



DEUTSCHE BÖRSE
GROUP

Fit for MiFID ?

Deutsche Börse Group – DBG Workshop Series



Today's agenda

01

Welcome, Introduction &
Regulatory Update

Vassiliki Veliou

02

Microstructural Issues /
Algorithmic Trading / HFT /
Reporting

Markus Löw
Dr Sandra Bramhoff

03

Market Making

Dagmar Wojcik
Thomas Elm

04

Transparency

Thomas Elm

05

Member Readiness

Frank Horneff



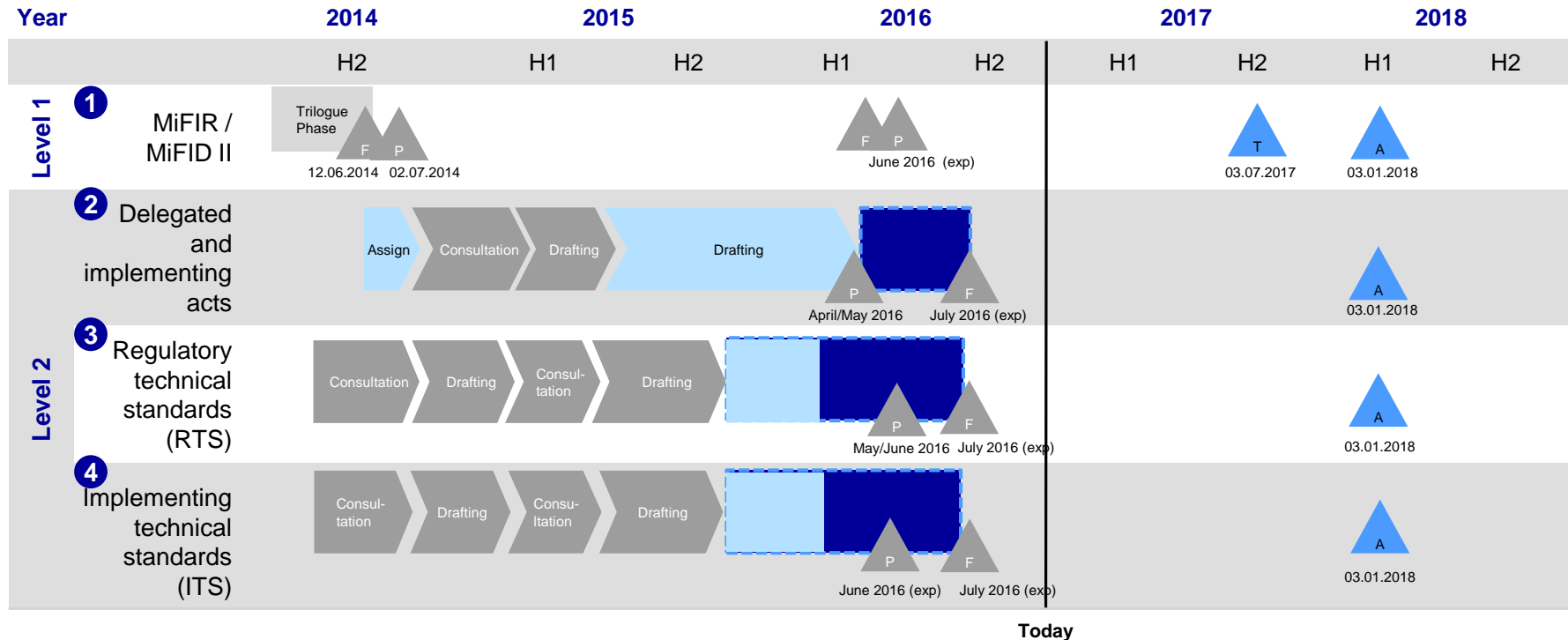
DEUTSCHE BÖRSE
GROUP

Welcome, Introduction & Regulatory Update

A bronze bull statue, likely the Charging Bull in New York City, is shown in profile on the left side of the image. The background is a blurred outdoor scene with several people walking and a modern building with large windows.

Regulatory Process & Timeline Update

MiFIR/ MiFID II Timeline - Delay of Level 1 agreed in quick fix¹⁾; implementing measures to enter into force in due course



- 1 **Postponement of application of MiFID II/MiFIR to 3 January 2018 agreed;** postponement of transposition into national law deferred to 3 July 2017; transposition documents to be consulted: German 2nd FinanzG and UK FCA handbook, etc.
- 2 **Delegated Acts:** Publication in April/May 2016; afterwards, objection period for EU Parliament (EP) and Council before entry into force
- 3 **RTS:** ESMA submitted to the EU Com draft regulatory technical standards in September 2015; adoption by EU Com delayed (started in May 2016); final approval by EP and Council outstanding; objection period before entry into force
- 4 **ITS:** ESMA submitted to the EU Com draft ITS in September 2015; adoption by EU Com delayed (expected for June 2016); final approval by EP and Council outstanding; objection period before entry into force

■ ESMA
 ■ EU Commission
 ■ EU Council, EU Parliament
 ■ Endorsement & objection period
 P = Publication in official journal
 F = Entry into force
 T = Transposition into national law
 A = Application within member states

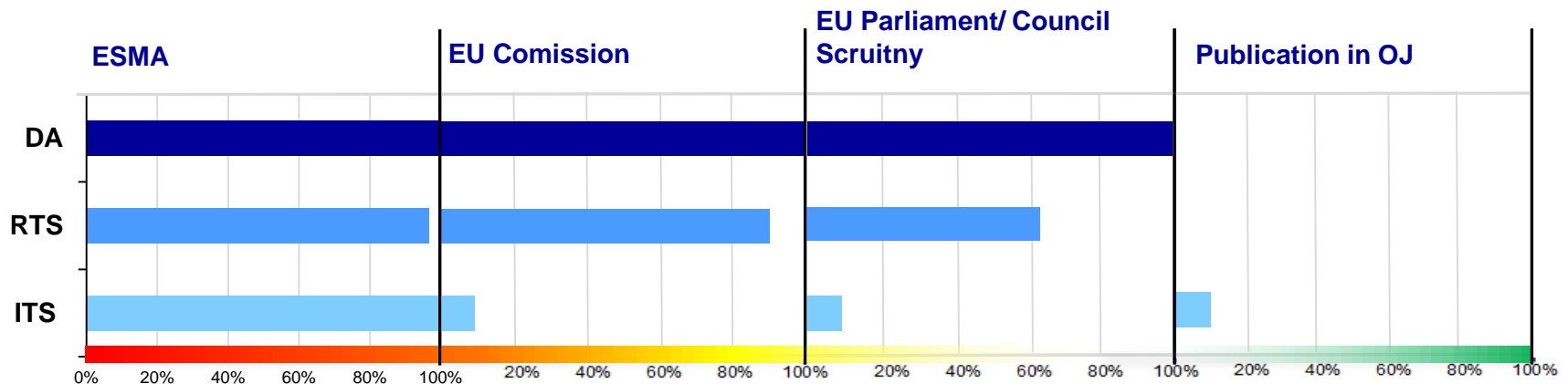
1) Quick fix to Level 1 was published on July 1, 2016 in EU Official Public Journal: <http://eur-lex.europa.eu/legal-content/EN/TXT/?uri=CELEX:32016R1033>

When application date of January 2018 was granted, the task to the EU Commission was to ensure Level 2 adoption beginning Q4 2016

| Level | Legislation | Status | Next Steps |
|-------|------------------------------|---|--|
| 1 | Regulation/ Directive | <ul style="list-style-type: none"> On July 1st, 2016, the Level 1 'quick fix' results were published in the EU official journal (OJ) Delay of application date set to January 2018 New definitions on 'package transactions' included with a new task to ESMA to determine liquidity draft RTS thereupon | <ul style="list-style-type: none"> EU Commission (EU COM) has to adopt Level 2 legislation beginning Q4 2016 ESMA has to finalise draft RTS on package transactions by 28 February 2017 |
| 2 | Delegated Acts ¹⁾ | <ul style="list-style-type: none"> Delegated acts have been adopted as delegated regulation by EU COM in Q2 2016 | <ul style="list-style-type: none"> Passed EU Council and Parliament scrutiny, publication in OJ expected in due time course |
| | RTS ¹⁾ | <ul style="list-style-type: none"> Most RTS adopted by EU COM; currently under scrutiny by EU Parliament and EU Council Few RTS still pending adoption by EU COM, to be sent to EU Council and EU Parliament soon New ESMA RTS on package transactions to be consulted shortly EU COM published other RTS that have not been consulted beforehand | <ul style="list-style-type: none"> Expected to pass scrutiny of EU Parliament and EU Council soon, with publication in OJ RTS expected to be adopted beginning Q4 2016 Consultation expected early Q4 2016 Currently process unclear; no comment period expected |
| | ITS ¹⁾ | <ul style="list-style-type: none"> One ITS already published in OJ, on MTF and OTF requirements ESMA delivered further ITS to EU Commission with no further update yet | <ul style="list-style-type: none"> Currently process unclear; no comment period expected |

1) OJ (Official Journal) RTS (Regulatory Technical Standards), ITS (Implementing Technical Standards), Delegated Acts (DAs)

Level 2 specification has further progressed after ESMA provided final proposals to the EU Commission



Completeness per DA, RTS and ITS

- The EU Commission has swiftly processed the Delegated Acts (DAs) and forwarded those in Q2 2016 to the EU Council and Parliament; only publication pending
- ESMA provided most Level 2 RTS¹⁾ to the EU Commission, of which the large majority has been adopted. The most prominent remaining RTS are 20, 21 (both on commodity derivatives) and on indirect clearing
- Only one ITS on OTF/MTF has been published in the Official Journal, all other ITS have been passed from ESMA to the EU Commission with unknown further process. Most topics related to commodity derivatives position reporting.

Today's Focus

- HFT, Algo, DEA
- Pre – and Post – Transparency
- Microstructural issues, e.g. Market Making, Algo Flagging & Testing, Risk Controls, OTR, Business Clock Synchronization
- Reporting Aspects

1) New RTS on packaged transactions not drafted and consulted yet; expected Q4 2016 with deadline 28 February 2017

Currently, many new aspects in regards to national implementation and Level 3 ESMA guidelines are consulted

| Level | Legislation | Status | Next Steps |
|-------|-------------------------|--|--|
| 2 | National Implementation | <ul style="list-style-type: none"> German transposition (2nd FimanoG¹⁾) currently consulted Further member states currently consulting transposition laws (e.g. UK FCA) | <ul style="list-style-type: none"> Consultation deadline 28 October 2016 E.g. UK FCA sets deadlines to 28 October, 2016 and 7 January, 2017 |
| 3 | Guidelines/ Q&As | <ul style="list-style-type: none"> Level 1 ordered guidelines: <ul style="list-style-type: none"> ESMA consultation paper on consolidated tape for non-equity instruments ESMA consultation paper on trading halts ESMA consultation paper on specific notions related to the management body of market operators and data reporting services providers (DRSP) ESMA consultation paper on product governance ESMA²⁾ own initiative guidelines: <ul style="list-style-type: none"> ESMA published guidelines on transaction reporting, order record keeping and clock synchronisation under MiFID II ESMA published Q&A on investor protection ESMA published Q&As on implementation of the double volume cap mechanism | <ul style="list-style-type: none"> Consultation deadline 5 December 2016 Consultation deadline 6 December 2016 Consultation deadline 5 January 2017 Consultation deadline 5 January 2017 Applicable on 3 January 2018 Applicable on 3 January 2018 Applicable on 3 January 2018 |

1) FimanoG is the abbreviation for the German transposition law proposal (= Finanzmarktnovellierungsgesetz)

2) Further Q&A publications expected in due course

The image features a close-up of a dark, weathered bronze bull sculpture on the left side. The bull is facing right, with its head and horns clearly visible. The background is out of focus, showing several people standing in what appears to be a public space or museum. A semi-transparent white rectangular box is overlaid on the right side of the image, containing the title text in blue.

Authorisation & Third Country Firms

With MiFID II/ MiFIR application on 3 January 2018, authorisation of firms and procedures for third country firms will change

Authorisation Alternatives

- The authorisation alternatives can be manifold according to the business model of the firm and the associated legal frameworks
- A firm can be a credit institution (e.g. Banking Act, CRR), a fund (e.g. AIFMD), insurance related (e.g. Solvency) or an investment firm (e.g. MiFID, Securities Trading Act)
- Under MiFID II, a substantial change is considered for firms requiring authorisation, when dealing on own account
- Based on the different authorisation alternatives, market participants should conduct a careful strategic review of their organisational set-up together with the requirements of their intended authorisation path

New MiFID II Authorisation Requirements

- Specifically, the MiFID II authorisation scope will be broadened especially to firms dealing on own account in financial instruments as members of the exchange, being market makers, when applying high frequency trading or when executing client orders (MiFID II, Article 2, 1 (d))
- Furthermore, three exemptions to the above rule are set out in Article 2 para. 1 for firms such as:
 - I. insurance undertakings as described in MiFID II Article 2 para. 1 point (a)
 - II. collective investment undertakings and pension funds as described in MiFID II Article 2 para. 1 point (i)
 - III. persons involved in commodity derivatives trading satisfying the criteria under MiFID II Article 2 para. 1 point (j)

By the same token new rules are defined for Third Country Firms

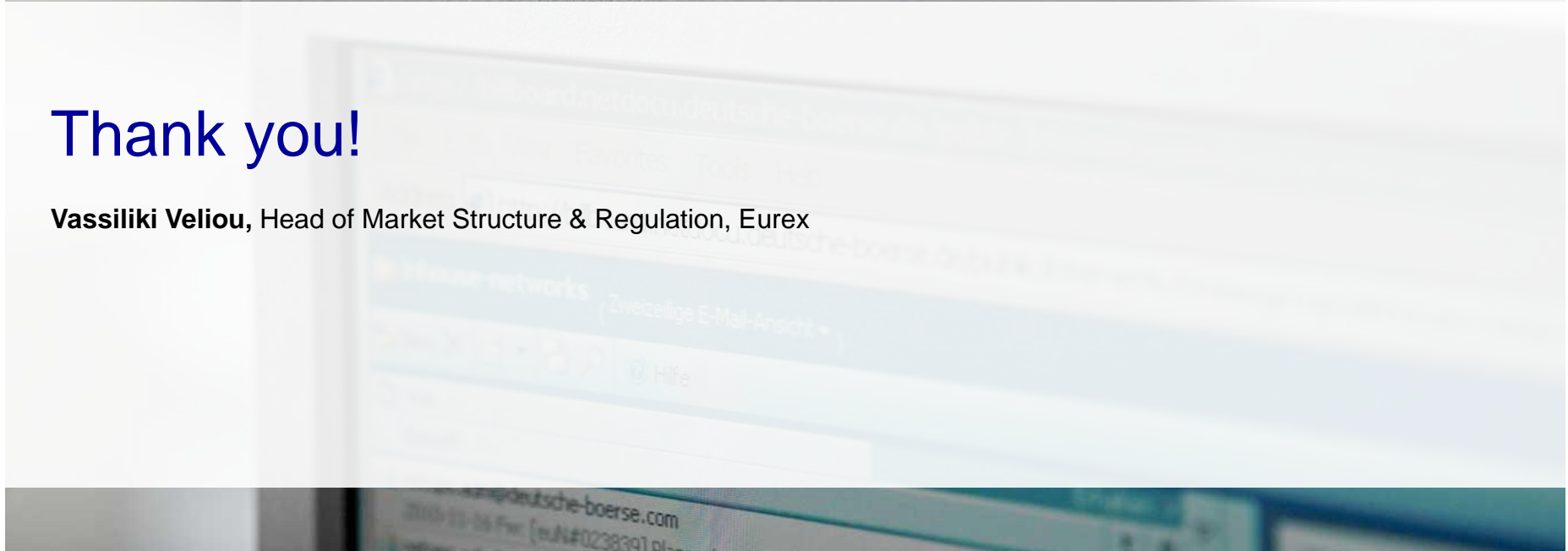
Third Country Firm Considerations

- Under MiFID II/ MiFIR, all third country firms satisfying the criteria need to be authorised in a member state in order to offer their services within the European Economic Area (EEA)
- Three authorisation ways are possible under MiFIR/ MiFID II depending on the target group, the third country firm plans to offer their services to:
 - I. **Establishing a full legal entity** in the EEA which allows passporting of their services within the Union (already known from MiFID I and used by Eurex members under the German HFT Act)
 - II. **Establishing a branch in the EEA** which allows third country firms to provide their services only in that member state (passporting only on terms set out under 3)). Target group can be retail as well as professional clients
 - III. **EU Commission's equivalence decision** between the home state and host member state, when offering their services only to professional clients & eligible counterparties. Services can be provided in other member states of the EEA, also in case a branch is set up.



Thank you!

Vassiliki Veliou, Head of Market Structure & Regulation, Eurex





DEUTSCHE BÖRSE
GROUP

Microstructural Issues / Algorithmic Trading / HFT / Reporting

Client ID and Execution Decision - new field definition

| New Field | Xetra & Eurex Implementation | Regulation Requirement |
|-----------------------------------|--|--|
| Client Identification Code | <p>8-byte numeric field in order to use numeric short codes for Personal Identification Data (PID)</p> <p>(to be resolved into PID, outside the XETRA/T7 trading system)</p> | <p>Art. 25(3) MiFIR (audit trail) stipulates an identification code of the member or participant which transmitted the order, specified under: RTS 24, Annex, Table 2, Field 3 stipulates a code used to identify the client of the member or participant of the trading venue.</p> <p>Members have to reserve a specific number to represent “AGGR” and “PNAL”</p> <p>The usage of short codes instead of PID within the trading system is approved by the Exchange Supervisory Authority for Xetra/Eurex.</p> <p>PID information of clients have to be resolved in the corresponding database by the end of the respective trading day (t)</p> |
| Execution within firm | <p>Rename current “Compliance ID” according to specification to “Execution ID”</p> | <p>Art. 25(3) MiFIR (audit trail) stipulates an identification code of the member or participant which transmitted the order, specified under: RTS 24, Annex, Field 5 “Execution within Firm” stipulates a code used to identify the person or algorithm within the member or participant of the trading venue who is responsible for the execution of the transaction resulting from the order</p> <p>If the field is left blank we assume human decision by the trader logged in and the PID from the trader will be collected from the trader admission of XETRA/Eurex to produce the report for the NCA as the case might be</p> |

Investment Decision - new field definition

| New Field | Xetra & Eurex Implementation | Regulation Requirement |
|--|--|--|
| Investment decision within firm | <p>Introduce “Investment ID” 8-byte numeric field in order to use numeric short codes as for clients</p> <p>(to be resolved into PID, outside the Xetra/T7 trading system)</p> | <p>Art. 25(3) MiFIR (audit trail) stipulates an identification code of the member or participant which transmitted the order, specified under:</p> <p>RTS 24, Annex, Table 2, Field 4 “Investment decision within firm” stipulates a code used to identify the person or the algorithm within the member or participant of the trading venue who is responsible for the investment decision.</p> <p>The usage of short codes instead of PID within the trading system is approved by the Exchange Supervisory Authority for XETRA/Eurex.</p> <p>PID information of decision makers within the member have to be resolved in the corresponding database prior to the usage the on a specific trading day (t-1)</p> |
| Investment decision within firm | <p>Introduce “InvestmentIndicator” 1-byte numeric field</p> | <p>which offers the options to differentiate depending on the:</p> <ul style="list-style-type: none"> ▪ “human, other than entering trader” ▪ “human, entering trader” ▪ “algorithm” ▪ “identical to Execution ID” ▪ Empty <p>We will provide basic sanity checks to also fulfil our obligation towards correctness of data</p> |

HFT definition

Specification of the definition of high frequency algorithmic trading technique

| MiFID II Article 4 | Delegated Regulation Articles 18, 19, 20 | XETRA & Eurex Explanation |
|---|---|--|
| <p>An algorithmic trading technique characterised by:</p> <p>(a) infrastructure intended to minimise network and other types of latencies, including at least one of the following facilities for algorithmic order entry: co-location, proximity hosting or high-speed direct electronic access;</p> <p>(b) system-determination of order initiation, generation, routing or execution without human intervention for individual trades or orders; and</p> <p>(c) high message intraday rates which constitute orders, quotes or cancellations</p> | <p>A high message intraday rate in accordance with Article 4 MiFID II shall consist of the submission on average of any of the following:</p> <p>(a) at least 2 messages per second with respect to any single financial instrument traded on a trading venue;</p> <p>(b) at least 4 messages per second with respect to all financial instruments traded on a trading venue.</p> | <p>A 'high message intraday rate' shall mean the submission on average of at least</p> <ul style="list-style-type: none"> Four messages per second for all instruments traded or Two messages per second for single instrument <p>Only messages submitted for orders introduced when dealing on own account and instruments for which there is a liquid market using latency minimising infrastructure</p> <p>10 Gbit/sec in Colocation, P/M account in liquid products, having an ExecutionID (= algorithmic)</p> <p>Messages per second shall be determined</p> <ul style="list-style-type: none"> on the basis of data with regard messages submitted during the preceding 12 months or on the period within those 12 months during which the firm was active. <p>Reports will be provided on a daily basis like today using the new parameters</p> |

Direct Electronic Access – new definition

MIFID II Article 4(1)(41)

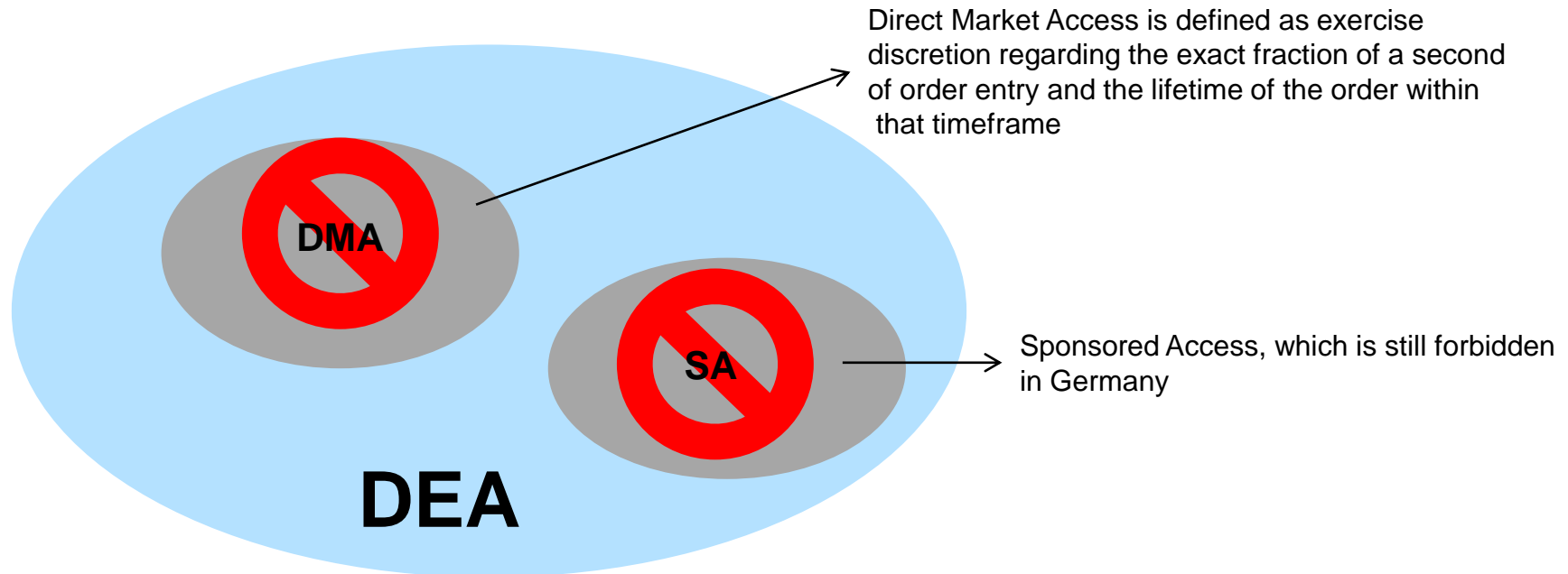
Direct electronic access means an arrangement where a member or participant or client of a trading venue permits a person to use its trading code so the person can electronically transmit orders relating to a financial instrument directly to the trading venue and includes arrangements which involve the use by a person of the infrastructure of the member or participant or client, or any connecting system provided by the member or participant or client, to transmit the orders (direct market access [DMA]) and arrangements where such an infrastructure is not used by a person (sponsored access [SA]).

Delegated Regulation EU

ESMA considers that the key element to qualify as DEA is the type of control over order execution that each type of service provides to its users. In the case of orders submitted by DEA users the critical element is the **ability of the DEA user to decide on the exact fraction of a second of order entry** and lifetime of the orders within that timeframe. Where a client order is effectively intermediated by the member or participant of the trading venue (and therefore the submitter of the order does not have control over those parameters), the arrangement would be out of the scope of DEA.

Direct Electronic Access - why we do not offer DEA at all...

According to Commission Delegated Regulation (EU) of 25.4.2016 supplementing Directive 2014/65/EU DEA under Article 4(1)(41) of Directive 2014/65/EU comprises of

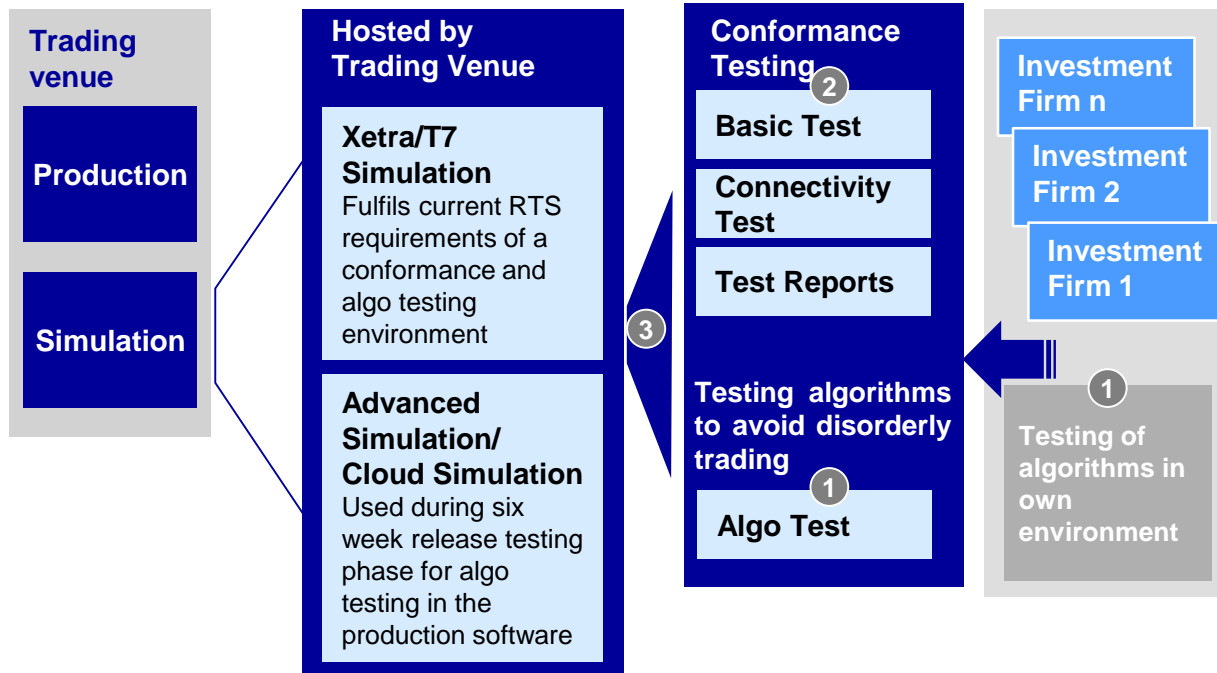


German exchange regulation requires the order provider (namely, the order routing system provider and member of the venue) to have control over the order before it reaches the exchange, meaning that orders on XETRA/Eurex would fall outside of the MiFID II DEA definition.



Algo Testing Environment

Testing environment provided by Xetra/Eurex



- 1 Certification** to trading venue that the algorithms deployed have gone through testing
- 2 Conformance testing** prior to (a) deployment of a new access to the trading venue's system (b) a material change in the trading venue's access functionality (c) the deployment or substantial update of the member's trading algorithms or strategies
- 3 Access to testing environment** for members (strict separation from production environment)

Assessment

- Based on the current regulatory requirements, the proposed testing environment concept seems to be feasible
- Testing on production software level can continue in Advanced Simulation/ Cloud Simulation while Xetra simulation/ T7 simulation will be upgraded to new release software
- Likewise, members may conduct conformance testing in Xetra/T7 to ready systems and algorithms for new release

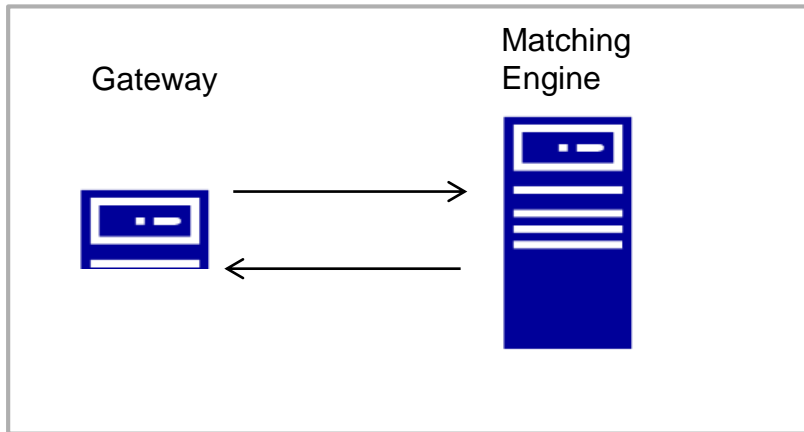
Member certificates to be uploaded to a dedicated "member section" via csv bulk upload or Web GUI.

Envisaged format

1. Time of upload
2. Start of validity
3. Algo ID
4. Name of the person uploading the data

Xetra/Eurex will not implement testing symbols in production as this would contradict actual regulation Art 9 (7) of delegated regulation (C(2016) 4387 final)

Business Clock Synchronisation



RTS 25: Regulatory technical and implementing standards on clock synchronisation Article 2(1)

'Gateway to gateway' latency shall be the time measured from the moment a message is received by an outer gateway of the trading venue's system, sent through the order submission protocol, processed by the matching engine, and then sent back until an acknowledgement is sent from the gateway'

| | Accuracy (divergence allowed from UTC) | Granularity |
|---------------------------|--|---------------------|
| ≥ 1 millisecond (ms) | 1ms | 1ms or better |
| < 1 ms ¹⁾ | 100 μ s | 1 μ s or better |

XETRA **EX** eurex



1) Guidelines on Transaction reporting, order record keeping and clock synchronisation under MiFID II (2016/1452)

7.5 Gateway-to-gateway latency

Trading Venues may list multiple gateway-to-gateway latency times for different percentiles. For the purposes of clock synchronisation, ESMA considers that Trading Venues should use the gateway-to-gateway latency time at the 99th percentile.

Business Clock Synchronisation – reference time

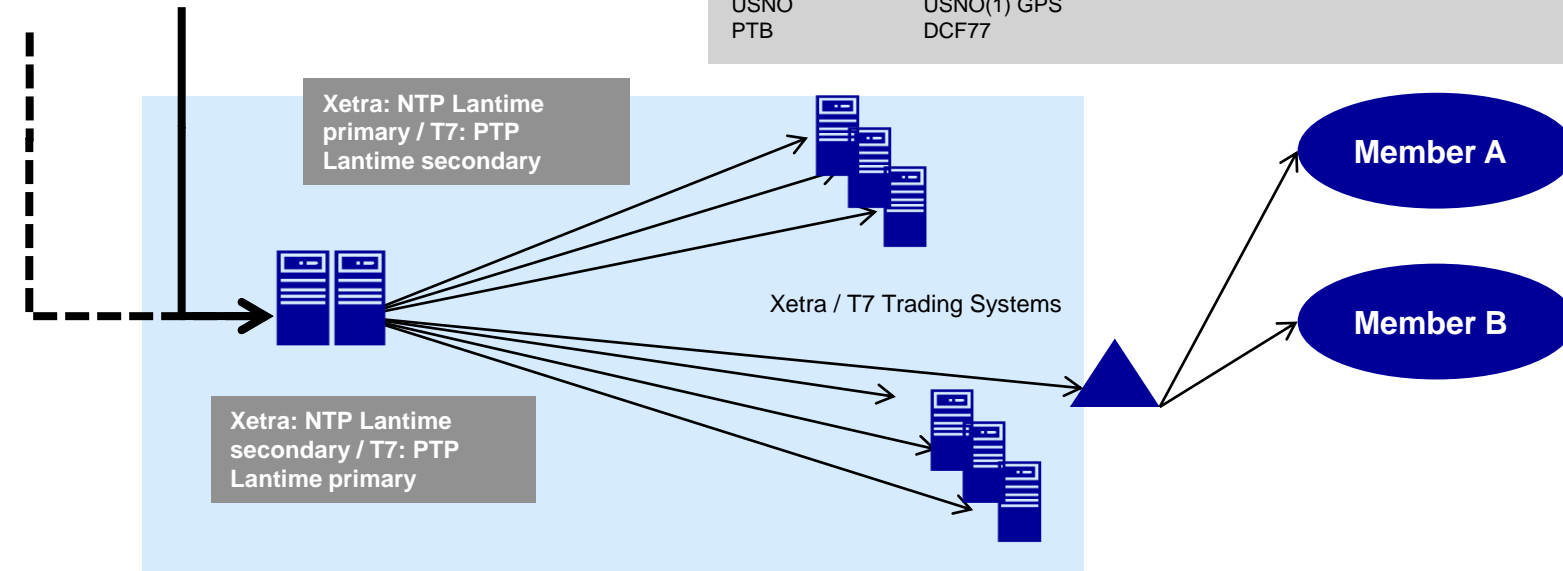
RTS 25 Regulatory technical and implementing standards on clock synchronisation – Article 1

DCF77 GPS



'Reference time': Operators of trading venues and their members or participants shall synchronise the business clocks they use to record the date and time of any reportable event with the Coordinated Universal Time (UTC) issued and maintained by the timing centres listed in the latest Bureau International des Poids et Mesures Annual Report on Time Activities. **Operators of trading venues and their members or participants may also synchronise the business clocks they use to record the date and time of any reportable event with UTC disseminated by a satellite system, provided that any offset from UTC is accounted for and removed from the timestamp.**

.....
USNO USNO(1) GPS
PTB DCF77



Guidelines on Transaction reporting, order record keeping and clock synchronisation under MiFID II (2016/1452)

7.3 Compliance with maximum divergence requirements

Relevant and proportionate testing of the system should be required along with relevant and proportional monitoring thereof to ensure that the divergence from UTC remains within tolerance. The relevance and proportionality will depend on the applicable maximum divergence from UTC.

We generate a report taking 10 min slots to check different clocks used by the crucial system components for drifts and readjust if needed.

Order-to-Trade Ratios (1/2)

Commission Delegated Regulation (EU) Article 1 – Definitions

- (a) 'order' includes all input messages, including messages on submission, modification and cancellation sent to the trading system of a trading venue, relating to an order or a quote, but excluding cancellation messages sent subsequent to:
 - (i) uncrossing in an auction;
 - (ii) a loss of venue connectivity;
 - (iii) the use of a kill functionality;
- (b) 'transaction' means a totally or partially executed order;
- (c) 'volume' means the quantity of financial instruments traded expressed as any of the following:
 - (i) the number of instruments for shares, depositary receipts, ETFs, certificates and other similar financial instruments;
 - (ii) the nominal value for bonds and structured finance products;
 - (iii) the number of lots size or contracts for derivatives;
 - (iv) metric tons of carbon dioxide for emission allowances.

Commission Delegated Regulation (EU) Article 3 – Methodology

Trading venues shall calculate the ratio of unexecuted orders to transactions for each of their members or participants at least at the end of every trading session in both of the following ways:

- (a) in volume terms: (total volume of orders/total volume of transactions) - 1;
- (b) in number terms: (total number of orders/total number of transactions) - 1.

Order-to-Trade Ratios (2/2)

Where methodology does not work at all!

Just imagine: an instrument without a trading

...means no volume!

(total volume of orders/total volume of transactions) - 1

...e.g.

(3000 / 0) - 1 = #DIV/0!

...means no trade!

(total volume of orders/total number of transactions) - 1

...e.g.

(3000 / 0) - 1 = #DIV/0!

Providing a floor for market makers can help make this formula work also in cases where there is no trading activity



Alerting numbers

Eurex

95% of all series do not have daily trading volume
45% of all products do not have daily trading volume

Xetra

72% of all instruments do not have daily trading volume

Organisational requirements

| MiFID II requirements | Description | Eurex T7 | Xetra T7 | Xetra |
|--|--|----------|----------|----------|
| Volatility Interrupt | The Volatility Interrupt is a special mechanism that is applied during continuous trading, in order to prevent large deviations of execution prices in a short period of time. | ✓ | ✓ | ✓ |
| Price Reasonability Check | When a user enters or modifies a limit order or a quote, the user can optionally request the system to perform a Price Reasonability Check on the limit price of the order or quote, and to reject the order or quote, if it fails the check. | ✓ | ✓ | ✓ |
| Extended Price Range Validation | The Extended Price Range Validation leads to a rejection of the order or quote, if the limit price of a buy order or quote exceeds the best sell price by more than the extended price range or if the best buy price exceeds the limit price. | ✓ | ✗ | ✗ |
| Maximum Quote Spread Validation | If the exchange requires that quotes have to be entered as double-sided quotes, then single-sided quotes are rejected, and double-sided quotes are accepted only if the price difference between the buy side and the sell side of the quote does not exceed the Maximum Quote Spread. | ✓ | (✓) | ✓ |
| Transaction Size Limits | Enable the participant to restrict the quantity at order and quote entry on user level. | ✓ | ✗ | ✗ |
| Max Order Value | When a user enters or modifies an order or a quote, the user can optionally request the system to perform a Max Order Value Check, and to reject the order or quote, if it fails the check. On the Börse Frankfurt the check will be mandatory. | ✓ new | ✓ | ✓ |
| Max Order Quantity | When a user enters or modifies an order or a quote, the user can optionally request the system to perform a Max Order Quantity Check, and to reject the order or quote, if it fails the check. On the Börse Frankfurt the check will be mandatory. | ✗ | ✓ new | ✓ new |
| Order Book Count Limits | Allows a participant to restrict the number of orders and quotes per product, that a specific business unit or session may have in the order book at any moment. | ✓ | ✓ | ✓ |
| Manual Stop/Release | A Manual Stop/Release of Trading functionality is available. The effect of this is on a participant level, on a business unit level, or for an individual user. | ✓ | ✓ | ✓ |

Best Execution Reporting

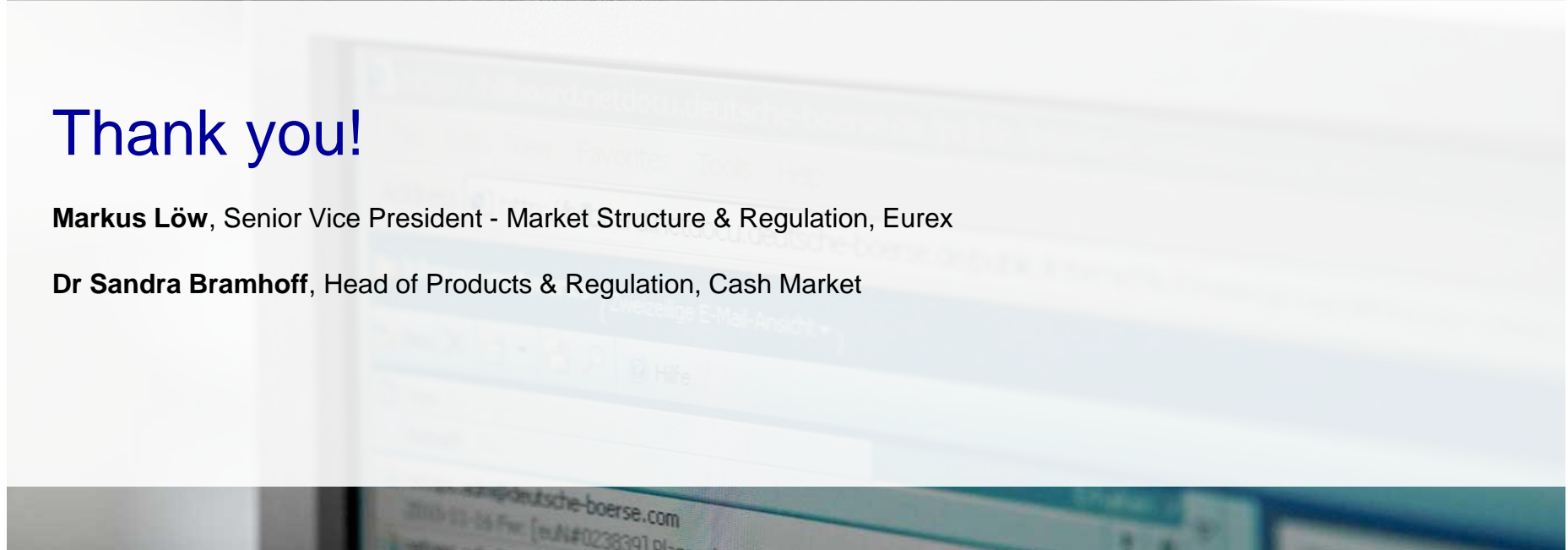
| Regulatory Topic | Regulatory Reference | Requirements Description |
|--|------------------------------------|--|
| Best Execution Reporting | MiFID II 27 (3) & (10)(a) (RTS 27) | <ul style="list-style-type: none"> ▪ Obligation of trading venues to publish quarterly Best Execution reports for each trading day, each trading venue, and each financial instrument ▪ Reports must include information on price, costs, likelihood of execution, best prices and depth of the order book etc. ▪ Reports must be published on website free of charge |
| Xetra / Eurex Implementation Approach | | <ul style="list-style-type: none"> ▪ Due to the data amount our preferred solution is to publish Best Execution reports for all financial instruments daily for the previous business date and cost reports each month on the 5th business date for the previous trading month ▪ Reporting file format is XML, enabling our member and the public user in a machine readable electronic format to download, search, sort and analyse all the provided data on the Xetra and Eurex website ▪ Reports are available on Xetra and Eurex website with a duration of 180 calendar days. After that reports will be provided on basis of ad-hoc requests ▪ XETRA and Eurex Bonds expected size of all files are approx. 100 MB (daily figure). Eurex expected size of each file is between 3 MB and 20 MB ▪ All deferred transactions (if applicable) are published end of business day and included in the best execution reporting on the next business date (t+1) ▪ Ongoing alignment with regulator on data field level (field interpretation, definition, population, applicability) and admissible report publication frequency (daily, monthly, quarterly) |



Thank you!

Markus Löw, Senior Vice President - Market Structure & Regulation, Eurex

Dr Sandra Bramhoff, Head of Products & Regulation, Cash Market





DEUTSCHE BÖRSE
GROUP

Market Making

Regulatory Requirements and Proposed Implementation

A low-angle photograph of a modern skyscraper with a glass facade. The building is composed of many rectangular windows, some of which are illuminated from within, showing interior office spaces. The sky in the background is a pale, clear blue. A semi-transparent white rectangular box is overlaid on the right side of the image, containing the title text.

Overview Regulatory Requirements

MiFID II Market Making Requirements at a glance

Investment firms *MiFID II Art. 17(3) / Art. 17(4)*

- Investment firm pursuing a market making strategy shall provide liquidity on a regular and predictable basis to the trading venue
- Enter into a binding written agreement with the trading venue which shall at least specify the obligations
- Have in place effective systems and controls to ensure that it fulfils its obligations under the agreement at all times
- An investment firm pursues a market making strategy when dealing on own account, continuously posting firm, simultaneous two-way quotes of comparable size and at competitive prices in at least one financial instrument on a single trading venue

Trading venues *MiFID II Art. 48(2) / Art. 48(3)*

- Regulated market shall establish a written agreement with all investment firms pursuing a market making strategy specifying obligations in relation to provision of liquidity
- Provide market making scheme to incentives liquidity provision for listed products .
- Regulated market is required to monitor and enforce compliance by investment firms with the requirements of written market making agreements

RTS 8 Regulatory technical standards on market making agreement and market making schemes

- Offer a **market making agreement** to all investment firms that pursue a market making strategy including minimum obligations in terms of presence, size and spread
- Offer a fair and non-discriminatory **market making scheme** which outlines incentives and requirements for quoting liquid equities, ETFs & ETPs, futures and options on liquid equities + ETFs and equity index futures and options for which there is a liquid market. Requirement is valid in a continuous auction order book trading system. Trading venue must offer a scheme during stressed market conditions, and may offer it during normal market conditions
- Define **stressed and exceptional market conditions**, implement those in respective trading systems and set up the right communication channel to inform all respective parties about the start and end of those
- Offer a **field to flag firm quotes** submitted in the performance of market making agreement in order to distinguish them from other order flows
- **Monitor the effective compliance** of investment firms with the obligations as defined in market making agreement and market making scheme.

Trading conditions “normal”, “stressed”, “exceptional” need to be defined

| Normal Market Conditions | Stressed Market Conditions | Exceptional Circumstances |
|---|---|--|
| <ul style="list-style-type: none"> Regular trading conditions in continuous auction markets Quotation parameters with target coverage of trading day for given size and spread parameters Minimum coverage of 50% per RTS 8¹⁾ | <ul style="list-style-type: none"> Post volatility interruptions Significant short-term changes of price and volume Risk-adjusted quotation parameters in spread and size terms Minimum coverage of 50% per RTS 8 | <ul style="list-style-type: none"> Extreme volatility in majority of instruments Disorderly trading conditions at TV Lack of prudent risk management by IF No obligation to provide liquidity on a regular and predictable basis, i.e. no market making obligation |

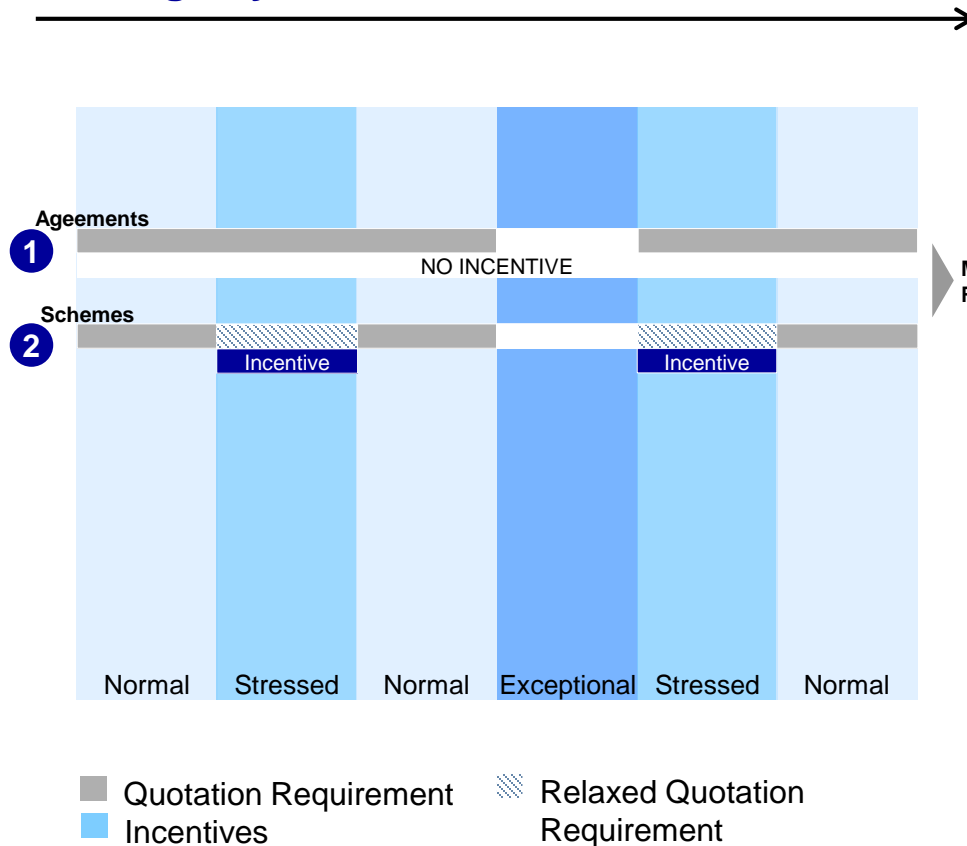
- During normal trading conditions investment firms under MM agreement are obliged to provide firm quotes for at least 50% of the trading hours during continuous trading for each trading day
- Firm quotes include any orders and quotes that are posted in a way that both sides are present in the order book at the same time of
 - comparable size when their volume do not diverge by more than 50% from each other¹⁾
 - competitive prices when their limits are within the maximum bid-ask range set by the trading venue
- Stressed market conditions are characterised by significant short-term changes in price and volume. In addition, the resumption of trading after volatility interruptions is considered as stressed market conditions (only of relevance for MM schemes).
- The obligation to provide liquidity does not apply in times of exceptional circumstances:
 - extreme volatility when majority of instruments face volatility interruption
 - Act of war, industrial action, civil unrest, cyber sabotage (to be defined by management)
 - Under disorderly trading conditions of TV
 - Investment's disability to maintain prudent risk management practices (to be reported by investment firm)

1) Minimum quoting size to use alternatively need to be confirmed by State of Hesse

Requirements to offer Agreements and Schemes are valid for Normal and Stressed Market Conditions

Trading day

Description



MiFID II Requirement

- 1 **Written Agreements:** Eurex and Xetra need to offer Written Agreements for all its products, to be signed by Market Makers upon their request.

Minimum obligations in terms of presence, size and spread on instrument or product level will be determined.

No incentives need to be paid out. Where appropriate, the terms of the applicable market making scheme needs to be pointed out.

- 2 **Market Making Schemes:** For equities, ETFs & ETPs, derivatives on liquid¹⁾ equities and ETFs as well as for liquid²⁾ equity index derivatives, market making schemes need to be offered by trading venues.

The schemes set out the incentives and the requirements that must be met to access those incentives under Normal Market Conditions (optional) and Stressed Market Conditions.

1) Shares and ETFs for which there is a liquid market as defined in accordance with Article 2(1)(17) of MiFIR.

2) Equity index futures and equity index options for which there is a liquid market as specified in accordance with point (c) of Article 9(1) and point (c) of Article 11(1) of MiFIR and corresponding Level 2 document.

A low-angle photograph of a modern skyscraper with a glass facade. The building is composed of many rectangular windows, some of which are illuminated from within, showing interior office spaces. The sky in the background is a pale, clear blue. A semi-transparent white rectangular box is overlaid on the right side of the image, containing the title text.

Eurex Implementation Proposal

Eurex implementation of Stressed Market Condition (SMC)

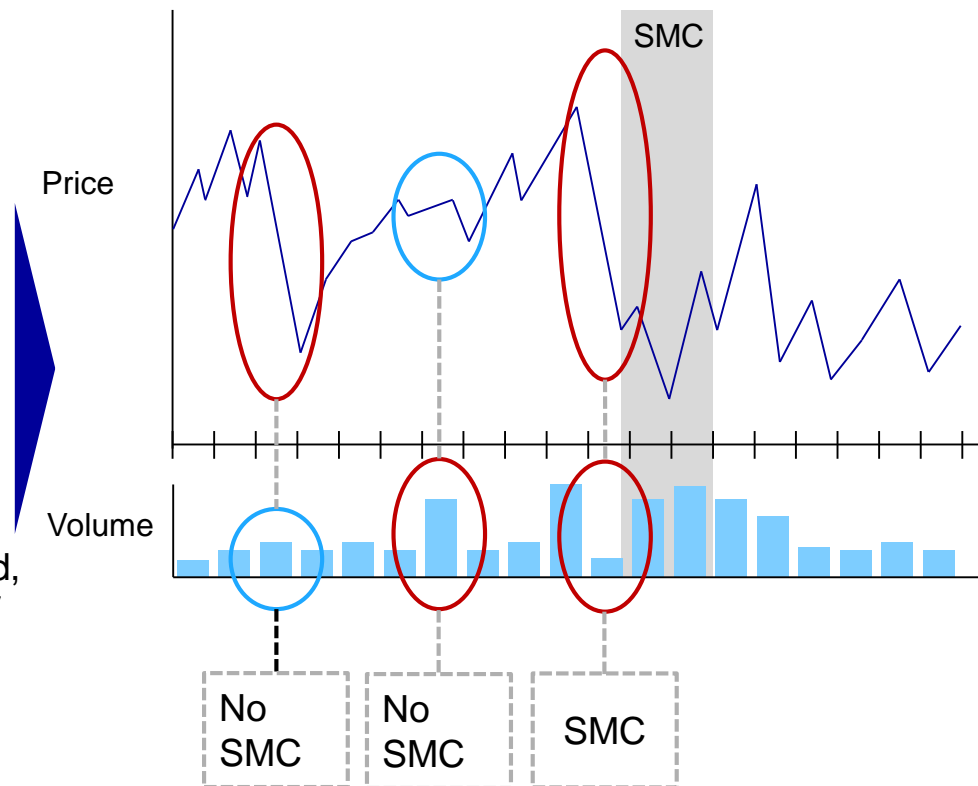
Regulatory definition of SMCs

- Trading venues shall set out the parameters to identify SMCs in terms of significant short-term changes of price **and** volume
- Trading venues shall consider the resumption of trading after volatility interruptions as SMC

Proposed implementation

- SMC is set to a specified time, after which the market will return to normal (unless another SMC is triggered)
- After a Volatility Interruption, the market will resume with SMC
- For Futures: Definition of a Stressed Market Trigger Mechanism which monitors price and volume change. In case both criteria are triggered, Stressed Market Conditions follows automatically
- For Options: No dedicated monitoring, trigger for SMC is linked to Futures
- Communication to members through readily accessible channels (Newsboard, Website)

Illustration of SMC Mechanism for Futures



Eurex implementation of Exceptional Market Conditions (EMC)

Triggers

Implementation

Extreme Volatility

- Automatic measurement of all Eurex products which are in SMC at the same point in time
- If the percentage exceeds 50%, EMC is automatically triggered for 60min, followed by 10min of SMC

Act of war, industrial action, civil unrest or an act of cyber sabotage

- Market Supervision triggers a Management Decision
- Upon positive decision, EMC will be manually set for the affected products

Disorderly trading conditions

- Orderly execution compromised if
 - Eurex processing times increases by 4 sigma
 - 50% of trading members lose connectivity
 - 50% of market makers lose connectivity
- Upon detection, Market Supervision triggers a Management Decision
- Upon positive decision, EMC will be manually set for the affected products

Suspension of pre-trade transparency obligation

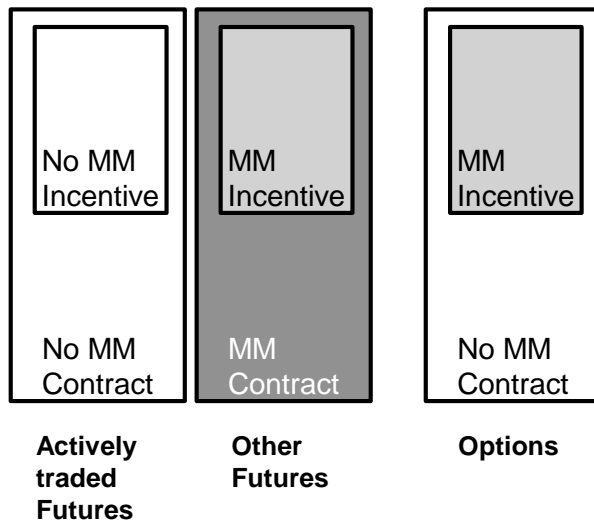
- Upon decision by responsible regulator, product is set manually into EMC by Market Supervision

Exceptional circumstances for individual investment firm

- Trading member declares emergency in writing
- Trading member exempt from obligations that day

Eurex needs to implement Written Agreements and Market Making Schemes

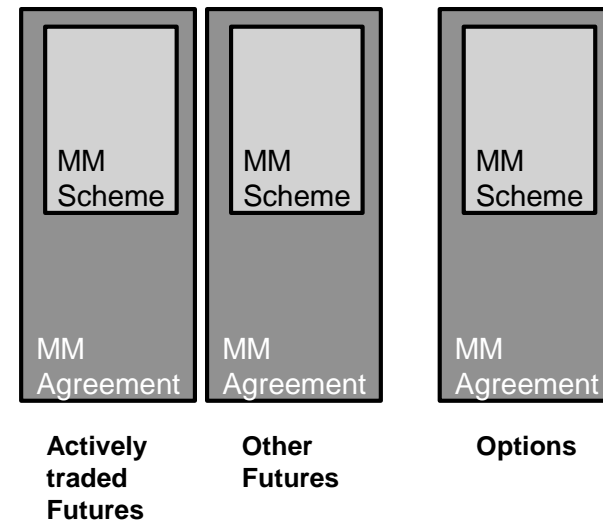
Eurex today



Eurex today offers written contracts in some Futures products. These contracts lay out the obligations (requirements) and incentives the Market Makers has vis-à-vis Eurex (DMM and AMM).

Eurex today offers incentives for options Market Makers (PMM and AMM).

Eurex with MiFID II



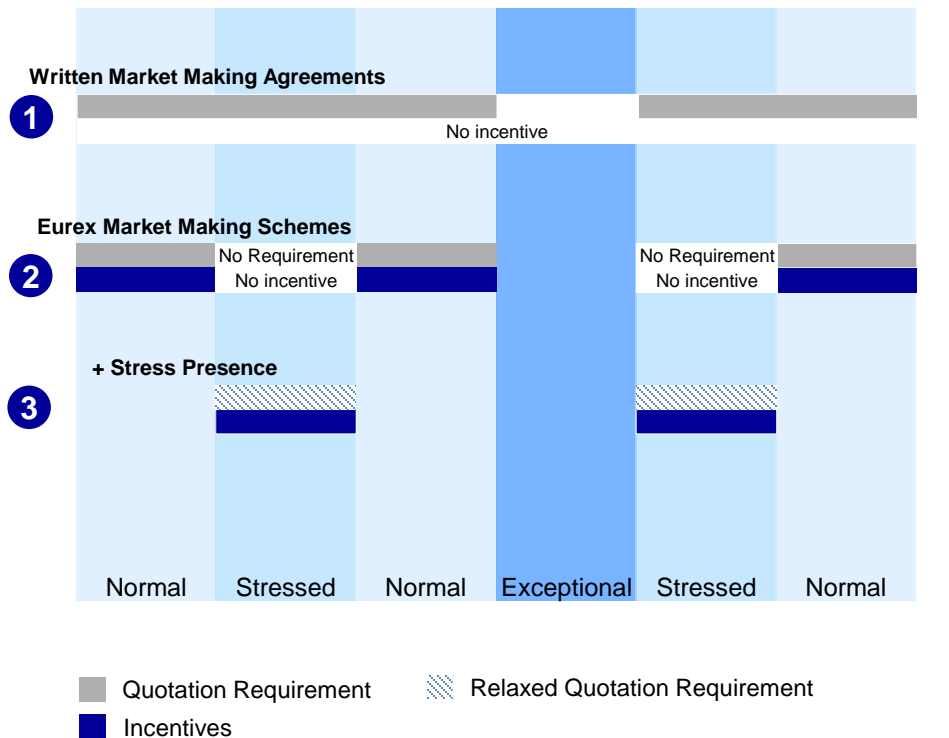
With MiFID II, Eurex will have to offer Written Agreements (similar to today's written contracts) to all participants who are required by MiFID II to enter into these agreements.

With MiFID II, Eurex will have to offer Market Maker Schemes (similar to today's incentives) in certain products.

Implementation Proposal: Performance during Stressed Market Conditions as “Stress Presence”

Trading day

Description

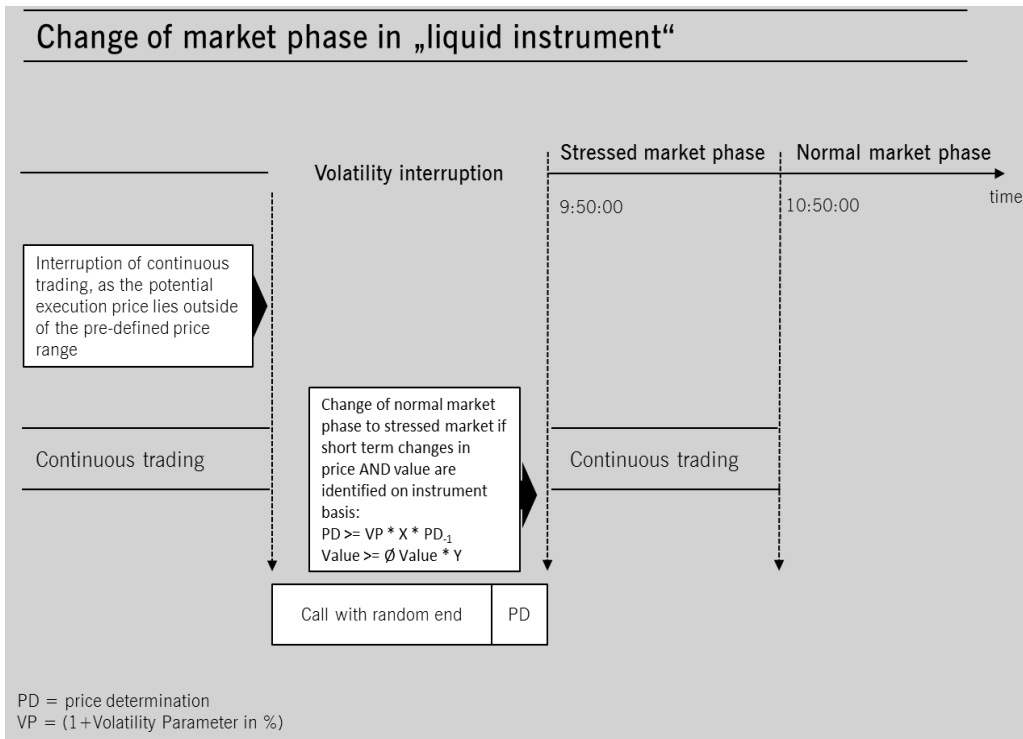


1. Eurex has to implement Written Agreements.
Today, Written Agreements exist only for less actively traded Futures products.
In the future, Written Agreements must be offered for all products.
2. Eurex Market Making Schemes will be offered during Normal Market Phases.
In Stressed or Exceptional Market Phases there is no quotation requirement.
3. The “Stress Presence” measures Market Making performance exclusively during the Stressed Market phase.
Market Makers who fulfil the quotation requirements will receive rebates on their monthly market making fees.

A low-angle photograph of a modern skyscraper with a glass facade. The building is composed of many rectangular windows, some of which are illuminated from within, showing interior office spaces. The sky in the background is a pale, clear blue. A semi-transparent white rectangular box is overlaid on the right side of the image, containing the title text.

Xetra Implementation Proposal

Xetra implementation of stressed market conditions (SMC)



- The following two parameters have to be defined by trading venue:
 - Short-term changes in price:
FWB will use extended volatility interruption to determine short-term changes in price per instrument
 - Short-term changes in value:
The value per price tick executed in extended volatility interruption in the respective instrument is higher by factor y than the average value per tick of previous year (or previous three months). Factor y will be defined by liquidity classes
- A stressed market condition would last 60 minutes. If within the stressed market condition another extended volatility interruption will be triggered AND if again the value equal conditions of short-term changes, stressed market condition will be prolonged for 60 minutes from point of time identified as stressed market and so on until beginning of closing auction

Xetra implementation of exceptional market conditions (EMC)

Triggers

Implementation

Extreme Volatility

- Automatic measurement of all Xetra products if volatility interruption has been triggered
- If the percentage exceeds 50% of all tradable products, EMC is automatically triggered for 60min and can be prolonged for another 60min if situation repeats within EMC; the market is informed by flag on start and end of EMC

Act of war, industrial action, civil unrest or an act of cyber sabotage

- Market Supervision triggers a Management Decision
- Upon positive decision, EMC will be manually set for all tradable products

Disorderly trading conditions

- In case of disorderly trading conditions meaning if majority of trading members can not connect to trading system or in case of latency issues
- Market Supervision triggers a Management Decision
- Upon positive decision, EMC will be manually set for all tradable products

Exceptional circumstances for individual investment firm

- Trading member declares emergency in writing
- Trading member exempt from obligations that day

Xetra's Overview on Market Making program with MiFID II:

Designated Sponsor is Market Maker with stricter obligations incentivised by 100% fee reimbursement during normal trading conditions

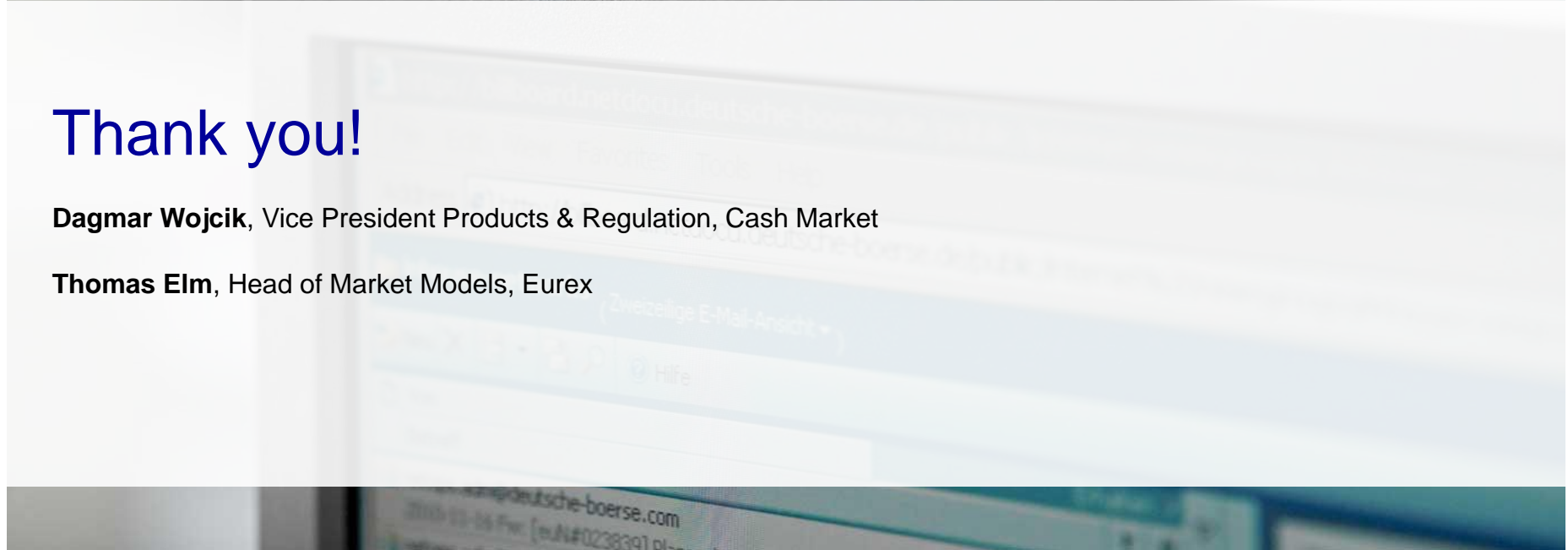
| | | Market Maker | Designated Sponsor |
|---------------------------|-------------|---|--|
| Contract | | Mandatory | Voluntary |
| Motivation | | Pursuing market making strategy as defined by MiFID II | <ul style="list-style-type: none"> Ensuring continuous trading and condition for index participation on behalf of issuer Participating in incentive scheme |
| Instrument scope | | All tradable instruments | |
| Normal trading conditions | Obligations | Depending on instrument and level of liquidity 50% - - | 90% 90% 80% |
| | Privileges | - | <ul style="list-style-type: none"> 100% transaction fee reimbursement + clearing & settlement credits Designated Sponsor rating |
| | | | |
| Stressed market | Obligations | Participation Rate | 50 % participation rate |
| | Privileges | | Reimbursement of transaction fees |
| Extreme Volatility | Obligations | Participation Rate | No quoting obligation / suspension of performance measurement |



Thank you!

Dagmar Wojcik, Vice President Products & Regulation, Cash Market

Thomas Elm, Head of Market Models, Eurex





DEUTSCHE BÖRSE
GROUP

Transparency



Overview and Motivation

Transparency is at the core of MiFID/MiFIR

Strengthening transparency is one of the shared principles to improve the financial system as confirmed by the G20 Leaders' statement in London on 2 April 2009, following the financial crisis which exposed weaknesses in the transparency of financial markets with harmful socioeconomic effects.

In order to strengthen the transparency and improve the functioning of the internal market for financial instruments, a new framework establishing uniform requirements for the transparency of transactions in markets for financial instruments is currently being put in place.

This framework aims to establish comprehensive rules for a broad range of financial instruments and it will complement requirements for the transparency of orders and transactions in respect of shares established in Directive 2004/39/EC of the European Parliament and of the Council.

This transparency framework is to be documented in MiFID / MiFIR and the relevant RTS.

Current Status of Regulatory Documentation

Postponement of application of MiFID II / MiFIR to 3 January 2018 agreed in Quick fix to Level 1 published on July 1, 2016 in EU Official Public Journal; Level 1 treatment of Package Transactions also addressed in this Quick fix;

RTS 2: ESMA submitted to the EU Com draft regulatory technical standards in September 2015; adopted by EU Com; final approval by EP and Council outstanding;

ESMA shall re-submit draft RTS on Package Transactions to the Commission by 28 February 2017

Regulatory Open Issues

More clarity needed from the regulator on the treatment of some Eurex asset classes, Packaged and Flex Transactions
Waiver application process still unclear.

Overview of Regulatory Scope

| <div>Venues</div> <div>Regime</div> | Multilateral (Trading Venues) | | | Bilateral | |
|--------------------------------------|---|--|-------------------------------------|---|-----|
| | Regulated Markets (RMs) | Multilateral Trading Facilities (MTFs) | Organised Trading Facilities (OTFs) | Systematic Internaliser (SIs) ²⁾ | OTC |
| Pre-trade transparency | Mandate to provide in order book: 1) Bid , 2) Offer and 3) Depth | | | Firm quotes (✓) | N/A |
| Exemptions 'Waivers' ¹⁾ | 1) Large-in-scale (LIS) ~ i.e. block size 2) Indication of interest in RFQ or voice systems above a size specific to the instrument (SSTI) 3) No liquid market , under trading obligation or otherwise | | | SSTI (✓) | N/A |
| Post-trade transparency | 1) Reporting of price, volume, time of transactions executed 2) Till 2020 reporting within 15 minutes , thereafter 5 minutes | | | (✓) | N/A |
| Exemptions 'Deferrals' ¹⁾ | <ul style="list-style-type: none"> Publication details can be deferred, if exemption granted (e.g. LIS/Illiquid) LIS Deferral based on post-trade thresholds Deferral period t+2 or longer National competent authority may grant deferrals with stricter elements, by asking to include aggregated volumes or other details before time lapses | | | (✓) | N/A |

1) Trading venue / SI has to request exemptions with national competent authority

2) Only derivatives not falling under trading obligation, hence, not being liquid, or above size specific to the instrument

Eurex Transparency Regime - Post MIFID II and following the migration of TES to T7

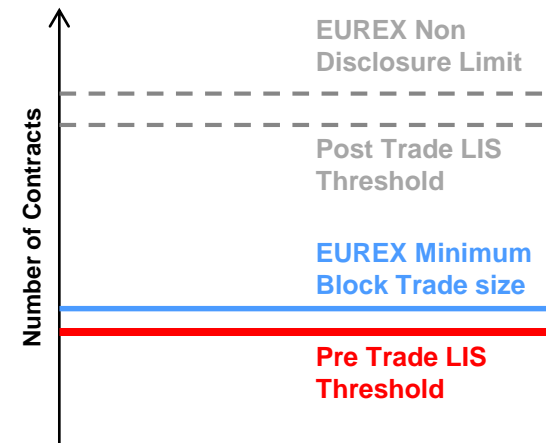
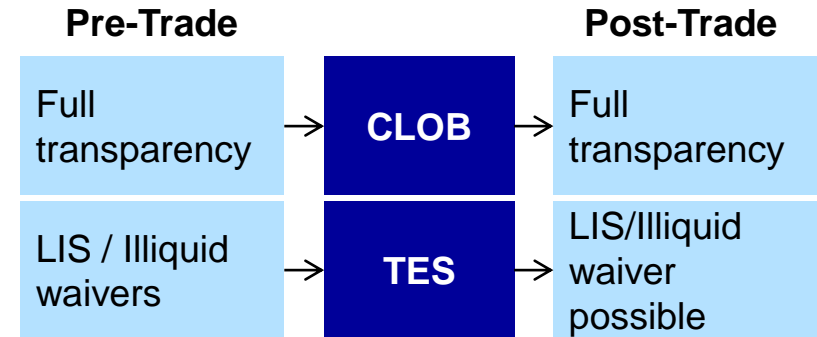
Pre-Trade Transparency

- All trades coming through the TES functionality will be waived for transparency purposes
- Eurex will have either the “Large In Scale” or “Illiquid” waivers in place to allow for this
- The **Minimum Block Trade sizes have to be at or above regulatory (e.g. LIS) thresholds**

Post-Trade Transparency

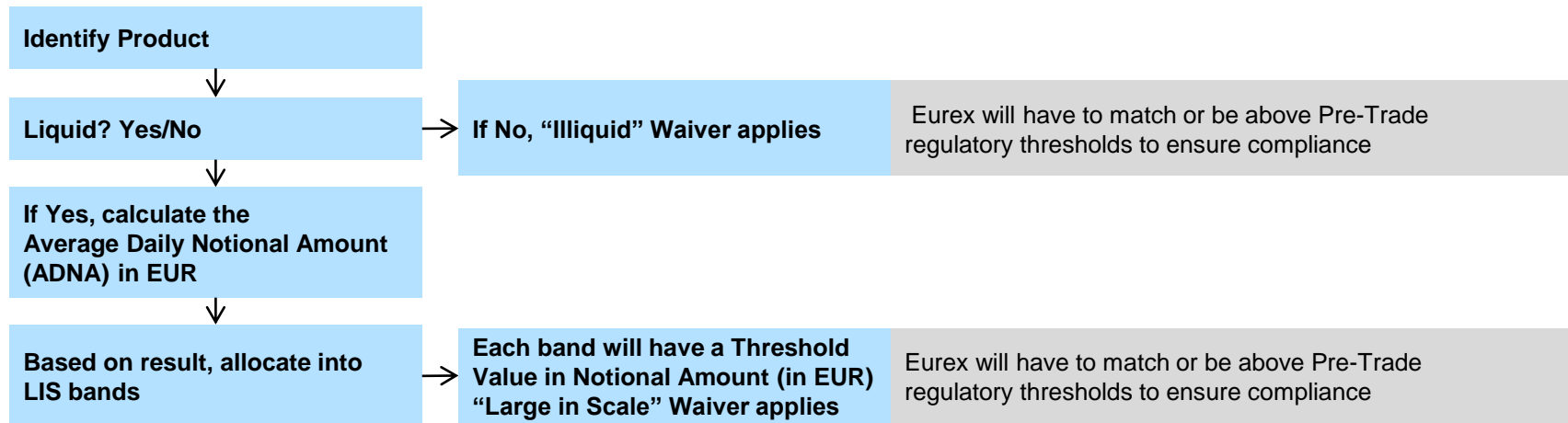
The use of post-trade waivers is **optional**

- Waivers would enable trades classified as LIS or Illiquid to be **deferred up to end of business** (currently only available for trades above the VDL - Volume Disclosure Limit)
- There is the potential for shorter/longer periods of non disclosure than the current setup as the regulatory framework allows deferrals up to T+2

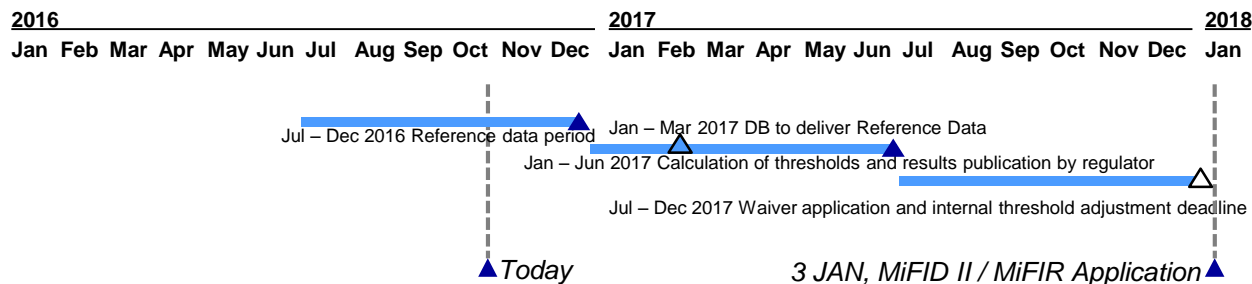


Threshold Calculation

The methodology for calculating the thresholds for Transparency purposes is specified in RTS 2, Art. 13 and the related ANNEX III. The results from these calculations are expected to be published by the regulator (July 2017). A **very** simplified example is shown below:



Timeline for Transparency



Threshold Calculation

Extract from RTS 2, ANNEX III:

Table 6.2

Equity derivatives – pre-trade and post-trade SSTI and LIS thresholds for sub-classes determined to have a liquid market

| Asset class - Equity Derivatives | | | | | | | |
|----------------------------------|--|--|---|-----------------|-----------------|-----------------|-----------------|
| Sub-asset class | For the purpose of the determination of the pre-trade and post-trade SSTI and LIS thresholds each sub-asset class shall be further segmented into sub-classes as defined below | Transactions to be considered for the calculations of the thresholds | Pre-trade and post-trade SSTI and LIS threshold values determined for the sub-classes determined to have a liquid market on the basis of the average daily notional amount (ADNA) band to which the sub-class belongs | | | | |
| | | | Average daily notional amount (ADNA) | SSTI pre-trade | LIS pre-trade | SSTI post-trade | LIS post-trade |
| | | | | Threshold value | Threshold value | Threshold value | Threshold value |
| Stock index options | a stock index option sub-class is defined by the following segmentation criteria: Segmentation criterion 1 - underlying stock index | calculation of thresholds should be performed for each sub-class considering the transactions executed on financial instruments belonging to the sub-class | < EUR 100m ADNA | EUR 20,000 | EUR 25,000 | EUR 1,000,000 | EUR 1,500,000 |
| | | | EUR 100m <= ADNA < EUR 200m | EUR 2,500,000 | EUR 3,000,000 | EUR 25,000,000 | EUR 30,000,000 |
| | | | EUR 200m <= ADNA < EUR 600m | EUR 5,000,000 | EUR 5,500,000 | EUR 50,000,000 | EUR 55,000,000 |
| | | | ADNA >= EUR 600m | EUR 15,000,000 | EUR 20,000,000 | EUR 150,000,000 | EUR 160,000,000 |
| Stock index futures/forwards | a stock index future/forward sub-class is defined by the following segmentation criteria: Segmentation criterion 1 - underlying stock index | calculation of thresholds should be performed for each sub-class considering the transactions executed on financial instruments belonging to the sub-class | < EUR 100m ADNA | EUR 20,000 | EUR 25,000 | EUR 1,000,000 | EUR 1,500,000 |
| | | | EUR 100m <= ADNA < EUR 1bn | EUR 500,000 | EUR 550,000 | EUR 5,000,000 | EUR 5,500,000 |
| | | | EUR 1bn <= ADNA < EUR 3bn | EUR 5,000,000 | EUR 5,500,000 | EUR 50,000,000 | EUR 55,000,000 |
| | | | EUR 3bn <= ADNA < EUR 5bn | EUR 15,000,000 | EUR 20,000,000 | EUR 150,000,000 | EUR 160,000,000 |
| | | | ADNA >= EUR 5bn | EUR 25,000,000 | EUR 30,000,000 | EUR 250,000,000 | EUR 260,000,000 |

Challenges and Next Steps

Challenges

- **All asset classes impacted**, block trade sizes to be re-visited
- The thresholds will be set by the regulators in notional terms. Translating this into number of contracts will have different outcomes for different products within the same liquidity band
- **Need to ensure meaningful groupings for the block track size calibration**
- **Regulatory documentation still outstanding** (e.g. on the treatment of some Eurex products such as Packaged Transactions)

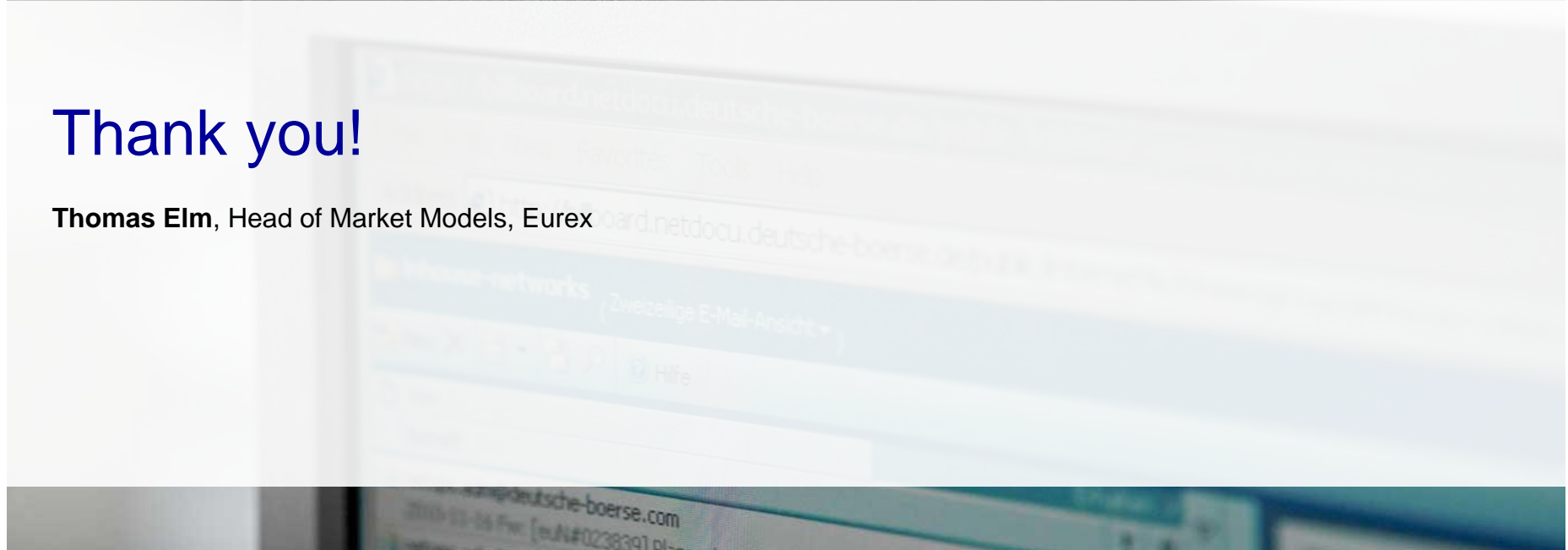
Next Steps

- Work closely with the internal regulatory team to reach clarity from the regulator on open issues
- Complete mapping of Eurex products and their respective Block Trade Sizes with the support of Product Development
- A flexible approach to deferrals is currently being investigated to allow for shorter/longer periods of non disclosure than the current setup as the regulatory framework allows deferrals up to T+2



Thank you!

Thomas Elm, Head of Market Models, Eurex





DEUTSCHE BÖRSE
GROUP

Member Readiness



MIFID II / MIFIR Impacts – for Eurex / Xetra members

MIFID regulation impacts the Trading Participant, as well as the individual exchange trader

Trading Participant



Impacts addressed in T7 R6.0

Exchange Trader



Impact of RTS 24 (entering an ID for each trader)
will be addressed by using 2 mechanisms

How we will assist you – Overall (Trading Participant) Level

Preparation

- The request of Regulatory Coordinators to facilitate efficient communication
- Very early release announcement
 - Xetra Circular 062/16
 - Eurex Circular 070/16
- Organisation of series of MIFID II / MIFIR workshops between October and December

Implementation & Rollout

- Provision prolonged simulation phase
 - Two weeks longer than usual
- T7 Cloud simulation with additional availability

How we will assist you – Individual (Trader) Level

- RTS 24 requires (amongst other things) that traders are identified
- Format for identification of natural persons depend on the country and may encompass passport number, insurance ID numbers, CONCAT ID) & others
- DBG uses eXAS (electronic Exchange Admission Service) to collect & maintain the identification
- The entry of IDs will be provided using a bulk upload via a spreadsheet (in addition to a standard way via the Member Section)

| Facility | New Traders | Existing Traders | Available from Feb 2017 ²⁾ | Available after Jan 2018 |
|---|-------------|------------------|---------------------------------------|--------------------------|
| Member Section (via login portal for Individual traders) | ✓ | ✓ | ✓ | ✓ |
| Bulk upload via spreadsheet provided by DBG ³⁾ | ✗ | ✓ | ✓ | ✗ |

Client support from Customer Readiness

- DBG will produce a video to help traders enter their National ID
- Trading participants will receive frequent updates on the compliant status of their traders

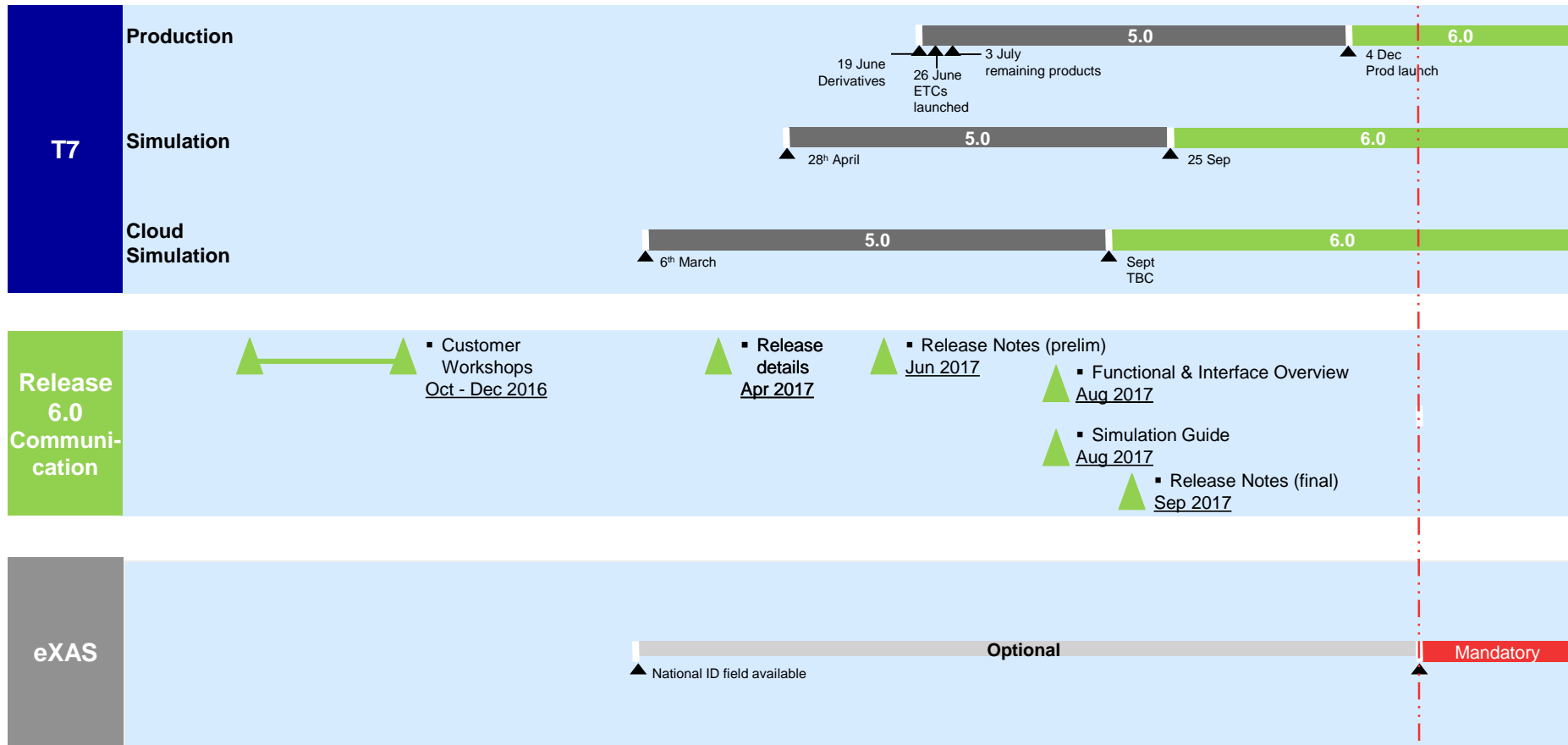
1) CONCAT ID is based on a person's member ID, first 5 letters of first name, last name, birthday & nationality. It can only be used by Traders in those countries allowed to use it

2) Facilities expected to be available in February (but maybe subject to change)

3) Bulk upload facility of spreadsheet filled in by member (provided member agrees that DBG can publish date of birth in the sheet)

Roadmap Update – Project Overview

| 2016 | | | 2017 | | | | | | | | | | | | 2018 | |
|------|-----|-----|------|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|------|-----|
| Q4 | | | Q1 | | | Q2 | | | Q3 | | | Q4 | | | Q1 | |
| Oct | Nov | Dec | Jan | Feb | Mar | Apr | May | Jun | Jul | Aug | Sep | Oct | Nov | Dec | Jan | Feb |



Implementation and communication schedule

| T7 Release 6.0- | Q2/2017 | | | Q3/2017 | | | Q4/2017 | | |
|--|---------|-----|----------|---------|----------|----------|----------|-----|-----|
| | Apr | May | Jun | Jul | Aug | Sep | Oct | Nov | Dec |
| Release Notes | | | | | | | | | |
| T7 Release Notes | | | P | | | F | | | |
| Simulation | | | | | | | | | |
| Participant Simulation Guide | | | | | | F | | | |
| Overview and functionality | | | | | | | | | |
| Functional and Interface Overview | | | | | F | | | | |
| Functional Reference | | | | | | F | | | |
| Participant and User Maintenance Manual | | | | | | | F | | |
| T7 GUI solutions | | | | | | | | | |
| T7 Trader and Admin GUI – Manual | | | | | | P | F | | |
| T7 Trader and Admin GUI - Installation Manual | | | | | | P | F | | |
| Trading interfaces | | | | | | | | | |
| T7 Enhanced Trading Interface – Manual | | | | | P | | F | | |
| T7 Enhanced Trading Interface - XML Representation | | | | | P | | F | | |
| T7 FIX Gateway - FIX 4.2 and 4.4 Manual | | | | | P | | F | | |
| T7 FIX Gateway - FIXimate FIX 4.2 and 4.4 | | | | | P | | F | | |
| T7 FIX Gateway - FPL Repository | | | | | P | | F | | |
| Market and reference data interfaces | | | | | | | | | |
| T7 Market + Reference Data Interfaces, Manual | | | | | P | | F | | |
| T7 Market + Reference Data Interfaces, FAST Templates | | | | | P | | F | | |
| T7 Reference Data File – FIXML Schema Files | | | | | P | | F | | |
| T7 Extended Market Data Services – Manual | | | | | P | | F | | |
| T7 Extended Market Data Interfaces, FAST Templates | | | | | P | | F | | |
| T7 Enhanced Order Book Interface – Manual | | | | | P | | F | | |
| T7 reports | | | | | | | | | |
| T7 XML Reports - Reference Manual | | | | | | P | F | | |
| Network access | | | | | | | | | |
| T7 Network Access Manual | | | | | P | | F | | |

The dates are indicative only. They are not finalised and are subject to change.

Existing documents (see left) will be revised for release 6.0.

Preliminary versions (identified by **P**) will be published in June 2016.

Final versions (identified by **F**) will be published in September and October 2017 prior to the production launch.

www.eurexchange.com

via

**Technology >T7 >System
Documentation > Release 4.0**

Please note that dates are preliminary and subject to change.

How can we assist you?

Register your Regulatory Coordinator

- To improve the efficiency of communication on related regulatory matters, Eurex recommends customers register a “Regulatory Coordinator” via the member section of its website
- Instructions for registering the details can be found in the Eurex/Xetra Member Sections

Where to direct your queries

| Channel | Contact |
|-----------------------|---|
| General email support | regulatory.support@deutsche-boerse.com |
| Hotline | +49-(0) 69-2 11-1 17 00 |
| Relationship managers | Responsible for communication with business relevance |
| Key account managers | Responsible for communication with readiness relevance |

Simulation Timelines

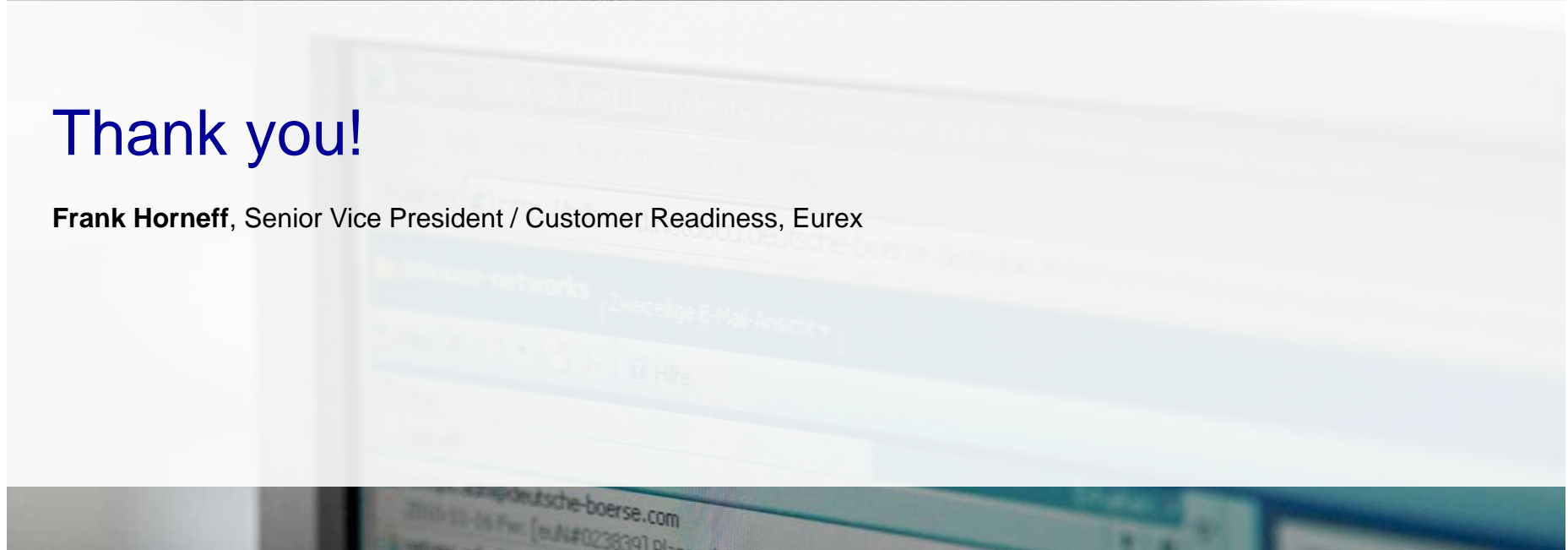
We have listened to your feedback:

- *T7 Release 6.0 has a 10 week Simulation window prior to go-live*



Thank you!

Frank Horneff, Senior Vice President / Customer Readiness, Eurex





Thank you!

Vassiliki Veliou, Head of Market Structure & Regulation, Eurex

Markus Löw, Senior Vice President - Market Structure & Regulation, Eurex

Dr Sandra Bramhoff, Head of Products & Regulation, Cash Market

Dagmar Wojcik, Vice President Products & Regulation, Cash Market

Thomas Elm, Head of Market Models, Eurex

Frank Horneff, Senior Vice President / Customer Readiness, Eurex & Cash Market

If you have any questions we would be happy to hear from you at:

regulatory.support@deutsche-boerse.com