

Document title

IMPLEMENTING MIFID II REQUIREMENTS FOR EURONEXT CASH MARKETS

Document type or subject

EURONEXT CASH MARKETS – MIFID II IMPLEMENTATION GUIDE

Revision number

Version 3.0

Date

2 Nov 2017

Number of pages

25

Author

Euronext

IMPLEMENTING MIFID II REQUIREMENTS FOR EURONEXT CASH MARKETS

Scope and audience: The purpose of this document is to introduce the changes that will be made to Euronext's **Cash legacy systems** for the purpose of MiFID II.

The implementation of MiFID II requirements on Optiq® Order Entry Gateway (OEG) for Cash, and the Universal Trading Platform (UTP) for Derivatives are not in scope of this document. Please refer to the [Optiq OEG client specifications](#) and [UTP Derivatives CCG client specifications](#) for more information on the implementation of MiFID II requirements for these respective platforms.

TABLE OF CONTENTS

1.	INTRODUCTION	4
2.	SUMMARY OF MIFID II CHANGES FOR EURONEXT CASH MARKETS	5
3.	IMPLEMENTING MIFID II CHANGES ON THE EURONEXT LEGACY CASH ENVIRONMENT.....	10
3.1	OBTAINING TIMESTAMP GRANULARITY IN UTP PRIVATE ORDER ENTRY & DROP COPY	10
3.2	OBTAINING TIMESTAMP GRANULARITY AND WAIVER INDICATORS IN THE END OF DAY APPLICATION TRADE FILE	12
3.3	OBTAINING TRADING VENUE TRANSACTION IDENTIFICATION CODE (TVTIC).....	13
3.4	POPULATING ALGO FLAG IN PRIVATE ORDER ENTRY MESSAGES.....	14
3.5	POPULATING MIFID II SHORT CODES AND DEA INDICATOR.....	15
3.5.1	POPULATING MIFID II SHORT CODES IN PRIVATE ORDER ENTRY MESSAGES	15
3.5.1.1	Guidance for use of FreeText, Freetext_2 & Client ID fields.....	15
3.5.1.2	Guidance for formatting MiFID II short codes into Hexadecimal format	19
3.5.2	POPULATING MIFID II SHORT CODES AND DEA INDICATOR IN FLAT FILE VIA SLC MANAGER	20
4.	CONTACT	23
5.	HISTORY	24

1. INTRODUCTION

Euronext announced a revised migration strategy and timelines for the Euronext Optiq and MiFID II programmes via Info-Flash on [5 July 2017](#). By deploying the MiFID II requirements on the legacy cash environment in 2017, Euronext has ensured that MiFID II conformity for Euronext Cash Markets will no longer be dependent on the release of the new Optiq trading platform. The Optiq migration programme will be subsequently delivered in 2018.

To ensure MiFID II compliance for Euronext Cash Markets, Euronext will introduce a number of changes to its Cash legacy environment. The purpose of this document is to introduce the changes impacting members as well as the associated terms of reference.

This document is to be read in conjunction with the following documents available on the documentation section of the Euronext website:

- Euronext Cash Regulated Markets – CCG Client Specifications – Binary V4 Interface v2.5.2
- Euronext Cash Regulated Markets – CCG Client Specifications – Binary V5 Interface v1.3.2
- Euronext Cash Regulated Markets – CCG Client Specifications – Binary V6 Interface v1.3.2
- Euronext Cash Regulated Markets – CCG Client Specifications – FIX 4.2 Interface - v2.5.2
- Euronext Cash Regulated Markets – End of Day Files Specifications – v1.3.1
- Conformance Script – CCG- Light - MiFID- II (FIX and Binary)
- Conformance Guidelines – CCG- Light- MiFID- II (FIX and Binary)
- Euronext Short Long Code Management v2.1
- MiFID II Migration Guidelines

2. SUMMARY OF MIFID II CHANGES FOR EURONEXT CASH MARKETS

To ensure MiFID II compliance, Euronext will introduce a number of changes to its Cash legacy environment. The following section outlines the changes impacting members as well as the associated terms of reference, or where the implementation of the MiFID II requirements deviate from the MiFID II implementation under Optiq.

MIFID II REQUIREMENT	LEGACY CASH ENVIRONMENT	OPTIQ CASH
RTS 1 and RTS 2 Transparency	<ul style="list-style-type: none"> ▪ For purposes of Algo flagging under RTS 1 (MMT Algorithmic indicator), clients using Algorithms as the <i>executing decision maker</i> are required to use existing field <i>TradingSessionID</i> as described in the terms of reference in section 3.3 below. ▪ Euronext will not accept Iceberg orders on non-Euro denominated Instruments. Iceberg orders on Euro denominated Instruments will be accepted with the minimum threshold of >10,000€¹. Euronext has enhanced error code 20360² to reflect that an Iceberg order does not fulfil these requirements. ▪ Euronext will not accept Guaranteed Cross orders on Bonds, Securitized Derivatives & ETN / ETC and on non-Euro denominated instruments. Orders will be rejected with error code 20360. ▪ Euronext will discontinue Over-The-Counter (OTC) reporting services in TCS and the eTCS portal from 2 January 2018. OTC reporting services will instead be managed by Saturn as of 3 January 2018. ▪ MiFID II changes for TCS will additionally include: new LIS sizes, new controls to reject orders on Bonds and Warrants below LIS³, rules for deferred publication on Equities and ETFs, prohibition on deferred publication for Bonds and Warrants. Further information on the MiFID II changes for TCS will be 	<ul style="list-style-type: none"> ▪ MiFID II transparency requirements will be fully implemented and relevant thresholds will be set for all order types. ▪ Algo flagging will be incorporated as a new field in order entry, as specified in the Optiq OEG client specifications.

¹ This change will enter into effect on 2 January 2018.

² Euronext has updated error code 20360 as follows:

- Order quantity [OrderQty field] greater than or equal to: 50,000,000 (for Equities & Bonds market segment – UTP RM) 50,000,000 (for Structured Products market segment – UTP VW)
- Iceberg Orders : Turnover must be greater than or equal to 10 000 Euros
- Iceberg Orders not allowed on Non Euro traded securities

³ Orders submitted below LIS on Equities and ETFs will be executed under Negotiated Trade Waivers.

EURONEXT CASH MARKETS – MIFID II IMPLEMENTATION GUIDANCE

MIFID II REQUIREMENT	LEGACY CASH ENVIRONMENT	OPTIQ CASH
	<p>incorporated in the final Trading Manual for off-order book facilities, to be published by 1 December 2017.</p>	
<p>RTS 3 Volume Cap Mechanism</p>	<ul style="list-style-type: none"> ▪ Euronext will communicate any instruments prevented from trading under the Double Volume Cap constraints via a dedicated Euronext webpage, along with the resumption date. Euronext will then also indicate which types of orders are affected. Details of automated XML feed generation will be provided in separate communication. ▪ Euronext will implement automatic rejections on orders / instruments on the Central Order Book (COB) that are subject to a Volume Cap. Following announcement of a Volume Cap breach by ESMA for an instrument, Guaranteed Cross orders on Equities below Large In Scale (LIS), will be rejected with error code 20360. Guaranteed Cross orders above LIS will not be subject to the Volume Caps. ▪ Euronext will not implement automatic rejections on orders/ instruments on TCS that are subject to a Volume Cap. In case a client has conducted trading activity on a type of order / instrument affected by a volume cap in TCS, Euronext will follow a manual trade cancellation process according to the regular (same day) trade cancellation procedures. 	<ul style="list-style-type: none"> ▪ Euronext will continue the communication of Double Volume Cap constraints via a dedicated Euronext webpage. Euronext will then also indicate which types of orders are affected. Details of automated XML feed generation will be provided in separate communication. ▪ Euronext will automatically prevent clients from using types of orders/ instruments affected by a volume cap.
<p>RTS 8 Market Making</p>	<ul style="list-style-type: none"> ▪ Euronext will require Algo traders pursuing market making activities to enter into a Market Making agreement. The members or participants will be required to indicate the designated capacity via the account type / Rule80A. Members will be using the existing possible values provided in the CCG specifications. ▪ Algo traders pursuing Market Making activities for Securitised Derivatives are requested to enter into a Market Making Agreement and are required to conduct all Market Making activities via a separate SLE if they are not part of the Securitised Derivative Liquidity Provision programme. Please contact the Euronext Structured Products desk for more information. ▪ Information on Stressed Market 	<ul style="list-style-type: none"> ▪ Euronext will adjust its policies and monitoring procedures on market making as communicated via Info-Flash on 7 June 2017. ▪ New Market Making Agreements and associated Terms and Conditions have been published via Info-Flash on 26 October 2017.

EURONEXT CASH MARKETS – MIFID II IMPLEMENTATION GUIDANCE

MIFID II REQUIREMENT	LEGACY CASH ENVIRONMENT	OPTIQ CASH
	Conditions will be published via a dedicated Euronext webpage. ⁴ Details of automated XML feed generation will be provided in separate communication.	
RTS 9 Order to Trade Ratio	<ul style="list-style-type: none"> As required by MiFID II, Euronext will calculate and monitor the order-to-trade ratio of unexecuted orders to transactions on the basis of both 'volumes' and 'numbers'. More information on the limits and procedures has been communicated via Info-Flash on 19 September 2017. 	<ul style="list-style-type: none"> Euronext will continue with Order to Trade ratio calculations as required by MiFID II.
RTS 11 Tick Size	<ul style="list-style-type: none"> Euronext will adapt its Tick Sizes to the MiFID II requirements on 29 December after market close. As announced in the MiFID II Migration Guidelines, new Tick Sizes will enter into effect on 2 January 2018. More details on the implementation of Tick Sizes has been published via Info-Flash on 12 October 2017. 	<ul style="list-style-type: none"> Euronext will continue with the Tick Size regime as established on the legacy cash environment.
RTS 21 Position Limits on Warrants, Certificates and Structured Notes with Commodity underlying	<ul style="list-style-type: none"> To ensure that Securitized Derivatives traded on Euronext markets with a commodity (derivative) underlying are exempted from daily position reporting, Euronext will no longer accept product issuances that exceed 2.5 million units per ISIN.⁵ More information on this policy was provided via Info-Flash on 20 September 2017. 	<ul style="list-style-type: none"> Euronext will continue with the policy set out on the legacy cash environment to not accept product issuance of Securitized Derivatives that exceed 2.5 million units.
RTS 22 Timestamping granularity, Waiver Indicators & Trading Venue Transaction Identification Venue (TVTIC)	<ul style="list-style-type: none"> Euronext services and protocols will be updated to provide microsecond timestamping granularity on executions. Changes have been designed to provide clients with flexibility to choose which service and protocol to use to extract timestamping 	<ul style="list-style-type: none"> Euronext will provide, at minimum, microsecond timestamping granularity in the following services and protocols: <ul style="list-style-type: none"> - OEG SBE & FIX protocol messages - Drop Copy FIX protocol messages - EOD Application Trade file Euronext will provide Waiver Indicators

⁴ This procedure is also applicable to Stressed Market Conditions on Euronext Derivatives Markets.

⁵ Securitized Derivatives (including Warrants, Certificates and Structured Notes) with a commodity underlying are exempted from weekly position reporting. If the product's issue size is below 2.5 million units, the products are also exempted from daily position reporting.

EURONEXT CASH MARKETS – MIFID II IMPLEMENTATION GUIDANCE

MIFID II REQUIREMENT	LEGACY CASH ENVIRONMENT	OPTIQ CASH
	<p>granularity:</p> <ul style="list-style-type: none"> - CCG Binary & FIX protocol execution messages - Drop Copy Binary & FIX protocol execution messages - End of Day (EOD) Application Trade file <p>More information about implementation approach and associated testing are provided in the terms of reference specified in section 3.1 and 3.2 below.</p> <ul style="list-style-type: none"> ▪ Euronext will additionally include Waiver Indicators to the EOD Application Trade file for applicable transactions in TCS. More information about implementation approach and associated testing are provided in section 3.2 below. ▪ Euronext will not include Waiver Indicators on the Central Order Book for Guaranteed Cross trades below LIS. ▪ To obtain a unique Trading Venue Transaction Identification Code (TVTIC), Members are required to concatenate existing fields <i>UTPEXID</i> and <i>Symbol</i>, as described in section 3.3 below. 	<p>in TCS Declaration Notice and will additionally maintain Waiver Indicators in the EOD Application Trade file.</p> <ul style="list-style-type: none"> ▪ To obtain the TVTIC, Members will be required to concatenate fields <i>SymbolIndex</i>, <i>EMM</i>, and <i>Execution ID</i>.
<p>RTS 24 Order Storage</p>	<ul style="list-style-type: none"> ▪ Euronext will not build new fields in order entry to obtain information for the purposes of Order Storage. ▪ To obtain identification of the relevant parties to an order, Euronext will request members to perform one of the following: <ol style="list-style-type: none"> 1. Members may submit the relevant short codes and DEAIIndicator upon order entry using the existing fields <i>FreeText</i>, <i>FreeText_2</i> (Binary only)⁶ and <i>ClientID</i>, according to the terms of reference specified in section 3.5 below. 2. Members who are unable to use the <i>FreeText</i> and <i>ClientID</i> fields may submit the identification of the relevant parties related to each order in a flat file at the end of the day, according to the terms of reference specified in section 3.5 below. Upload functionalities will be made available in the SLC Manager. 	<ul style="list-style-type: none"> ▪ New fields will be incorporated in order entry, as specified in the Optiq OEG client specifications. ▪ Clients will continue to map short codes to long codes via SLC manager, as outlined in associated technical specifications.

⁶ FreeText2 only applicable to the Binary protocol, not available in Bulk Quotes messages and cannot be amended through Cancel / Replace messages.

EURONEXT CASH MARKETS – MIFID II IMPLEMENTATION GUIDANCE

MIFID II REQUIREMENT	LEGACY CASH ENVIRONMENT	OPTIQ CASH
	<ul style="list-style-type: none"> ▪ Members will be required to map short codes to long codes via SLC Manager as outlined in associated technical specifications. To obtain access to SLC Manager EUA, Member Connectivity Administrators (MCAs) are required to submit a service access request using the Saturn Access web form(s) available on the Euronext Connect. Log-in credentials will be provided by Customer Access Service (CAS). Access to the production environment will be provided to Members upon returning the Registration Form for MiFID II Regulatory Reporting Services to Euronext Membership, signed by the Authorised Representative (AR). Customers are invited to complete thorough testing of SLC Manager in EUA before 15 December 2017. SLC Manager will enter into Production on 3 January 2018, but will be available for short and long code declarations as of early December 2017 for Members who wish to supply this information ahead of MiFID II entry into force. ▪ To obtain information on Trading Capacity and populate this field in the Trading venue regulatory reporting related to the RTS24, Euronext will maintain the following mapping based on UTP AccountType / Rule80A: <ul style="list-style-type: none"> - Client (1) = AOTC - House (2) = DEAL - RLO (3) = DEAL - RO (4) = AOTC - LP (6) = DEAL - Related Party (7) = AOTC <p><u>Members are strongly reminded to not change the way Rule80A is currently populated in order entry to match with the relevant Trading Capacity. The mapping provided is for Euronext purposes only and does not require any action from Members.</u></p> 	

3. IMPLEMENTING MIFID II CHANGES ON THE EURONEXT LEGACY CASH ENVIRONMENT

The following section describes the procedures and requirements for implementing MiFID II requirements on the Euronext legacy cash environment to:

1. Obtaining **timestamping granularity** in UTP private Order Entry and Drop Copy messages
2. Obtaining **timestamping granularity** and **waiver indicators** in the EOD Application Trade File
3. Obtaining Trading Venue Transaction Identification Code (**TVTIC**)
4. Populating **Algo flags** in private Order Entry messages
5. Populating MiFID II **short codes** and **DEA indicator** via private Order Entry messages or through the use of a flat file via SLC Manager

3.1 OBTAINING TIMESTAMP GRANULARITY IN UTP PRIVATE ORDER ENTRY & DROP COPY

To provide clients with microsecond granularity for transactions, UTP Cash Binary & FIX protocols will be updated as described below. The changes will be available for all Euronext Cash markets, including the LP quote driven model.

CCG BINARY PROTOCOL

Details of the changes

- A new field *TradeTimeSecondsGranularity* [Int (4)] will be added to the **Order Fill** (2) and **Extended Response** (x) messages to provide microsecond granularity of the transaction time. These messages are sent to clients in **private order entry** and **drop copy**.
- To obtain the full timestamp of the trade in microseconds, clients are required to combine the data from the existing field *TransactTime* and the newly added field *TradeTimeSecondsGranularity*.
- Conditions for provision of data in the new field:
 - Microseconds will be provided in *TradeTimeSecondsGranularity* the first time a Trade message is sent to the client
 - In addition to providing Trade information in Drop Copy, the **Extended Response** (x) message is also used to respond to client's **Order Status Request** (H) messages. In such cases *ExecTransType* = 3 and *TradeTimeSecondsGranularity* will be set to Null.
 - The **Order Fill** (2) message is also used in Drop Copy to notify the order issuer the Clearing organization (CCP) handling the trade. In this case, *TradeTimeSecondsGranularity* will be set to Null.

Testing and implementation

To provide flexibility in testing and implementation, **the new field will only be effective in a new protocol version "V6"**. This will apply equally to order entry and drop copy messages.

Clients who wish to receive the data in the new field for the trades are required to:

- Submit a request with Member Connectivity Administrators (MCA) to use the new "V6" protocol for the EUA platform, following standard procedures using the the Euronext Connect web portal (connect2.euronext.com).

EURONEXT CASH MARKETS – MIFID II IMPLEMENTATION GUIDANCE

- Schedule and pass the mandatory conformance test with Euronext Customer Technical Support Group (CTSG) using the modified protocol. CTSG will be available to assist clients with testing of this change during regular testing hours Monday-Friday from 09:00-17:00 CET/CEST. The P-EUA is closed every **Wednesday** until 13:00 CET.

To provide flexibility for migration to the new protocol, clients who have passed the mandatory conformance testing can schedule the required connection changes to start using the new protocol at any time as of the effective date of implementation in Production environment on **13 November 2017**. For the switch clients will need to:

- Follow the steps to get their connections setup to use the new “V6” protocol for the Production platform. While this change could be done by modifying the existing connections, Customer Access Services recommends that clients obtain new order entry connections to reduce the risk of migration.
- On the effective date of implementation, at the start of the trading session, start sending the new value in field *ProtocolVersion* of the **Logon (A)** message.

Clients who do not require the information added in the private messages may choose to:

- Maintain connections setup with the existing Binary protocol and not make any changes to existing connections.
- Continue sending the same value in field *ProtocolVersion* of the Logon (A) message. In this case, clients will continue receiving **Order Fill (2)** message for trades with the field *TransactTime* in seconds.

CCG FIX PROTOCOL

Details of the changes

- The new field *TradeTimeSecondsGranularity* (tag: 10078) [Int (6)] will be added at the end of the **Execution Report (8)** message, to provide the microseconds, and will be sent only in case this message is sent to clients for Trade.
- To obtain the full timestamp of the trade in microseconds, clients are required to combine the data from the existing field *TransactTime* (tag: 60) and the newly added field *TradeTimeSecondsGranularity* (tag: 10078).
- The change is applicable in the same way for order entry and drop copy messages, and it is mandatory for clients using FIX protocol to manage this change, by either ignoring the new tag, or interpreting it as specified.
- Conditions for provision of data in the new field:
 - The microseconds will be provided in the messages the first time a Trade message is sent to the client
 - The **Execution Report (8)** message is also used in Drop Copy to notify the order issuer of the Clearing organization (CCP) handling the trade. In this case the new field is not provided.

Testing and implementation

Clients who wish to receive the new field *TradeTimeSecondsGranularity* (tag: 10078) are required to make the necessary changes to incorporate the new field in their systems. Clients should complete testing of the changes in the EUA platform and provide information on completion of tests to

EURONEXT CASH MARKETS – MIFID II IMPLEMENTATION GUIDANCE

Euronext CTSG. CTSG will be available to assist clients with testing of this change during regular testing hours Monday-Friday from 09:00-17:00 CET/CEST. The P-EUA is closed every **Wednesday** until 13:00 CET.

Clients who do not require this information in the private messages may choose to ignore the new field added in the Execution Report (8) messages.

The changes impacting timestamping granularity will be effective in production as of **13 November 2017**. Whether clients choose to incorporate or ignore the data, the changes to the Execution Report (8) message for Trades is mandatory will apply to all clients using FIX protocol as of the start of trading session on the indicated effective date.

DROP COPY

The changes apply in the same way to the order entry and drop copy messages & service, depending on the protocol used by the client.

While conformance testing is not required for changes in Drop Copy messages, clients may perform the necessary tests in the EUA environment

3.2 OBTAINING TIMESTAMP GRANULARITY AND WAIVER INDICATORS IN THE END OF DAY APPLICATION TRADE FILE

The End of Day (EOD) application Trade file will be updated to include the fields:

- TradeTimeSecondsGranularity
- WaiverIndicator for transactions in TCS, where applicable, as per the below mapping⁷:

WAIVER INDICATOR	DESCRIPTION	APPLICABLE FOR
NLIQ	Negotiated transactions in liquid financial instruments	Equities & ETFs that are flagged by ESMA as being a <i>liquid</i> financial instrument, this waiver is set on Off-Market On-Exchange trades that are (1) not VWAP transactions and (2) not identified as the Large in Scale limit
OILQ	Negotiated transactions in illiquid financial instruments	Equities & ETFs that are flagged by ESMA as being an <i>illiquid</i> financial instrument, this waiver is set on Off-Market On-Exchange trades that are (1) not VWAP transactions and (2) not identified as Large in Scale limit
PRIC	Negotiated transactions subject to conditions other than the current market price of that equity financial instrument	<ul style="list-style-type: none"> - Any operations conducted on Euronext Fund Services (Paris and Amsterdam), covering the Fund orders either in Quantity or in Cash - VWAP transaction for Equities - "Cash Legs" of Delta-neutral & Exchange for Physical trades reported on an Equity and/or ETF underlying
(blank)	No Waiver assigned	Cases when rules above are not met, including any transactions that are not identified as Large in Scale limit

⁷ Table provides the correlation of Waiver indicator values, and the applicable rules in TCS. The value in the field are restricted to those identified in field 61 "Waiver Indicator" of the Table 2, Annex 1 of RTS22.

Note on values prior to January 3, 2018: Please note that until MiFID II rules go into effect, the values provided in the field Waiver Indicator may not be always consistently and accurately set.

Testing and implementation

The EOD Application Trade file are now available in the new format only and will contain the new fields independent of the protocol used for exchange of private order entry messages via CCG. As such, all clients using the file are required to make the necessary changes to manage the additional fields. Euronext has updated the specifications to the EOD Trade File Application accordingly and has included a dedicated section to describe the procedures to automate extraction of the files. To obtain the full timestamp of the trade in microseconds, clients are required to combine the data from the existing field *TransactTime* and the newly added field *TradeTimeSecondsGranularity*.

Although no conformance testing is required for the EOD Application Trade File, clients are invited to test their access and download automation on the EUA platform. Please note that waiver indicators will only be activated in the EOD Application Trade File once the MiFID II changes for TCS have been delivered in EUA. For technical support on this service, please contact the CTSG team. Waiver indicators will be valid in Production as of 3 January 2018.

Clients who currently do not have access to the End of Day Trade Application files are invited to contact CAS to obtain credentials in EUA and Prod.

3.3 OBTAINING TRADING VENUE TRANSACTION IDENTIFICATION CODE (TVTIC)

For purposes of Trading Venue Transaction Identification Code (TVTIC), clients are required to concatenate the values of the fields *UTPEXID* and *Symbol*, provided in respectively the Order Fill (2) message in Binary format and in the Execution report in FIX format, in order to obtain the unique TVTIC for reporting purposes under MiFID II.

Protocol	Binary	FIX 4.2
Field Name	UTPEXID	UTPEXID (FIX tag: 9731)
Format	Int	Int
Length	8	24
Possible values	Numerical; Trade reference ID by instrument & day. Field used as a reference identifier for a trade, uniqueness is guaranteed within a single trading day and for a given instrument. This field is provided in case of fill, partial fill or trade cancellation.	Numerical Trade reference ID by instrument & day. Field used as a reference identifier for a trade, uniqueness is guaranteed within a single trading day and for a given instrument. This field is provided in case of fill, partial fill or trade cancellation.
Used in	Binary ORDER FILL (2) BUST/CORRECT (C) EXTENDED RESPONSE (x)	FIX EXECUTION REPORT (8)

Protocol	Binary	FIX 4.2
Field Name	Symbol	Symbol (FIX tag 55)
Format	String	String
Length	12	12
Possible values	ISIN ; Instrument Trading Code	ISIN ; Instrument Trading Code
Used in	Binary NEW ORDER (D) NEW ORDER (e)	FIX NEW ORDER SINGLE (D) ORDER CANCEL REQUEST (F)

EURONEXT CASH MARKETS – MIFID II IMPLEMENTATION GUIDANCE

<p>ORDER CANCEL REQUEST (F) CANCEL/REPLACE ORDER (G) PRICE INPUT (I) ONE SIDE ONLY PERIOD (O) LIQUIDITY PROVIDER COMMAND (Z) BULK QUOTE (B) ORDER STATUS REQUEST (H) BULK QUOTE ACK (J) ONE SIDE ONLY PERIOD ACK (P) ONE SIDE ONLY PERIOD NOTICE (N) QUOTE REQUEST (L) REQUEST FOR SIZE (r) REQUEST FOR SIZE ACKNOWLEDGEMENT (s) REQUEST FOR EXECUTION (M) ORDER ACK (a) ORDER FILL (2) CANCEL REQUEST ACK (6) ORDER KILLED (4) BULK CANCEL ACK REPORT (K) CANCEL/REPLACE REQUEST ACK (E) ORDER REPLACED (5) ORDER CANCEL/REPLACE REJECT (8) BUST/CORRECT (C) GENERIC RESPONSE (y) EXTENDED RESPONSE (x) TCS PRICE INPUT (p) TCS TRADE ENTRY (T) TCS DECLARATION (d) TCS PRICE ACK (q) TCS TRADE ENTRY NOTICE (t) TCS NOTICE (n)</p>	<p>ORDER MASS CANCEL REQUEST (q) ORDER CANCEL/REPLACE REQUEST (G) ORDER STATUS REQUEST (H) PRICE INPUT (UI) BULK QUOTE (UB) ONE SIDE ONLY PERIOD (UO) LIQUIDITY PROVIDER COMMAND (UZ) BULK QUOTE ACK (UJ) ONE SIDE ONLY PERIOD ACK (UP) ONE SIDE ONLY PERIOD NOTICE (UN) QUOTE REQUEST (UL) REQUEST FOR SIZE (Ur) REQUEST FOR SIZE ACKNOWLEDGEMENT (Us) REQUEST FOR EXECUTION (UM) EXECUTION REPORT (8) ORDER CANCEL REJECT (9) ORDER MASS CANCEL REPORT (r) REQUEST ACK MESSAGE (Uy) TCS DECLARATION (UD) TCS TRADE ENTRY (UT) TCS PRICE INPUT (Up) TCS PRICE ACK (Ua) TCS NOTICE (U8) TCS TRADE ENTRY NOTICE (Ut)</p>
--	--

3.4 POPULATING ALGO FLAG IN PRIVATE ORDER ENTRY MESSAGES

In order to identify transactions executed as a result of an Algorithmic **executing decision maker**, clients pursuing Algorithmic activity are required to flag such activity in the legacy order entry using existing field TradingSessionID as described below.

Protocol	Binary	FIX 4.2
Field Name	TradingSessionID	TradingSessionID (FIX tag: 336)
Format	String	String
Length	4 bytes	4 characters
Possible values	<p>Field currently used to identify a session ID or combination of session IDs for which the order is valid.</p> <p>If the first character is equal to 'A' then the order was placed as a result of an Algorithmic trading; Else no Algorithm was involved. In such a case, the field MMT Algorithmic indicator will be populated with the value 'ALGO' in the Full trade information message (1004)</p> <p>Whatever the content of this field, the trading</p>	<p>Field currently used to identify a session ID or combination of session IDs for which the order is valid.</p> <p>If the first character is equal to 'A' then the order was placed as a result of an Algorithmic trading; Else no Algorithm was involved. In such a case, the field MMT Algorithmic indicator will be populated with the value 'ALGO' in the Full trade information message (1004)</p> <p>Whatever the content of this field, the trading</p>

EURONEXT CASH MARKETS – MIFID II IMPLEMENTATION GUIDANCE

	engine will force it to '123' (all sessions).	engine will force it to '123' (all sessions).
Used in	Binary New Order (D) New Order (e) Cancel / Replace Order (G) Trading Session Status (h) Extended Response (x)	FIX New Order Single(D) Order Cancel/Replace Request (G) Execution Report (8) Trading Session Status (h)

Testing and implementation

UTP Cash Binary & FIX protocols have been updated to reflect the Algo flag in the TradingSessionID ID field in the private order entry messages. Clients who engage in Algorithmic activities are required to make the necessary changes to incorporate the amendment to the field in their systems. Clients should complete testing of the changes in the EUA platform and provide information on completion of tests to Euronext CTSG. CTSG will be available to assist clients with testing of this change during regular testing hours Monday-Friday from 09:00-17:00 CET/CEST. The P-EUA is closed every **Wednesday** until 13:00 CET.

The changes impacting Algo flag will be effective in production as of **13 November 2017**.

3.5 POPULATING MIFID II SHORT CODES AND DEA INDICATOR

Euronext will not build new fields in its legacy order entry to obtain information for the purposes of Order Storage. To obtain identification of the relevant parties to an order, Euronext will request members to perform one of the following:

1. Members may submit the relevant short codes and DEA Indicator upon order entry in the Central Order Book⁸, using the existing fields *FreeText*, *FreeText2* (for Binary protocol only) and *ClientID*;
2. Members who are unable to use the *FreeText* and *ClientID* fields may submit the identification of the relevant parties related to each order in a flat file at the end of the day via the SLC Manager.

The following section sets out the terms of reference for both approaches.

3.5.1 POPULATING MIFID II SHORT CODES IN PRIVATE ORDER ENTRY MESSAGES

3.5.1.1 Guidance for use of FreeText, Freetext_2 & Client ID fields

The following section sets out the terms of reference for populating the *FreeText*, *FreeText_2* and *ClientID* fields in order entry for purposes of Order Storage under RTS 24.

Protocol	Binary	FIX 4.2
Field Name	FreeText / FreeText_2	FreeText (FIX tag: 9952)
Format	String	String
Length	18 bytes	18 characters

⁸ Conditions apply to the Central Order Book only. Orders entered through TCS are not in scope for Order Storage requirements under RTS24

EURONEXT CASH MARKETS – MIFID II IMPLEMENTATION GUIDANCE

Protocol	Binary	FIX 4.2
Possible values	Hexadecimal	Hexadecimal
Conditions	<p>Field may be used to populate up to two short codes and the DEAIIndicator.</p> <p>Per short code: 8 bytes in hexadecimal, left padded with zeros</p> <p>DEAIIndicator: 1 byte where '1' is DEA and '0' is not DEA.</p> <p>The 18th byte will be filled with a predefined character as described in the sequencing conditions below.</p> <p>Clients not using FreeText_2 for purposes of Cross Orders on the Central Order Book, may also leverage this field for the submission of the relevant parties to the order, adhering to the same conditions and sequencing as outlined for FreeText. Euronext will then consider the whole of the FreeText field to be populated at Member discretion. The same values for the predefined character will also apply to the 18th byte of FreeText_2, as described in the sequencing conditions below.</p>	<p>Field may be used to populate up to two short codes and the DEAIIndicator.</p> <p>Per short code: 8 characters in hexadecimal, left padded with zeros</p> <p>DEAIIndicator: 1 character where '1' is DEA and '0' is not DEA</p> <p>The 18th character will be filled with a predefined character as described in the sequencing conditions below.</p>
Sequence	May be used independently or in combination with the ClientID field as outlined in the sequencing conditions described below.	May be used independently or in combination with the ClientID field as outlined in the sequencing conditions described below.
Used in	<p>Binary</p> <p>New Order (D)</p> <p>Cancel/Replace Order (G) – not applicable for FreeText2</p> <p>Bulk Quote (B) – not applicable for FreeText2</p> <p>Bulk Quote Ack (J) – not applicable for FreeText2</p> <p>Extended Response (x)</p>	<p>FIX</p> <p>New Order Single (D)</p> <p>Order Cancel / Replace Request (G)</p> <p>Bulk Quote (UB)</p> <p>Bulk Quote Ack (UJ)</p> <p>Execution Report (8)</p>

Protocol	Binary	FIX 4.2
Field Name	ClientID	ClientID (FIX tag: 109)
Format	String	String
Length	8	8
Possible values	Hexadecimal	Hexadecimal
Conditions	Field may be used to populate up to one short code, in 8 byte hexadecimal	Field may be used to populate up to one short code, in 8 character hexadecimal
Sequence	This field may be used independently or in combination with the FreeText field as outlined in the sequence description below.	This field may be used independently or in combination with the FreeText field as outlined in the sequence description below.
Used in	<p>Binary</p> <p>New Order (D)</p> <p>Cancel/Replace Order (G)</p> <p>Bulk Quote (B)</p> <p>Bulk Quote Ack (J)</p> <p>Extended Response (x)</p>	<p>FIX</p> <p>New Order Single (D)</p> <p>Order Cancel / Replace Request (G)</p> <p>Bulk Quote (UB)</p> <p>Bulk Quote Ack (UJ)</p> <p>Execution Report (8)</p>

EURONEXT CASH MARKETS – MIFID II IMPLEMENTATION GUIDANCE

SEQUENCING CONDITIONS			
Predefined character	Guidelines	FreeText / FreeText_2 sequence	Client ID sequence
q – use of FreeText only	<p>The letter ‘q’ in the 18th byte of the FreeText field will indicate that the whole of the FreeText field will be used to populate two short codes and the DEAIindicator, where the first short code will always be ExecutionDecisionWithinFirm and the second short code may constitute either InvestmentDecisionWithinFirm or ClientIdentificationShortCode. Where ShortCode1 is populated with ‘3’ (NORE), Euronext will assume that ShortCode2 is the ClientIdentificationShortCode.</p> <p>The ClientID field is available to use at the Member’s discretion.</p> <p>The member declares the short codes with the designated CodeType via SLC Manager, as described in the specifications for SLC Manager.</p>	<p>Length 8bytes8bytes1byte1byte</p> <p>Sequence Shortcode1Shortcode2DEAIindicator</p> <p>Example: ExecutionWithinFirmShortCode = 1547875 (in HEX = 179E63, which needs to be left-padded with two zeroes), InvestmentDecisionwithinFirmShortCode = 8749646 (In HEX = 85824E, which needs to be left-padded with two zeroes), DEAIindicator=0, and Predefinedcharacter “q” to indicate use of FreeText field. FreeText field should be populated as follows: “00179E630085824E0q”</p>	<p>Length 8 bytes</p> <p>Sequence Freeusage</p>
x – use of ClientID only for Algo indicator	<p>Should a Member engage in Algorithmic activity where the ExecutionWithinFirmShortCode and InvestmentDecisionWithinFirmShortCode are the same Algo, the Member may populate the 18th byte of the FreeText with the letter ‘x’ to indicate that the ClientID field is used to identify the AlgoID for both ExecutionWithinFirmShortCode and InvestmentDecisionWithinFirm. The remainder of the FreeText field will be used at Member’s own discretion.</p> <p>Euronext will consider that the DEA indicator is ‘0’</p> <p>The member declares the short code with both CodeTypes via SLC Manager, as described in the specifications for SLC Manager.</p>	<p>Length 17bytes1byte</p> <p>Sequence Freeusagex</p>	<p>Length 8 bytes</p> <p>Sequence ShortCode</p>
w – use of ClientID + last two bytes FreeText	<p>The letter ‘w’ in the 18th byte of the FreeText field will indicate that the member will use the ClientID field to populate the ClientIdentificationShortCode.</p> <p>Where ‘w’ is populated, Euronext will assume that ExecutionDecisionWithinFirm is ‘3’ (NORE) and that the 17th byte of the FreeText is populated with the</p>	<p>Length 16bytes1byte1byte</p> <p>Sequence FreeusageDEAIindicatorw</p>	<p>Length 8 bytes</p> <p>Sequence ShortCode</p>

EURONEXT CASH MARKETS – MIFID II IMPLEMENTATION GUIDANCE

	<p>DEAIndicator.</p> <p>The member will be required to declare to ClientIdentificationShortCode via SLC manager with the designated CodeType, as described in the specifications for SLC Manager.</p>		
<p>y – use of full FreeText and full ClientID</p>	<p>The letter ‘y’ indicates the member will use both FreeText and ClientID fully to populate up to 3 short codes and the DEAIndicator.</p> <p>In case there is no associated third short code, the member may input the value as ‘00000000’ for padding.</p> <p>The member will be required to declare the short codes via SLC manager with the designated CodeType, as described in the specifications for SLC Manager.</p>	<p>Length 8bytes8bytes1byte1byte</p> <p>Sequence Shortcode1Shortcode2DEAindicator</p>	<p>Length 8 bytes</p> <p>Sequence ShortCode3</p>
<p>z – use of partial FreeText and full ClientID</p>	<p>The letter ‘z’ indicates that the member will use part of the FreeText at own discretion.</p> <p>In this case, Euronext will assume the first 8 bytes of the FreeText to represent the ExecutionDecisionWithinFirmShortCode, and the 17th byte of the FreeText to represent DEAIndicator, and the ClientID to represent either ClientIdentificationShortCode or InvestmentDecisionWithinFirmShortCode. ClientID is assumed to represent ClientIdentificationShortCode when ExecutionDecisionWithinFirmShortCode is populate with ‘3’ (NORE).</p> <p>The member will be required to declare the short codes via SLC manager with the designated CodeType, as described in the specifications for SLC Manager.</p>	<p>Length 8bytes8bytes1byte1byte</p> <p>Sequence Shortcode1FreeusageDEAindicator</p>	<p>Length 8 bytes</p> <p>Sequence ShortCode2</p>

Testing and implementation

Clients who will leverage the FreeText and/or ClientID fields to identify the relevant parties to an order are advised to conduct the necessary conformance testing in EUA, as described in the conformance script and guideline. CTSG will be available to assist clients with testing during regular testing hours Monday-Friday from 09:00-17:00 CET/CEST. The P-EUA is closed every **Wednesday** until 13:00 CET.

3.5.1.2 Guidance for formatting MiFID II short codes into Hexadecimal format

This section describes how to translate decimal representation of MiFID II short codes into hexadecimal representation.

Background and Approach

The short code range is from $-2^{31} + 1$ to $(2^{31} - 1)$ outlined in Optiq SBE/FIX and CCG-D order entry Binary/FIX documentation. The decimal representation range is from - 2,147,483,646 and 2,147,483,647.

The hexadecimal translation consists of transcoding the signed 32 bytes binary equivalent of the MiFID II short code decimal representation into 8 characters hexadecimal representation for the ExecutionDecisionWithinFirmShortCode, InvestmentDecisionWithinFirmShortCode, ClientIdentificationShortCode in the fields FreeText, FreeText_2 and ClientID.

The method of populating Mifid II short codes in the designated fields is described section 3.5.1.1 above.

MiFID II short codes using positive ranges

Positive ranges can be carried for the following scope of short codes:

- ClientIdentificationShortCode - Short code corresponding to LEI or National ID, '1' for AGGR (aggregated orders) or '2' for PNAL (pending allocations);
- ExecutionWithinFirmShortCode - Short code corresponding to National ID, in-house Algorithm ID, or '3' NORE (client execution decision maker);
- InvestmentDecisionWFirmShortCode - Short code corresponding to National ID or in-house Algorithm ID

Representation format	Lowest value	Highest value
Decimal	4	2,147,483,647
Hexadecimal	0 0 0 0 0 0 0 4	7 F F F F F F F

Conversion method:

Steps	Example (decimal value 100)
1. Find the 32 binary equivalent for the given positive decimal value	0000 0000 0000 0000 0000 0000 0110 0100
2. Translate in 8 hexadecimal char the value obtained in step 1	0 0 0 0 0 0 6 4

MiFID II short codes using negative ranges

Negative ranges can be carried for the following scope of short codes:

- ExecutionWithinFirmShortCode - Short code to ISV Algorithm ID
- InvestmentDecisionWFirmShortCode - Short code corresponding to ISV Algorithm ID

Representation format	Lowest value	Highest value
Decimal	- 2,147,483,646	-1
Hexadecimal	8 0 0 0 0 0 0 2	F F F F F F F F

EURONEXT CASH MARKETS – MIFID II IMPLEMENTATION GUIDANCE

Conversion method:

Steps	Example (decimal value -1 230 000 000)
1. Find the 32 binary equivalent for the positive value of the given negative decimal value.	0100 1001 0101 0000 0100 1111 1000 0000
2. Invert 0s & 1s of the binary number obtained in step 1	1011 0110 1010 1111 1011 0000 0111 1111
3. Add 1 to the binary number obtained in step 2	1011 0110 1010 1111 1011 0000 1000 0000
4. Translate in 8 hexadecimal char the value obtained in step 3	B 6 A F B 0 8 0

3.5.2 POPULATING MIFID II SHORT CODES AND DEA INDICATOR IN FLAT FILE VIA SLC MANAGER

The following section sets out the terms of reference for populating the MiFID II short codes in an end of day flat file to be submitted via Euronext SLC Manager.

FILE FORMAT AND NAMING

Expected data format: DAT, extension: .dat

File name must be appear as follow:

OrderIDShortCodes _[date]_[member code]_[market_code]_[sequence].dat

ex: OrderIDShortCodes_20170425_00014956_1_01.dat

Field name	Description	Values	Format	Rejections cases	Message
OrderIDShortCodes _	Prefix	OrderIDShortCodes_	Alpha	Not equal to 'OrderIDShortCodes'	[1000] Incorrect file name. Expected pattern [OrderIDShortCodes]
date_	Date of the file	YYYYMMDD Example 20170601	Format:YYYY MMDD	1) Not a valid date 2) Date <> current date	[1001][date] Incorrect date type/format
member code_	Participant code is Alphanumeric, 8 char. Applied by Euronext to Participants.	Letters, numbers, Fixed- length -8 char. Left padded with '0' where participant code is less than 8 characters	Alphanumeric of 8 char.	Unknown participant code	[1002][participant_code] Incorrect participant type/format

EURONEXT CASH MARKETS – MIFID II IMPLEMENTATION GUIDANCE

market_code_	Market code In case of presence on two markets, Client must sent two reports, one for each market.	1 - Euronext Cash 2 – Luxembourg Market	Integer	Values not in (1,2)	[1003][market_code] Incorrect data format: expected value 1, 2
sequence_	To add in case of multiple subsequent deliveries for a given day.	Between 01 and 99 digit	Integer	Validation rules: Must be defined between 01 and 99 digit Rejection cases: 1) Contains less than 2 characters 2) Contains special characters, accentuated characters, punctuation marks 3) Contains letters	[1004][sequence] Incorrect data file / format
.dat	File extension	.dat	Alpha	Not equal to ".dat"	[1005]Incorrect data file / format

DATA STRUCTURE

Expected data format: pipe as a sign separator (| separated values) and each line is closed by "|",extension: .dat

Date |OrderID|ISINCode|ShortCode1|ShortCode2| ShortCode3 |DEAIndicator|

Field name	Format	Len	Values	Description	Mandatory
Date	Format:YYYYMMDD	8	YYYYMMDD Example 20170601	Date of the order	Yes
OrdID	Integer	8	From 0 to 2^64-2	Number assigned by the Trading Engine upon successful validation of an incoming order. Please note: upon order modification, a new OrderID is generated by the Trading Engine. Members have to submit each OrderID even if the ShortCodes and DEAIndicators remain unchanged.	Yes
ISINCode	Alphanum	12		12-character alpha-numerical code that serves for uniform identification of a security	Yes
ShortCode1	Integer	4	From - 2^31+1 to 2^31-1	ExecutionWithinFirmShortCode, MiFID II identifier of the trader {NationalID or identification of client } or Algorithm {AlgoID} or	Yes

EURONEXT CASH MARKETS – MIFID II IMPLEMENTATION GUIDANCE

Field name	Format	Len	Values	Description	Mandatory
				responsible for the execution making	
ShortCode2	Integer	4	From - $2^{31}+1$ to $2^{31}-1$	MiFID II identifier for either one of the following: <ul style="list-style-type: none"> - InvestmentDecisionWithinfirmShortCode to identify the trader {NationalID} or Algorithm {AlgoID} responsible for the investment decision making; or - ClientIdentificationShortCode to identify the client of the member or participant of the trading venue {NationalID, LEI, AGGR or PNAL}. In case there is DEA, the code of the DEA user shall be used. 	Yes
ShortCode3	Integer	4	From - $2^{31}+1$ to $2^{31}-1$	InvestmentDecisionWithinfirmShortCode to identify the trader {NationalID} or Algorithm {AlgoID} responsible for the investment decision making To be used optionally and where applicable in combination with ShortCode2 populated as ClientIdentificationShortCode	No
DEAIndicator	Alphanumeric 1 char	1	'1' Yes '0' No	Indicates whether the order was submitted via a Direct Electronic Access (DEA) connection or not. It must be set to 1 for DEA access	Yes

TIMING AND UPLOAD PROCEDURE

Members will be required to upload the file via the SLC manager via GUI or API REST before 10:30 pm CET of the day of trading. More information about the upload procedure is provided in the specifications for SLC Manager, available on the Euronext website.

4. CONTACT

For further information relating to this document or Euronext’s MiFID II programme, please visit the Euronext MiFID II webpage at www.euronext.com/mifid-2 or contact the MiFID II Support Desk at mifid2@euronext.com. Alternatively, please contact the following Euronext customer support teams, available Monday – Friday from 09:00 to 18:00 CET:

Team	Contact details
<p>Customer Technical Support Group For technical support throughout the testing and conformance period</p>	<ul style="list-style-type: none"> ■ Tel: +33 1 85 148 588 ■ Email: CTSG@euronext.com
<p>Membership For questions related to the Saturn Reporting Agreement</p>	<ul style="list-style-type: none"> ■ Tel: +31 (0)20 721 4264 ■ Email: EuronextMembership@euronext.com
<p>Customer Access Services For questions related to Saturn access and log-in credentials</p>	<ul style="list-style-type: none"> ■ Tel: +33 1 8514 8589 ■ Email: CAS@euronext.com

5. HISTORY

VERSION N°	DATE	CHANGE DESCRIPTION
3.0	2017-10-23	<ul style="list-style-type: none"> - Overall formatting changes and replacement of Execution-Ing DecisionWithinFirmShortCode by ExecutionwithinfirmShortCode - Clarification of discontinued service eTCS Portal - Removed reference to Technical Note for Optiq, pending updated version - Clarification on Volume Cap management on COB and TCS - Added reference to SLC Manager specifications and updated onboarding procedures - Clarified Market Making flagging and added reference to Market Making Info-Flash - Clarification of Market Making flagging for Securitised Derivatives - Added reference to Tick Size Info-Flash and updated implementation date - New section added on Trading Venue Transaction Identification Code - Further information regarding the usage of the field Freetext, Freetext2, and ClientID : content, possible combinations & limitations - Clarification on Mapping between Trading capacity versus UTP account type and updated list of possible values - Updated reference to production go-live date for Timestamps and Algo flag on 13 November 2017 - Further information regarding the sequencing conditions and the usage of predefined characters for population of short codes and DEAIndicator on order entry - Further guidance for Hexadecimal formatting of MiFID II Short codes - Corrected file format and naming for populating short codes and DEAIndicator via flat file - Clarified contact details
2.0	2017-09-25	<p>Updated:</p> <ul style="list-style-type: none"> - Updated references to relevant Info-Flashes throughout document - Updated reference to related documents - Updated requirements and procedures for Algo Flagging - Included language on TCS decommissioning for OTC reporting - Updated language on volume cap management on legacy cash environment

EURONEXT CASH MARKETS – MIFID II IMPLEMENTATION GUIDANCE

VERSION N°	DATE	CHANGE DESCRIPTION
		<ul style="list-style-type: none">- Updated Order to Trade Ratio policy and procedures- Clarification on availability of timestamp and waiver indicators in EUA for EOD Trade application file- Updated sequencing procedures to populate short codes and DEAIIndicator using existing fields FreeText and ClientID , including possibility to use FreeText2 in Binary protocol- Updated file format and naming convention- participant code and market code- Updated data structure – optional third short code in flat file submission for short codes and DEAIIndicator by OrderID
1.0	2017-09-06	Initial version

DISCLAIMER

The purpose of this document is to provide general information only, and in no way does it provide a legal interpretation of MIFID II legislation. Nor does the information provided constitute legal or professional advice for any particular situation. You should take independent advice in respect of issues that are of concern to you. Euronext does not assume any responsibility for any errors or omissions contained herein. Euronext accepts no liability for decisions taken by any party, based on this information. This document and any contents thereof, as well as any prior or subsequent information exchanged with Euronext in relation to the subject matter of this document, are confidential and for the sole attention of the intended recipient. All data as of March 2017.

Euronext refers to Euronext N.V. and its affiliates. Information regarding trademarks and intellectual property rights of Euronext is located at www.euronext.com/terms-use.

References to an RTS should be taken to refer to the Delegated Act implementing the regulatory technical standards and not to the draft document submitted by ESMA to the European Commission.

© 2017, Euronext N.V. - All rights reserved.