), sitting midpoint orders will be cancelled
- MAQ definition possible
Automatic adaption to remaining order quantity when MAQ exceeds remaining order quantity
- IOC / FOK available
- Order limits available (not restricted to ESMA tick size)

Midpoint Sweep Orders

- Will first be tried for execution in the midpoint order book once
- Any remainder is forwarded to the CLOB and treated like a regular order with the possible restrictions provided
- No safeguard in midpoint trading. SMP definitions apply in the CLOB
- All execution conditions and order restrictions available, only apply in CLOB
- MAQ definition not possible
- Modifications apply to the CLOB only

Midpoint Orders and Midpoint Sweep Orders must also be MiFID II compliant and the MiFID II validations will also be performed for these orders.

Midpoint Matching Algorithm

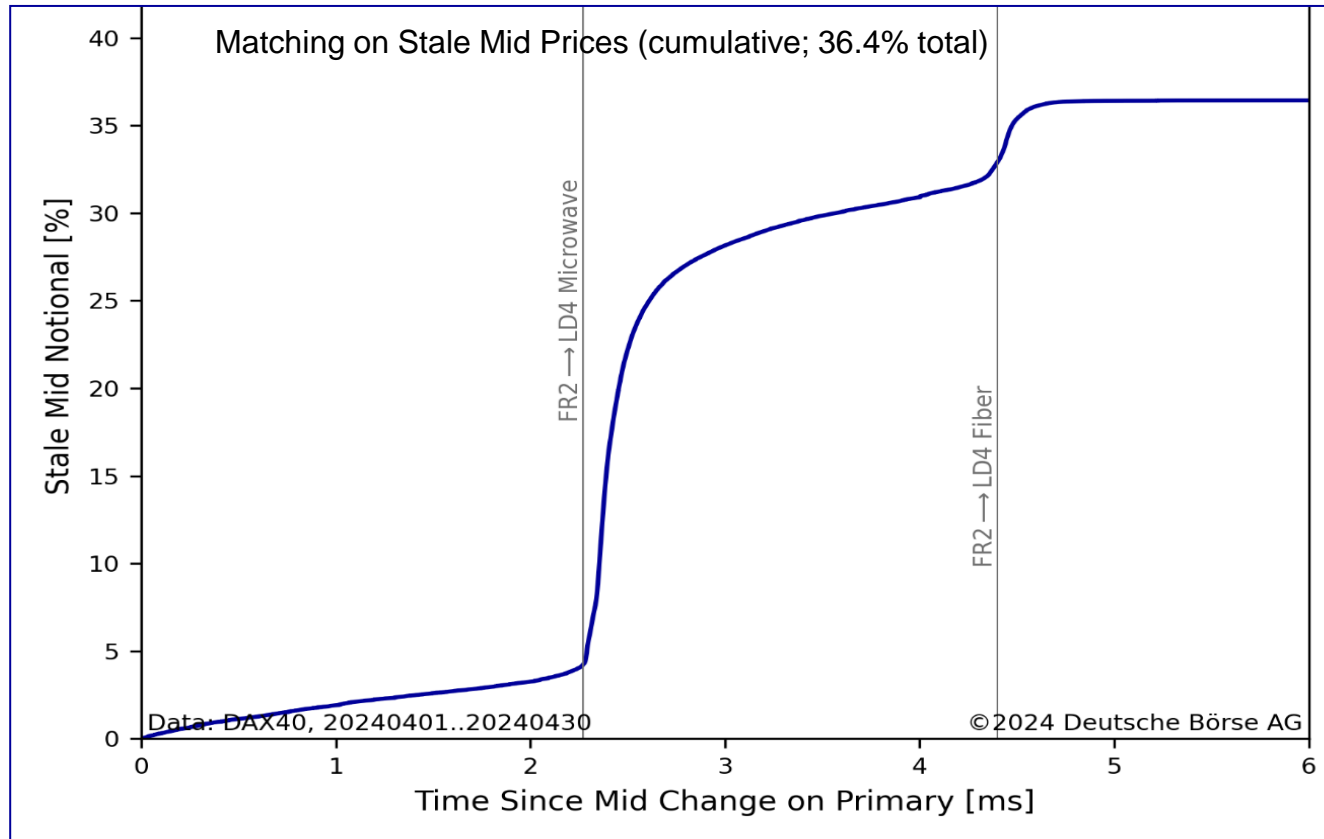
- Matching Trigger Events: Incoming Order, Change of Midpoint Price, Change in Vola Range, Matcher Failover...
- Prioritization: Volume-Time Priority under consideration of MAQ
- Execution principle: maximization of overall execution volume

Bid Time	Qty	MAQ	Midpoint Order Limit	Midpoint Order Limit	MAQ	Qty	Ask Time
10:00	100	100	9,90	M	75	75	10:01
10:05	100	100	M				
10:02	50	-	M				
10:04	25	-	9,90				

- Current midpoint price: 10,00 EUR
- Potential triggers:
 - Incoming Midpoint Sell Order (Market) with quantity 25, executed together with resting 10:01 sell order against 10:05 buy order
 - Change from midpoint price to 9,90 EUR leads to execution of 10:02 and 10:04 buy orders against 10:01 sell order

Dark Trading and Latency costs

DAX40 instruments at London MTFs



Data source: Refinitiv

- Chart shows cumulative notional value of DAX40 trades on dark venue (hosted on London data center) away from Xetra Midpoint vs. latency since Midpoint on Xetra changed
- In total, ca. 30% of notional is latency-arbitrated
- Stale prices are on average 2.6 bps from Xetra Midpoint

**Xetra Midpoint will have no latency
Participants will NOT be exposed
to any latency costs!**

Technical Implementation Details

Instrument Reference Data

T7 Release 13.0

Deutsche Börse Group

Market & Reference Data Interfaces Manual

Version 1

Tag	Field Name	Req'd	Data Type	Description						
28913	MidpointTrading	N	Midpoint-Trading (enum)	Indicates whether the instrument is enabled for Midpoint trading. <table border="1" data-bbox="777 635 1268 749"> <thead> <tr> <th>Value</th> <th>Description</th> </tr> </thead> <tbody> <tr> <td>0</td> <td>Disabled</td> </tr> <tr> <td>1</td> <td>Enabled</td> </tr> </tbody> </table>	Value	Description	0	Disabled	1	Enabled
Value	Description									
0	Disabled									
1	Enabled									
28914	MidpointExecVenueID	N	string	Market Identifier Code (ISO 10383) used for reporting mid-point trades to the supervisory authority.						

- See “Instrument Snapshot Message”, T7 Market and Reference Data Interfaces Manual Release 13.0
- Respectively for other reference data sources, i.e. FIX, Static Instrument Files

- Midpoint trading indicator (enabled / disabled) is the result of
 - Instrument type check (equities, ETFs and depository receipts only)
 - Most relevant market check (Xetra only)
 - DVC suspension status check (only instruments that are currently not suspended on Xetra or EU-wide)
- New Midpoint reporting / segment MICs:
 - XEMA = (Xetra Midpoint) Regulated Market
 - XEMB = (Xetra Midpoint) Open Market
 - XEMI = (Xetra Midpoint) Scale

Order Entry and Modification

Tag	Field Name	Req'd	Len	Ofs	Data Type	Description						
110	MinQty	N	8	64	Qty	Minimal Quantity that has to be executed in MidPoint matching.						
30388	MidPointType	N	1	172	unsigned int	Midpoint order type. <table border="1" data-bbox="1021 579 1493 722"> <thead> <tr> <th>Value</th> <th>Description</th> </tr> </thead> <tbody> <tr> <td>1</td> <td>Midpoint order</td> </tr> <tr> <td>2</td> <td>Midpoint sweep order</td> </tr> </tbody> </table>	Value	Description	1	Midpoint order	2	Midpoint sweep order
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2	Midpoint sweep order											

- See “New Order (single)” message, T7 Enhanced Trading Interface Cash Message Reference, Release 13.0
- Respectively for order modifications, order deletion reports, order information messages, also in FIX, GUI

- 2 new fields for order entry and modification, re-use of existing order entry and order maintenance messages
- Modifications of MinQty lead to new time stamp (midpoint orders only)
- Modification of MidPointType not possible
- Xetra Retail trading capacities (RMO and RLP) not available for midpoint orders and midpoint sweep orders

Immediate Execution / New Order Response

	Tag	Field Name	Req'd	Len	Ofs	Data Type	Description																
Message Body (1x)	378	ExecRestatement-Reason	Y	2	168	unsigned int	Code to further qualify the field Exec-Type (150) of the Execution Report (8) message. <table border="1"> <thead> <tr> <th>Value</th> <th>Description</th> </tr> </thead> <tbody> <tr> <td>101</td> <td>Order add accepted</td> </tr> <tr> <td>102</td> <td>Order modify accepted</td> </tr> <tr> <td>105</td> <td>IOC Order accepted</td> </tr> <tr> <td>107</td> <td>FOK Order accepted</td> </tr> <tr> <td>181</td> <td>Ownership Changed</td> </tr> <tr> <td>114</td> <td>Order has been changed to IOC</td> </tr> <tr> <td>205</td> <td>Midpoint Sweep order changed to regular order</td> </tr> </tbody> </table>	Value	Description	101	Order add accepted	102	Order modify accepted	105	IOC Order accepted	107	FOK Order accepted	181	Ownership Changed	114	Order has been changed to IOC	205	Midpoint Sweep order changed to regular order
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	574	MatchType	Y	1	173	unsigned int	The point in the matching process at which this trade was matched. <table border="1"> <thead> <tr> <th>Value</th> <th>Description</th> </tr> </thead> <tbody> <tr> <td>4</td> <td>Auto-match incoming order</td> </tr> <tr> <td>5</td> <td>Cross Auction</td> </tr> <tr> <td>7</td> <td>Call Auction</td> </tr> <tr> <td>11</td> <td>Auto match resting order</td> </tr> <tr> <td>14</td> <td>Continuous Auction</td> </tr> <tr> <td>12</td> <td>Auto match at midpoint</td> </tr> </tbody> </table>	Value	Description	4	Auto-match incoming order	5	Cross Auction	7	Call Auction	11	Auto match resting order	14	Continuous Auction	12	Auto match at midpoint		
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FillGrp (n)	1443	>FillLiquidityInd	N	1	208	unsigned int	Indicates whether the order added or removed liquidity. Required only for execution reports generated for fills. <table border="1"> <thead> <tr> <th>Value</th> <th>Description</th> </tr> </thead> <tbody> <tr> <td>2</td> <td>Removed Liquidity</td> </tr> <tr> <td>101</td> <td>Removed Liquidity Midpoint</td> </tr> <tr> <td>5</td> <td>Triggered Stop Order</td> </tr> </tbody> </table>	Value	Description	2	Removed Liquidity	101	Removed Liquidity Midpoint	5	Triggered Stop Order								
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- See “Immediate Execution Response”, T7 Enhanced Trading Interface Cash Message Reference, Release 13.0
- ExecRestatement Reason contained in both, immediate execution responses and new order response messages
 - ExecRestatement Reason “205” only relevant for Sweep Orders (also for order entry in CLOB, see “New Order Response” message)
- MatchType and FillLiquidityInd only for execution messages
 - MatchType “12” (auto match at midpoint) only if all fills generated by incoming order are in midpoint book, otherwise (if in both, midpoint book and CLOB) MatchType is “4” (auto-match incoming order)
- FillsGroup part includes FillLiquidityInd field, multiple instances reported per each filled resting order
 - “101” for immediate execution in midpoint book
 - “2” for immediate execution in CLOB (Sweep Orders only)
- In case of Sweep Orders, Execution Response or New Order Response is sent only once after full processing of order across both midpoint book and CLOB

Book Order Execution

	Tag	Field Name	Req'd	Len	Ofs	Data Type	Description														
Message Body (1x)	574	MatchType	Y	1	173	unsigned int	<p>The point in the matching process at which this trade was matched.</p> <table border="1"> <thead> <tr> <th>Value</th> <th>Description</th> </tr> </thead> <tbody> <tr> <td>4</td> <td>Auto-match incoming order</td> </tr> <tr> <td>5</td> <td>Cross Auction</td> </tr> <tr> <td>7</td> <td>Call Auction</td> </tr> <tr> <td>11</td> <td>Auto match resting order</td> </tr> <tr> <td>14</td> <td>Continuous Auction</td> </tr> <tr> <td>12</td> <td>Auto match at midpoint</td> </tr> </tbody> </table>	Value	Description	4	Auto-match incoming order	5	Cross Auction	7	Call Auction	11	Auto match resting order	14	Continuous Auction	12	Auto match at midpoint
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- See “Book Order Execution”, T7 Enhanced Trading Interface Cash Message Reference, Release 13.0
- Only relevant for Midpoint Orders resting in Midpoint book (sweep orders transferred to CLOB are treated like “normal” orders (i.e. without any Midpoint Type))
- MatchType “12” in general Message Body
- FillsGroup part includes FillLiquidityInd field
 - “100” for passive execution resting midpoint order in midpoint book

Trade Notification

Tag	Field Name	Req'd	Len	Ofs	Data Type	Description																		
574	MatchType	N	1	256	unsigned int	<p>The point in the matching process at which this trade was matched. The value 3 (reporting from recognized markets) represents trades entered by Market Supervision</p> <table border="1"> <thead> <tr> <th>Value</th> <th>Description</th> </tr> </thead> <tbody> <tr> <td>3</td> <td>Confirmed Trade Report (reporting from recognized markets)</td> </tr> <tr> <td>4</td> <td>Auto-match incoming order</td> </tr> <tr> <td>5</td> <td>Cross Auction</td> </tr> <tr> <td>7</td> <td>Call Auction</td> </tr> <tr> <td>11</td> <td>Auto match resting order</td> </tr> <tr> <td>12</td> <td>Auto match at midpoint</td> </tr> <tr> <td>14</td> <td>Continuous Auction</td> </tr> <tr> <td>15</td> <td>Retail</td> </tr> </tbody> </table>	Value	Description	3	Confirmed Trade Report (reporting from recognized markets)	4	Auto-match incoming order	5	Cross Auction	7	Call Auction	11	Auto match resting order	12	Auto match at midpoint	14	Continuous Auction	15	Retail
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20473	RootParty- IDExecutionVenue	N	4	497	Fixed String	<p>Market Segment Identification Code Valid characters: \x20, \x22-\x7B, \x7D, \x7E</p>																		

- See “Trade Notification”, T7 Enhanced Trading Interface Cash Message Reference, Release 13.0
- MatchType “12”
- RootPartyIDExecutionVenue contains relevant Xetra Midpoint Segment MIC
 - XEMA – Regulated Market
 - XEMB – Open Market
 - XEMI - Scale

Market Data

Tag	Field Name	Req'd	Data Type	Description																				
277	> TradeCondition	N	Trade-Condition (set)	<p>AW = Last Auction Price cannot be combined with any other value and has its own entry in order to convey the auction type through <i>TrdType (828)</i>.</p> <p>XR = Retail price is used to report prices resulting from Retail orders (applicable for cash market products only).</p> <p>BB = Midpoint Price is used to report prices resulting from midpoint orders (applicable for cash market products only).</p> <table border="1"> <thead> <tr> <th>Value</th> <th>Description</th> </tr> </thead> <tbody> <tr> <td>U</td> <td>Exchange Last</td> </tr> <tr> <td>R</td> <td>Opening Price</td> </tr> <tr> <td>AX</td> <td>High Price</td> </tr> <tr> <td>AY</td> <td>Low Price</td> </tr> <tr> <td>AJ</td> <td>Official Closing Price</td> </tr> <tr> <td>AW</td> <td>Last Auction Price</td> </tr> <tr> <td>BD</td> <td>Previous Closing Price</td> </tr> <tr> <td>XR</td> <td>Retail</td> </tr> <tr> <td>BB</td> <td>Midpoint Price</td> </tr> </tbody> </table>	Value	Description	U	Exchange Last	R	Opening Price	AX	High Price	AY	Low Price	AJ	Official Closing Price	AW	Last Auction Price	BD	Previous Closing Price	XR	Retail	BB	Midpoint Price
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- See “Depth Snapshot Message” and “Depth Incremental Message” in EMDI / MDI, T7 Market and Reference Data Interfaces Manual, Release 13.0
- Trade Condition “BB” for Midpoint trades (also for EOBI messages “trade report”, “trade reversal” and “instrument snapshot”)
- Following Midpoint information will be available in T7 GUI Market view:
 - LstMidpointPrc (like LstPrc)
 - LstMidpointQty (like LstQty)
 - LstMidpointTime (like LstTime)

Order Book

- No pre-trade transparency – Xetra Midpoint is a dark pool
- EOBI messages “trade report”, “trade reversal” and “instrument snapshot” will contain same TradeCondition (“BB”) as in market data

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