

XONTRO Newsletter

MiFID II

No. 1

BRAINTRADE Gesellschaft für Börsensysteme mbH	30 th December 2016
	Page 1
XONTRO / MiFID II	Newsletter No. 1

This XONTRO newsletter contains information regarding the following issue:

MiFID II / MiFIR – XONTRO modifications (overview)

Disclaimer:

The Newsletter distributed herein should be regarded as an information supplementary to the product documentation of a system either operated by or technically accessible via the "BrainTrade Gesellschaft für Börsensysteme mbH, Börsenplatz 4, 60313 Frankfurt Main, Germany" company.

These Newsletters are therefore only distributed via e-mail among the BrainTrade system users resp. their service providers. The newsletter subscription may be revoked at any time via e-mail to be sent to "trade(at)xontro.de" or by telephone using the direct number +49-(0)69-589978-110.

BRAINTRADE
Gesellschaft für Börsensysteme mbH

Page 2

XONTRO / MiFID II Newsletter No. 1

1 MiFID II / MiFIR – Introduction

One note to begin with: the XONTRO MiFID II newsletters are addressed towards banks as well as intermediaries. They represent a new separate "newsletter area"; thus they commence using the sequential number 1. The MiFID II newsletters will be published in German and English. They may be inspected resp. downloaded from the internet using the "MiFID II" category under "www.xontro.de".

The entire securities trading business within the EU will be facing dramatic changes, caused by the "Markets in Financial Industries Directive (MiFID)" resp. "... Regulation (MiFIR)", to be coming into force by January 3rd, 2018. These changes will, in many ways, affect the operating modes of cash market exchange trading venues, such as, e.g., the XONTRO exchanges.

This newsletter starts off by outlining the MiFID/MiFIR innovations that the XONTRO trading venues will be affected by; thereafter, the tangible runtime modifications that result from these innovations for the XONTRO exchanges' business processes will be depicted.

This newsletter may not yet be taken as a programmer or implementation template guide lining the MiFID implementation requirements for individual investment firms; for this purpose, this newsletter has not yet been drafted sufficiently detailed enough. Therefore, the XONTRO customers are kindly requested to wait for the publication of further news and details regarding the MiFID issues, to be published within the next few weeks to come. For this, the notifications posted at the end of this newsletter are kindly recommended for inspection, too.

BRAINTRADE
Gesellschaft für Börsensysteme mbH

30th December 2016

Page 3

XONTRO / MiFID II Newsletter No. 1

2 Overview

Those extensive MiFID/MiFIR regulations that will bear no visible influence upon the value-added process along with the trading venues will not be regarded here. According to an analysis done by BrainTrade, together with their associated trading venues, the following areas will have to be focused upon:

- Enhanced pre and post trade transparency regulations for the trading venues.
- Submission requirements for trade data (turnover values, ratio of executed to unexecuted orders, etc.) towards the regulatory authorities.
- New regulations for the transaction reporting procedures, aiming at the replacement of the
 existing registration procedures according to §9 WPHG ("TRICE") by the new transaction
 reporting tools.
- Provision and, upon request, forwarding of specific order history data towards to regulatory authorities (BaFin, ESMA, etc.).
- Publication of the "best execution quality data" for transactions executed on the trading venues.
- EU-wide standardization of the tick size bands used for certain instrument groups, as well as of the time stamp formats used for so-called "reportable events".
- As well as another series of further "minor" regulations, etc.

These prescriptions will shortly be described in what follows next; the chapters that follow thereafter will deal with drafts of the implementation impact for the XONTRO applications, as well as with the hitherto planned implementation strategy for XONTRO.

2.1 New Transparency Requirements

"Transparency requirements" essentially mean that, either a party having participated in a securities transaction, or the agent operating the executing trading venue, has to publish the conditions of a securities transaction in such a "transparent" manner that a non-involved investor will be enabled to inspect the market conditions that have led to a specified contract for a specified instrument. For this purpose, data covering the pre- (offers, bids, asks, quotes, spreads, etc.) as well as the post-trading situation (price, time of contract, backlogs, exceptions that justify a deviation from the market price, etc.) will have to be included into the record. These data should be made open to the public as promptly as possible.

These prescriptions are in effect for the post trade transparency for equity instruments as of today already; in the future, they will become effective for the pre- and post-trade transparency for all securities classes as binding.

BRAINTRADE
Gesellschaft für Börsensysteme mbH

Page 4

XONTRO / MiFID II Newsletter No. 1

For the prices fixed in XONTRO, the post trade transparency for all securities classes takes place as of now already by forwarding them onto the "Consolidated Exchange Feed" (CEF) of the Deutsche Börse and thence being made accessible to the public.

In addition, a unique transaction identifier will be delivered by XONTRO. Also, CEF will obtain a further price message having been flagged accordingly, in case at least one algo order was executed within a given price fixing. The obligation to flag algo orders by the participants will remain unchanged.

With regards to the pre trade transparency, the quotes issued by the pricing intermediaries are being submitted by XONTRO onto CEF for all securities classes as of now already. Thus, for XONTRO there will be no adaptation to become necessary.

For the XONTRO participants, this means that there will be no changes to become necessary with regards to the pre- and post-trade transparency requirements.

2.2 New Reporting Obligations

The registration obligations valid in Germany now, according to §9 WPHG, are scheduled to be replaced resp. harmonized within the EU by the MiFID/MiFIR regulations covering the new transaction reporting obligations, beginning as of 3rd January 2018. Strictly speaking, this reporting obligation is not mandatory for trading venue operators as of now as well as in the future, but rather for the (owners resp. operators of) investment firms (funds managers, intermediaries, brokers, ...); thus it appears to be irrelevant for the (operators of) trading venues. However, due to reasons not being entirely comprehensible on the first glimpse, the legislator has defined two essential exceptions from this rule:

- If a party being involved in a securities transaction is a resident of a non-EU country, then the transaction reporting obligation is not to be done by the participating party (or their investment firm), but rather by the trading venue that the transaction was executed on.
- If employees of an EU central bank (e.g. of the Deutsche Bundesbank) are involved in a securities transaction, then, likewise, not the central bank, but rather the executing trading venue remains subject to report.

Due to this reason, and just for these two exceptional cases to be complied with, some additional routines might be implemented for the XONTRO trading venues that follow this reporting obligation in those exceptional cases mentioned. As these reports should include details not yet contained in XONTRO so far, some XONTRO interface modules will have to be extended; for this purpose, cf. the chapters 4. and 5. below.

BRAINTRADE
Gesellschaft für Börsensysteme mbH

Page 5

XONTRO / MiFID II Newsletter No. 1

2.3 New Best Execution Reports

Beginning with the 2nd quarter of 2018, all trading venue operators within the EU will be requested to publish a regular survey covering the individual system trading parameters, broken down according to the individual ISINs traded. These surveys are requested to be available in a machine-readable format and be freely accessible for all EU citizens on an internet platform. These surveys will be aimed to enable a fair comparison of the individual trading platform parameters for all private investors within the EU, in order for them to come to a better decision as for the choice for a trading location regarding their investor's decisions.

The surveys asked for will be delivered by XONTRO resp. the XONTRO trading venues at a point of time yet to be confirmed.

2.4 New Technical Standards

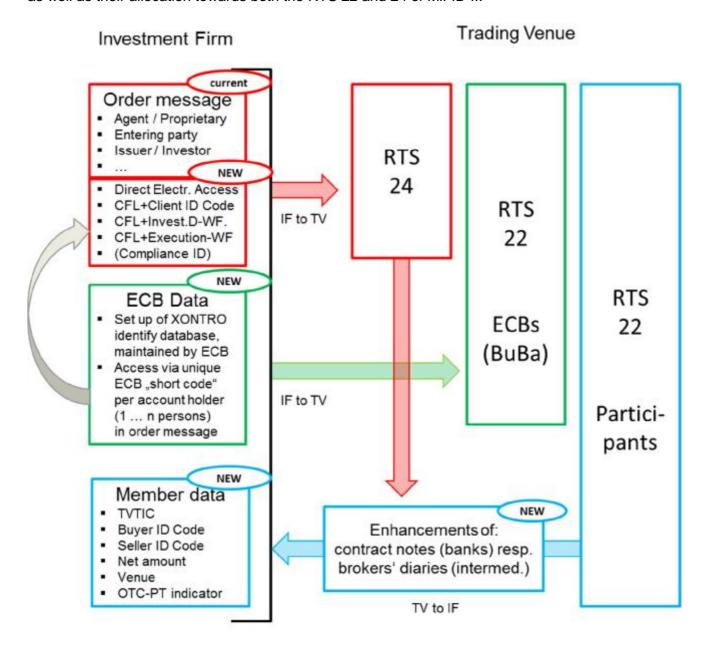
In addition to those standards already existing as of today, a series of further technical standards will have to be implemented, or existing standards will have to be extended. Amongst other things, this will affect the functionalities listed as follows:

- Each event to be reported towards ESMA should contain a time stamp using UTC and having a mandatory fixed format.
- The trading systems should provide evidence that they are capable to cope with certain stress factors, such as a message load capacity twice as high as for the highest peak within the more recent past.
- Within the trading system, there should be a "panic button" being available, by means of
 which the trading activity for a certain instrument, or for an entire trading segment, may be
 stopped "at the push of a button", in case certain configuration modes may occur within the
 trading system.
- Those tick size bands being valid for a certain instrument, and for the time being, should be
 used equally within all trading systems; this should likewise be true for the periodic changes
 of the tick size band used for a given instrument, e.g. in cases where a liquidity shift was
 detected for that instrument.
- etc.

XONTRO / MiFID II Newsletter No. 1

3 (Modified) Data Flow Charts - Overview

The chart embedded below shows a schematic overview over the new resp. extended data flows, as well as their allocation towards both the RTS 22 and 24 of MiFID II:



CFL = Control flag (eg. LEI, National-ID, Algorithm, ...)
TVTIC = Trading Venue Transaction Identification Code

Page 7

XONTRO / MiFID II Newsletter No. 1

4 Interface Adaptations for Financial Institutes

As the co-ordination details between XONTRO and the remaining German cash market trading venues (Xetra, Xitaro, Tradegate, etc.) have not yet been finally concluded with regards to the interface enhancements, it is not yet possible to deliver a detailed description for the final adaptations at this moment. The co-ordinated aim is to deliver a description as consistent as possible, in order to minimize the individual differences between the trading venues being in scope.

Therefore, at this very moment only generally accepted conclusions may be published, such as the statements to follow below:

- The order entry interfaces SAKI-FIX, SAKI-SWIFT, as well as the 3270 dialog interface, will be augmented, essentially by the inclusion of data covering the type of party or parties having been involved in an order entry.
- In case so called "short codes" will be used to depict the parties involved, it may become
 mandatory to deliver some additional specifications via an additional interface (e.g. via file
 transfer).
- The contract notes format will be enhanced (for real time contract notes as well as for the contract notes data carrier sets).

Those details known so far will be illustrated in the chapters to follow below.

4.1 System Interfaces (SAKI-FIX and SAKI-SWIFT)

4.1.1 Order Entry Enhancements

In order to comply with the requirements of an ex post order history free of gaps for an order history report according to RTS 24, resp. for the transaction reporting requirements according to RTS 22 (EU central banks resp. Non-EU participants), the following additional fields are believed to be needed:

- Direct Electronic Access (DEA) Field 2^{1*}
 'true' where the order was submitted to the trading venue using DEA as defined in Article 4(1)(41) of Directive (EU) 2014/65.
- 'false' where the order was not submitted to the trading venue using DEA as defined in Article 4(1)(41) of Directive (EU) 2014/65.
- Client identification code (CIC) Field 3*
 Code used to identify the client of the member or participant of the trading venue. In case there is DEA, the code of the DEA user shall be used. Where the client is a legal entity, the LEI code of the client shall be used. Where the client is not a legal entity, the {NATIONAL ID}

¹ Items bearing references towards ESMA sources are flagged with a "*".

XONTRO / MiFID II Newsletter No. 1

shall be used. In case of aggregated orders, the flag AGGR as specified in Article 2(3) of Commission Delegated Regulation (EU) .../... on maintenance of relevant data relating to orders in financial instruments under article 25(2) of Regulation (EU) No 600/2014 shall be used. In case of pending allocations, the flag PNAL as specified in Article 2(2) of Commission Delegated Regulation (EU) .../... on maintenance of relevant data relating to orders in financial instruments under article 25(2) of Regulation (EU) No 600/2014 shall be used. This field shall be left blank only if the member or participant of the trading venue has no client.

- Investment decision within firm (IDWF) Field 4* 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 in accordance with Article 8 of Commission Delegated Regulation (EU) .../... 22 on transaction reporting under Article 26 of Regulation (EU) No 600/2014. Where a natural person within the member or participant of the trading venue is responsible for the investment decision the person who is responsible or has primary responsibility for the investment decision shall be identified with the {NATIONAL_ID}. Where an algorithm was responsible for the investment decision the field shall be populated as set out in Article 8 of Commission Delegated Regulation (EU) .../... on transaction reporting under Article 26 of Regulation (EU) No 600/2014]. This field shall be left blank when the investment decision was not made by a person or algorithm within the member or participant of the trading venue.de.
- Execution within firm (EXWF) Field 5*
 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 in accordance with Article 9 of Commission Delegated Regulation (EU) .../... on transaction reporting under Article 26 of Regulation (EU) No 600/2014]. Where a natural person is responsible for the execution of the transaction, the person shall be identified by {NATIONAL_ID}. Where an algorithm is responsible for the execution of the transaction, this field shall be populated in accordance with Article 9 Commission Delegated Regulation (EU) .../... on transaction reporting under Article 26 of Regulation (EU) No 600/2014. Where more than one person or a combination of persons and algorithms are involved in the execution of the transaction, the member or participant or client of the trading venue shall determine the trader or algorithm primarily responsible as specified in Article 9(4) of Commission Delegated Regulation (EU) .../... on transaction reporting under Article 26 of Regulation (EU) No 600/2014 and populate this field with the identity of that trader or algorithm.
- Non executing broker Field 6*
 Note: The field "Freelance broker LEI" will be detected from within XONTRO and should thus not be transmitted by the Investment firm.
- Trading capacity Field 7*
 Note: Both field values "DEAL" and "MTCH" will be detected from within XONTRO by

BRAINTRADE	
Gesellschaft für Börsensysteme mb	Н

Page 9

XONTRO / MiFID II Newsletter No. 1

interpreting the content of the existing field "Agent vs. proprietary flag" (Agent = "MTCH" und Proprietary = "DEAL"), which is mandatory for all orders sent.

4.1.2 Order Execution Confirmation Enhancements

As to the current status, according to RTS 25 the accuracy of the execution time (price fixing time) will be extended from 8 (hundredth of a second) to 12 (microsecond) digits.

4.2 Contract Notes and Contract Notes Data Carrier Sets

In order to conduct the transaction reporting according to RTS 22, investment firms will need some additional information from the trading venues that have not yet been provided so far. It is planned for this additional information to include them into the contract notes files for the trading participants.

In addition, the order references included in the contract notes will be enhanced by the proportionate settlement amount (4 decimal places). The contract notes display masks used for the 3270 terminal emulation dialog will also be enhanced.

The real time (SAKI SWIFT and SAKI FIX) contract notes, as well as the contract notes data carrier sets, will be extended by the following new fields:

- Trading venue transaction identification code TVTIC Field 3*
 This is a number generated by trading venues unique for each trade, and disseminated to both the buying and the selling parties in accordance with Article 12 of [RTS 24 on the maintenance of relevant data relating to orders in financial instruments under Article 25 of Regulation 600/2014 EU]. This field is only required for the market side of a transaction executed on a trading venue.
- Buyer/seller identification code Field 7 resp. 16*
 Code used to identify the acquirer/disposer of the financial instrument. Where the acquirer/disposer is a legal entity, the LEI code of the acquirer/disposer shall be used.
 Where the acquirer/disposer is a non-legal entity, the identifier specified in Article 6 shall be used. Where the transaction was executed on a trading venue or on an organized trading platform outside of the Union that utilizes a central counterparty (CCP) and where the identity of the acquirer/disposer is not disclosed, the LEI code of the CCP shall be used. Where the transaction was executed on a trading venue or on an organized trading platform outside of the Union that does not utilize a CCP and where the identity of the acquirer/disposer is not disclosed, the MIC code of the trading venue or of the organized trading platform outside of the Union shall be used. Where the acquirer/disposer is an investment firm acting as a systematic internalize (SI), the LEI code of the SI shall be used. 'INTC' shall be used to designate an aggregate client account within the investment firm in order to

Page 10

XONTRO / MiFID II Newsletter No. 1

report a transfer into or out of that account with an associated allocation to the individual client(s) out of or into that account respectively.

Submitting entity identification code – Field 6*

Code used to identify the entity submitting the transaction report to the competent authority in accordance with Article 26(7) of Regulation (EU) No 600/2014. Where the report is submitted by the executing firm directly to the competent authority, it shall be populated with the LEI of the executing firm (where the executing firm is a legal entity). Where the report is submitted by a trading venue, it shall be populated with the LEI of the operator of the trading venue. Where the report is submitted by an ARM, it shall be populated with the LEI of the ARM.

- Trading date time supplement (4 digits, microseconds) Field 28 (supplement)*
 This field contains the last 4 of the total 6 decimal places of the contraction time stamp (using microseconds). This format was chosen in order to retain the compatibility of the contraction time stamp used so far (using hundredths of seconds) to the remaining application parts.
- Venue (Segment-MIC) Field 36*

Identification of the venue where the transaction was executed. Use the ISO 10383 segment MIC for transactions executed on a trading venue, Systematic Internalize (SI) or organized trading platform outside of the Union. Where the segment MIC does not exist, use the operating MIC.

• OTC post-trade indicator – Feld 63*

Indicator as to the type of transaction in accordance with Articles 20(3)(a) and 21(5)(a) of Regulation (EU) No 600/2014. – According to an assessment done by most German trading venues, only the two values: "ACTX" = Agency cross transaction, and "CANC" = Cancellation will be relevant for the XONTRO trading venues.

4.3 3270 Dialog for Financial Institutes

4.3.1 Enhancements

The XONTRO order and trade entry 3270 screen dialogs will be enhanced by certain fields. Details about these enhancements will be published at a later time.

4.3.2 Functionality Abolition

The following 3270 screen dialog functionalities for financial institutes will be abolished:

- BREB/EG (Collective order entry (per ISIN) for financial institutes)
- BREB/OL (Order block deletion (per ISIN) for financial institutes)

Page 11

XONTRO / MiFID II Newsletter No. 1

5 Interface Adaptations for Intermediaries

5.1 System Connection for Intermediaries (SAM) Enhancements

With regards to the RTS 22, no detailed requirements for specific intermediaries' system connection (SAM) enhancements have been requested by the XONTRO intermediaries so far.

5.1.1 Order Entry

For the order history allocation according to RTS 24, the following enhancements will become necessary: All order requests will be extended by the following fields:

- Direct Electronic Access (DEA) Field 2*
 'true' where the order was submitted to the trading venue using DEA as defined in Article 4(1)(41) of Directive (EU) 2014/65.

 'false' where the order was not submitted to the trading venue using DEA as defined in Article 4(1)(41) of Directive (EU) 2014/65.
- Client identification code (CIC) Field 3* Code used to identify the client of the member or participant of the trading venue. In case there is DEA, the code of the DEA user shall be used. Where the client is a legal entity, the LEI code of the client shall be used. Where the client is not a legal entity, the {NATIONAL_ID} shall be used. In case of aggregated orders, the flag AGGR as specified in Article 2(3) of Commission Delegated Regulation (EU) .../... on maintenance of relevant data relating to orders in financial instruments under article 25(2) of Regulation (EU) No 600/2014 shall be used. In case of pending allocations, the flag PNAL as specified in Article 2(2) of Commission Delegated Regulation (EU) .../... on maintenance of relevant data relating to orders in financial instruments under article 25(2) of Regulation (EU) No 600/2014 shall be used. This field shall be left blank only if the member or participant of the trading venue has no client.
- Investment decision within firm (IDWF) Field 4*
 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 in accordance with Article 8 of Commission Delegated Regulation (EU) .../... 22 on transaction reporting under Article 26 of Regulation (EU) No 600/2014. Where a natural person within the member or participant of the trading venue is responsible for the investment decision the person who is responsible or has primary responsibility for the investment decision shall be identified with the {NATIONAL_ID} Where an algorithm was responsible for the investment decision the field shall be populated as set out in Article 8 of Commission Delegated Regulation (EU) .../... on transaction reporting under Article 26 of Regulation (EU) No 600/2014]. This field shall be left blank when the investment decision was not made by a person or algorithm within the member or participant of the trading venue.

Page 12

XONTRO / MiFID II Newsletter No. 1

Execution within firm (EXWF) – Field 5*

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 in accordance with Article 9 of Commission Delegated Regulation (EU) .../... on transaction reporting under Article 26 of Regulation (EU) No 600/2014]. Where a natural person is responsible for the execution of the transaction, the person shall be identified by {NATIONAL_ID} Where an algorithm is responsible for the execution of the transaction, this field shall be populated in accordance with Article 9 Commission Delegated Regulation (EU) .../... on transaction reporting under Article 26 of Regulation (EU) No 600/2014. Where more than one person or a combination of persons and algorithms are involved in the execution of the transaction, the member or participant or client of the trading venue shall determine the trader or algorithm primarily responsible as specified in Article 9(4) of Commission Delegated Regulation (EU) .../... on transaction reporting under Article 26 of Regulation (EU) No 600/2014 and populate this field with the identity of that trader or algorithm.

- Non executing broker Field 6*
 Note: The field "Freelance broker LEI" will be detected from within XONTRO and should thus not be transmitted by the Investment firm.
- Trading capacity Field 7*
 Note: Both field values "DEAL" and "MTCH" will be detected from within XONTRO by interpreting the content of the existing field "acctTypCodXontro" (A = "MTCH" und P = "DEAL"), which is mandatory for all orders sent.

5.1.2 Quote Entry

As to the current status, according to RTS 25 the accuracy of the quote entry time (quote transmission time) will be extended from 8 (hundredth of a second) to 12 (microsecond) digits.

5.1.3 Broadcast Order Execution

As to the current status, according to RTS 25 the accuracy of the execution time (price fixing time) will be extended from 8 (hundredth of a second) to 12 (microsecond) digits.

5.1.4 Broadcast Price

As to the current status, according to RTS 25 the accuracy of the execution time (price fixing time) will be extended from 8 (hundredth of a second) to 12 (microsecond) digits.

BRAINTRADE
Gesellschaft für Börsensysteme mbH

Page 13

XONTRO / MiFID II Newsletter No. 1

5.2 3270 Dialog for Intermediaries Adaptations

5.2.1 Enhancements

The XONTRO order and trade entry 3270 screen dialogs for intermediaries will be enhanced by certain fields. Details about these enhancements will be published at a later time.

5.2.2 Functionality Abolition for Intermediaries

The following **3270 dialog functionalities** for intermediaries will be abolished:

- BROF/GO (Order entry for intermediaries)
- BROF/UW (Forward orders for intermediaries)

The following **3270 dialog partial functionalities** for intermediaries will be abolished:

BROS/KU: Variable previous' day prices' correction on the following day
 (for pricing intermediaries, prior to opening price fixing – legal review pending presently)

BRAINTRADE	
Gesellschaft für Börsensysteme mb	Н

Page 14

XONTRO / MiFID II Newsletter No. 1

6 Further Modifikation

6.1 New Tick Size Bands

Those tick size bands to be used for a specific instrument must be used on all trading venues within the EU equally. This should also be valid in cases of periodic tick size band changes for a given instrument, because of, e.g., liquidity shifts have been recognized for the instrument. In case of an instructed tick size band modification, the changed values will be adapted and published with chronological synchronism for all trading venues within the EU. For this end, the appropriate procedures will have to be implemented within XONTRO.

6.2 Clock Accuracy

The new technical MiFID standards require for so called "reportable events" to be equipped with a time stamp that documents the time at which the "event" took place consistently using UTC and an accuracy of a microsecond (6 decimal places). Thus, the time stamp to be used in XONTRO has to be extended from hitherto 8 (HH.MM.SS.HS) to 12 (HH.MM.SS.NNNNNN) decimal places.

"Reportable events" are essentially defined as specifications with regards to the order history, the order flow, the time the trade entry resp. trade confirmation took place, as well as the quote resp. price entry times along with the transparency requirements.

BRAINTRADE
Gesellschaft für Börsensysteme mbH

Page 15

XONTRO / MiFID II Newsletter No. 1

7 Chronological Implementation Schedule

The currently valid implementation schedule stipulates for the entire MiFID II /MiFIR regime to become effective on January 3rd, 2018, either (MiFID) by the directives outlined to be coming into force by means of the individual EU state legislative governments until January 3rd 2018, or (MiFIR) by the regulations passed to become directly and legally binding for all states within the EU by January 3rd 2018.

The EU-wide as well as the national (Germany) laws' provisions have, however, not yet been fully concluded at this moment; in addition, at this point in time (January 2017), not all technical and implementing standards designated have yet been fully described resp. published. Despite of this flaw, however, the current implementation plan is believed to remain valid for the near future to come.

Starting off from this assumption, the following project implementation schedule appears justified:

- 12/2016 High level communication to market participants (this document)
- 01/2017 Meeting of BrainTrade and the German cash markets trading venues
 (Aim: Commitment to a consistent industry standard, at least in Germany)
- 02/2017 Initial interface specification for XONTRO
- 02/2017 Detailed interface specification for XONTRO
- 09/2017 XONTRO MiFID II simulation environment launch
- 09-11/2017 XONTRO participation simulation
- 03.01.2018 Production launch for MiFID II / MiFIR in XONTRO