EUREX

DEUTSCHE BÖRSE
CASH MARKET

Information handbook for audit trail and other regulatory reporting under the MiFID II/ MiFIR regime

Frankfurt Stock Exchange and Eurex

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Abstract
This document outlines the audit trail related reporting requirements under MiFID II / MiFIR and field descriptions. This handbook shall serve as guidance for trading participants in order to fulfil their reporting obligation. Furthermore, other MiFID II / MiFIR affected reports are also included.

Document History

Version	Date	Description
4.0	06/04/2023	Separation former chapter 2 “transaction reporting”, Correction 2.3.4.1 and 3.3.4.1; Correction 2.3.4.5.2, Update 3.3.4.3 (Field description): Data record specific field “ValidFrom-Date” can only be T or T+1; Clarification that the ValidFromDate must always be a trading day; Update 3.1 (notification to regulator); Update 3.3.4.4.2; Update 3.3.4.5.1 (addition of new TR162 report fields); Update 4 (update exchange rule article and links)

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1 Introduction

With MiFID II/MiFIR, applicable since January 3rd 2018, trading participants and trading venues shall meet certain reporting requirements. The Art. 25(3) of Reg. 600/2017 and MAR Art. 4 and MiFIR Art. 27 are serving as regulatory basis. This handbook shall help the Frankfurt Stock Exchange (FSE) and Eurex trading participants to fulfill the reporting requirements.

Chapter 2 encompasses the reporting content of the audit trail and the short code solution. Chapter 3 gives the trading participants the information about the identification of algorithms, their testing and certification. Chapter 4 provides an overview about the venue's DMA offerings. Chapter 5 provides information about other MiFID II / MiFIR affected reports. Chapter 6 contains an excursus about participant reference data and chapter 7 contains the enclosure.

2 Audit Trail Reporting

2.1 Regulatory requirements

In terms with Article 25 (2) of Regulation (EU) No 600/2014, the operator of a trading venue shall keep at the disposal of the competent authority, for at least five years, the relevant data on all orders in financial instruments which are advertised through their systems. The records shall contain the relevant data such as the characteristics of the order, including those that link an order with the executed transaction(s) stemming from that order; these details shall be reported in accordance with Article 26(1) and (3). In order to fulfill these requirements, the trading venue built new fields in the trading system. These new fields are described in next chapters.

2.2 Extract: Audit trail fields[1]

Field 2: Direct Electronic Access (DEA)

Content: 'true' where the order was submitted to the trading venue using DEA as defined in Article 4(1)(41) of Directive 2014/65/EU. 'false' where the order was not submitted to the trading venue using DEA as defined in Article 4(1)(41) of Directive 2014/65/EU.
Format and Standard: true; false
Data source: FSE TC540, TC810; Eurex TE540, TE810 'dmaFlg'
For more information please refer to chapter 4.

Field 8: Liquidity provision activity

Content: Indicates whether an order is submitted to a trading venue as part of a market-making strategy pursuant to Articles 17 and 48 of Directive 2014/65/EU or is submitted as part of another activity in accordance with Article 3 of this Regulation.
Format and Standard: true; false
Data source: Trading participants have to flag these orders/quotes during entry. The reporting will take place in FSE report TC540, TC550, TE540, TE545, TE550 "liqProvActivity".
T7: "OrderAttributeLiquidityProvision" (tag 23002) via ETI: Mandatory field in order, quote and TES transactions required to be set by the entering trader. Since the field is mandatory, only valid values are accepted for each relevant transaction and, consequently "0 - no liquidity provision" or "1 – liquidity provision" in the audit trail of T7.

Field 21: New order, order modification, order cancellation, order rejections, partial or full execution

Content:

- New order: receipt of a new order by the operator of the trading venue.
- Triggered: an order which becomes executable or, as the case may be, non-executable upon the realization of a pre-determined condition.
- Replaced by the member or participant of the trading venue: where a member, participant or client of the trading venue decides upon its own initiative to change any characteristic of the order it has previously entered into the order book.
- Replaced by market operations (automatic): where any characteristic of an order is changed by the trading venue operator's IT systems. This includes where a peg order's or a trailing stop order's current characteristic are changed to reflect how the order is located within the order book.

[1] RTS24, Annex, Table 2

- Replaced by market operations (human intervention): where any characteristic of an order is changed by a trading venue operator's staff. This includes the situation where a member, participant of the trading venue has IT issues and needs its orders to be cancelled urgently.
- Change of status at the initiative of the member, participant of the trading venue. This includes activation and deactivation.
- Change of status due to market operations.
- Cancelled at the initiative of the member, participant of the trading venue; where a member, participant or client decides upon its own initiative to cancel the order it has previously entered.
- Cancelled at the initiative of the member, participant of the trading venue; where a member, participant or client decides upon its own initiative to cancel the order it has previously entered.
- Cancelled by market operations. This includes a protection mechanism provided for investment firms carrying out a market-making activity as laid down in Articles 17 and 48 of Directive 2014/65/EU.
- Rejected order: an order received but rejected by the operator of the trading venue.
- Expired order: where the order is removed from the order book upon the end of its validity period.
- Partially filled: where the order is not fully executed so that there remains a quantity to be executed. 'PARF' - Partially filled
- Filled: where there is no more quantity to be executed.
- Request for quote sent: when the RFQ was sent out to the potential counterparties.

Format and Standard:

- 'NEWO' - New order;
- 'TRIG' - Triggered;
- 'REME' - Replaced by the member or participant of the trading venue;
- 'REMA' - Replaced by market operations (automatic);
- 'REMH' - Replaced by market operations (human intervention);
- 'CHME' - Change of status at the initiative of the member/ participant of the trading venue;
- 'CHMO' - Change of status due to market operations;
- 'CAME' - Cancelled at the initiative of the member or participant of the trading venue;
- 'CAMO' -Cancelled by market operations;
- 'REMO' - Rejected order;
- 'EXPI' - Expired order;
- 'PARF' - Partially filled;
- 'FILL' - Filled;
- {ALPHANUM-4} characters not already in use for the trading venue's own classification. Such as:
- 'RFQS' – Request for quote sent;

Data source : TC540, TC545, TC600, TC610, TE540, TE545 'regOrderEvent'.

Field 31: Price notation

Content: Indicates whether the price is expressed in monetary value, in percentage, in yield or in basis points.

Format and Standard:

- 'MONE' – Monetary value
- 'PERC' – Percentage
- 'YIEL' – Yield

- 'BAPO' – Basis points

Data Source:
The price notation information will be distributed via a new field in the post-trade CEF Core Feed and in the T7 Reference Data Interface as field #423 "Price Type" with the following values:
1: PERC [percentage]
2: MONE [monetary]
22: BAPO [basis points]
For Eurex and FSE, value YIEL [yield] is currently not applicable.

Field 44: Passive or aggressive indicator:

Content: On partial fill and fill order events, indicated whether the order was already resting on the order book and providing liquidity (passive) or the order initiated the trade and thus tool liquidity (aggressive)
Format and Standard: 'PASV' – passive; 'AGRE' - aggressive.
Data source: Börse Frankfurt: blank due to the continuous auction model.
T7: FSE and Eurex report TC810 (TE810) 'sideLiquidityInd'; and #1444 SideLiquidityInd ETI
This field is only populated for executions occurring in continuous trading sessions otherwise it is blank. Orders are neither passive nor aggressive during auction periods.

Field 48: Trading venue transaction identification code

Content: Alphanumerical code assigned by the trading venue to the transaction pursuant to Article 12 of this Regulation. The trading venue transaction identification code shall be unique, consistent and persistent per ISO10383 segment MIC and per trading day. Where the trading venue does not use segment MICs, the trading venue transaction identification code shall be unique, consistent and persistent per operating MIC per trading day. The components of the transaction identification code shall not disclose the identity of the counterparties to the transaction for which the code is maintained.

Format and Standard: {ALPHANUM-52}
Data source:

- ETI Trade Notifications, TES Trade Broadcast: RegulatoryTradeID, tag 1903
- FGW Trade Capture Report
- TC810, TE810
- CEF Core: TRANS_ID_CODE (846F)

FSE and Eurex T7:

If members do not retrieve the information from the "data source" stated above, the field TVTIC can be concatenated by the following fields. Please note that the length of the fields shall be fixed with leading zeros to the given 52-character string value below. It is recommended to take the data required to create the TVTIC from T7 ETI interface.

Envir_Flag (1)+ SecurityID (20)+ TranTime (20)+ DealType (1) + MatchStepID (10)

FSE T7 rules:

- Envir_Flag (1):
  - Valid value “1” for the Xetra market (MIC XETR)
  - Valid value “3” for Börse Frankfurt and Börse Frankfurt Zertifikate (MIC XFRA)

  Field length is one digit.
- SecurityID (20):
  - RDI/RDF, EMDI, ETI, FIX LF: SecurityID (Tag 48)
  - FGW: SecurityAltID (Tag 455)

  Field length is fix 20 digits. The part on the leading zeros needs to be provided to reach the fixed length.
- TranTime (20):
  - ETI: Trade Notification and TES trade broadcast TransactTime Stamp (Tag 60)
  - EMDI: MDEntryTime (Tag 273)
  - FGW in Execution and Trade Capture Report UTransactTime (Tag 30060)

  Field length is fix 20 digits. The part on the leading zeros needs to be provided to reach the fixed length.
- DealType (1):
  - Valid value "0" for on-book
  - Valid value "1" for off-book

  Field length is one digit.
- MatchStepID (10):
  For on-book
  - ETI: TrdMatchID (tag 880)
  - EMDI: MDEntryID (tag 278)
  - FGW: TradeMatchID (tag 880)

  For off-book
  - ETI and FGW: PackageID (tag 2489)
  - EMDI: MDEntryID (tag 278)

  Field length is fix 10 digits. The part on the leading zeros needs to be provided to reach the fixed length.

Eurex T7 rules:

- Envir_Flag (1): to be set to 1 for Eurex T7 and to 2 for FX T7 as prefix from session context.
- SecurityID (20): RDI/RDF, EMDI, ETI and FGW (Tag 48 SecurityID). Field length is fix 20 digits. The part on the security ID leading zeros needs to be provided to reach the fixed length.
- TranTime (20):
  - ETI,trade notification and TES trade broadcast: TransactTime Stamp (Tag 60)
  - EMDI: MDEntryTime (Tag 273)
  - FGW in Execution and Trade Capture Report UTransactTime (Tag 30060)

  Field length is fix 20 digits. The part on the leading zeros needs to be provided to reach the fixed length.
- DealType (1):
  - Valid value "0" for on-book
  - Valid value "1" for off-book
  - EMDI: MDOriginType (tag 1024)

- MatchStepID (10):
  - ETI, trade notification broadcast: TradeMatchID (tag 880)
  - ETI, TES trade broadcast: PackageID (tag 2489)
  - EMDI: MDEntryID (tag 278)
  - FGW: TrdMatchID (tag 880)

As a general rule, the T7 SecurityID used for the creation of the TVTIC is always a simple instrument Security ID as e.g. provided in the T7 trade confirmation. In case of a complex (multi-leg) instrument match, the TVTIC is created on instrument leg level and the corresponding leg instrument Security ID is taken into account.

Consequently, a TVTIC on complex instrument level is not supported. The approach of referring to the simple instrument Security ID uniformly covers all different types of trades resulting from the matching of simple and complex instruments. As an example, a matching event of a futures calendar spread results to two TVTIC which only differ by the SecurityID representing the corresponding T7 instrument ID of leg 1 and leg 2 (regardless whether the matching event involves synthetic matching or not).
With the help of the Strategy Link Id (tag 1851), it is possible to retrieve all relevant information on complex instrument level.

Uniqueness

T7: The field used is unique per segment MIC, business day, transaction, price level and system (FX T7 und FSE T7 and Eurex T7).

2.3 Short Code Solution

This chapter describes the short code solution comprising the T7 trading system, the MIFID II / MIFIR and uniqueness requirements, registration of short codes, the short code management, monitoring and sanctioning, and information about the common upload engine (CUE).

2.3.1 Technical fields in the trading system T7

Deutsche Börse Group follows the EU-wide industry "short code solution" standard. Trading participants shall insert the information of the ESMA fields[2] "client identification code", the "execution within firm" and the "investment decision within firm" in the respective T7 fields using this logic. The fields are available in the order and quote messages as 8-byte 20 digits numeric fields.

- Client ID (for the MiFID field "Client identification code")
- Execution ID (for the MiFID field "Execution within firm")
- Investment ID (for the MiFID field "Investment decision within firm")

As the fields execution decision and investment decision can contain an algoID or a short code, there are respective qualifier fields. Please set the qualifier fields to the following values[3] in order to identify the numeric values in execution decision and investment decision as algo (22) or short code (24):

- Execution Qualifier value 22 = Algo or 24 = Human
- Investment Qualifier value 22 = Algo or 24 = Human

Following the ESMA requirements[4], the submission of the Execution ID is mandatory, and the Investment ID is optional as the field must be blank in case the client of the trading participant took the investment decision.

However, members can leave the execution and investment decision field blank and set the respective qualifier to "human" and the system automatically maps the NationalID of the submitting TraderID owner into the field in the trading venue's audit trail. The ClientID is mandatory when trading in the Agent-/ Riskless Principal-Account (A-/R-account) i.e. the ESMA trading capacity AOTC / MTCH. Please find more information on all scenarios in 2.3.2.

Please note that the short code fields are not permitted to have leading zeros, e.g. "00012345" or be a stand-alone "0".

[2] Commission Delegated Regulation (CDR) 2017/580, article 2
[3] Values might differ with respect to different interfaces, e.g. ETI or FIX.
[4] Commission Delegated Regulation (CDR) 2017/580, article 2 and ESMA guidelines ESMA/2016/1452, chapters 5.11, 5.12

2.3.2 Short code fields and attributes

Please find an overview of all scenarios including short codes by account (ESMA trading capacity) and related flagging of the fields below and the detailed information on the fields in this chapter.

Proprietary accounts (trading capacity DEAL) and riskless principal account (trading capacity MTCH)

Flagging options	Execution Decision	Execution Qualifier	Investment Decision	Investment Qualifier	Client ID
Execution decision taken by an algo. Investment decision taken by the trader or another person within the member firm.	Algo ID	T7: 22 (for an algo)	**Short code** for the National ID of the trader/person	T7: 24 (for a natural person)	-
Execution decision taken by the trader or another person within the member firm. Investment decision taken by an algo.	**Short code** for the National ID of the trader/person	T7: 24 (for a natural person)	Algo ID	T7: 22 (for an algo)	-
Execution and investment decision are both taken by the trader or another person within the member firm.	**Short code** for the National ID of the trader/person	T7: 24 (for a natural person)	**Short code** for the National ID of the trader/person	T7: 24 (for a natural person)	-
RISKLESS Principal Account ONLY Investment and execution decisions not taken within the participant firm.	**Short code** for NORE	T7: 24 (for a natural person)	Empty	Empty	**Short code** for LEI or National ID

Agent account (Trading capacity AOTC), client ID mandatory

Flagging options	Execution Decision	Execution Qualifier	Investment Decision	Investment Qualifier	Client ID
Execution and investment decision taken by an algo.	Algo ID	T7: 22 (for an algo)	Algo ID	T7: 22 (for an algo)	**Short code** for LEI or National ID, PNAL or AGGR
Execution decision taken by an algo. Investment decision taken by the trader or another person within the member firm.	Algo ID	T7: 22 (for an algo)	**Short code** for the National ID of the trader/person	T7: 24 (for a natural person)	**Short code** for LEI or National ID, PNAL or AGGR
Execution decision taken by the trader or another person within the member firm. Investment decision taken by an algo.	**Short code** for the National ID of the trader/person	T7: 24 (for a natural person)	Algo ID	T7: 22 (for an algo)	**Short code** for LEI or National ID, PNAL or AGGR
Execution and investment decision are both taken by the trader or another person within the member firm.	**Short code for the National** ID of the trader/person	T7: 24 (for a natural person)	**Short code** for the National ID of the trader/person	T7: 24 (for a natural person)	**Short code** for LEI or National ID, PNAL or AGGR
Execution decision taken by the trader or a person of the member firm other than the trader and the investment decision not taken within the investment firm.	**Short code** for the National ID of the trader/person	T7: 24 (for a natural person)	Empty	Empty	**Short code** for LEI or National ID, PNAL or AGGR
Execution decision taken by an algo and the investment decision not taken within the investment firm.	Algo ID	T7: 22 (for an algo)	Empty	Empty	**Short code** for LEI or National ID, PNAL or AGGR

Agent account (Trading capacity AOTC), client ID mandatory

Flagging options	Execution Decision	Execution Qualifier	Investment Decision	Investment Qualifier	Client ID
Investment and execution decision not taken within the participant firm.	NORE	T7: 24 (for a natural person)	Empty	Empty	**Short code** for LEI or National ID, PNAL or AGGR

2.3.2.1 ClientID

The ClientID must be populated with a short code of the trading participant's immediate client. It is a mandatory field for all orders entered on A-/ R-account.[5] Without using a short code (empty) the orderentry will be rejected. If you are entering orders via proprietary accounts, the ClientID must be empty.

The short code used in the ClientID field must be registered with a long code, i.e. natural persons with the respective NationalID, legal persons with the legal entity identifier (LEI) or the ESMA valid values for certain exemptions.

National ID by country and priority

The national ID for natural persons[6] must follow the format requirements of valid national identifiers as outlined in the ESMA Questions and Answers on MiFIR data reporting[7].
Please refer to chapter 6 for your convenience.

LEI

Legal persons have to be identified with the LEI as defined in ISO 17442.

ESMA valid values[8]

"PNAL"

In the exceptional case of an allocation that is pending at the time of order submission and where the applicable national legislation allows for the allocation of the order to take place after its submission, please populate the field with short code for the default reference "PNAL" for such order.

"AGGR"

Where the allocation has taken place and clients are identified before the transmission of the order to the Trading Venue's member or participant for execution but the orders of several clients are aggregated by the member or participant of the Trading Venue, the participant is requested to populate Client ID with the short code with the default reference "AGGR".

[5] Commission Delegated Regulation (CDR) 2017/580 Art. 2, ESMA Guidelines (ESMA/2016/1452) chapter 6.3
[6] Annex II of Commission Delegated Regulation (EU) 2017/590
[7] ESMA70-1861941480-56, p.50
[8] ESMA Guidelines (ESMA/2016/1452) chapter 6.3

The following short codes, representing industry standards, shall be used to flag the ESMA permitted attributes of the ClientID. Please note that you are required to upload the respective short/long codes in your mapping file. Please refer to 2.3.4 for examples.

1 – Aggregated order flag "AGGR"
2 – Pending allocations flag "PNAL"

If you used PNAL or AGGR, you are not required to provide the trading venues with the ClientIDs afterwards. Those values have to be provided in your transaction reporting to the NCA but not to the trading venue. For further details please refer to the ESMA guidelines[9].

2.3.2.2 ExecutionID

The executionID is mandatory in every order and quote, irrespectively of the account (e.g. A-, R-, P-, M-account). As by ESMA definition[10] this decision is taken "within the member firm", there is no option to identify a client in this field. If a client took this decision, ESMA defines this field to be populated with the ESMA value "NORE". Hence, the trading participant must populate this field with a short code for the long code "NORE".
However, if this decision is taken within the trading participant's firm, an algoID or a short code for the natural person within the firm must be populated. For trading participants' convenience, this field can be left empty, and the qualifier set to "human" and the trading venue maps the national ID of the trader automatically to the trading venue's audit trail.

The short code used in the execution decision must be registered with a long code, i.e. natural persons with the respective NationalID or the ESMA valid value "NORE" for this exemption.

National ID by country and priority
The national ID for natural persons[11] must follow the format requirements of valid national identifiers as outlined in the ESMA Questions and Answers on MiFIR data reporting[12].
Please refer to chapter 6 for your convenience.

ESMA valid value[13]
"NORE"
In cases where the decision about the execution was made by a client (e.g. the client instructs the details of the trade including the venue of execution) or by another person from outside the investment firm (e.g. an employee of a company within the same group), investment firms should use the default value "NORE" in this field.

[9] ESMA/2016/1452, chapter 6.3
[10] Commission Delegated Regulation (CDR) 2017/580 Art. 2, (CDR) 2017/590 Art. 8, ESMA Guidelines (ESMA/2016/1452) chapters 5.12.
[11] Annex II of Commission Delegated Regulation (EU) 2017/590
[12] ESMA70-1861941480-56, p.50
[13] ESMA Guidelines (ESMA/2016/1452) chapter 6.3

The short code "3", representing industry standard, shall be used to flag the ESMA permitted value "NORE" of the execution decision. Please note that you are required to register the respective short/long code with the trading venue. Please refer to 3.3.3 for an example.

It is in the trading participants' responsibility to determine the decision maker (e.g. algorithm, natural person or client) who is primarily responsible for the execution in accordance with their governance model.

2.3.2.3 InvestmentID

The investmentID is mandatory in every order and quote, if trading in proprietary accounts e.g. P-, M-account. As by ESMA definition[14] this decision is taken "within the member firm", there is no option to identify a client in this field. If a client took this decision, ESMA defines this field to be empty. For this purpose, please leave the qualifier field empty too.
However, if this decision is taken within the trading participant's firm, an algoID or a short code for the natural person within the firm must be populated. For trading participants' convenience, this field can be left empty and the qualifier set to "human" and the trading venue maps the national ID of the trader automatically to the trading venue's audit trail.

The short code used in the investment decision must be registered with a long code, i.e. natural person with the respective NationalID.

National ID by country and priority

The national ID for natural persons[15] must follow the format requirements of valid national identifiers as outlined in the ESMA Questions and Answers on MiFIR data reporting[16].
Please refer to chapter 6 for your convenience.

It is in the participants' responsibility to determine the decision maker (e.g. algorithm, natural person or client) who is primarily responsible in accordance with their governance model.

2.3.3 Data requirements of short / long code combinations

2.3.3.1 Uniqueness and consistency

The short/long code combinations have to be unique and consistent over time, i.e. the long code (natural persons: natural person within the trading participant or client of a trading participant; legal persons: LEI) needs to be assigned to one single short code, which will be used in order to identify that client since the first day of usage.
For example: The trading participant has a client John Doe, with a long code "19811025JOHN#DOE##". The trading participant registers that long code with a short code "123". Hence, short code "123" must be used for John Doe starting with the first order submission for this client and has to be used for every consecutive order submission.

[14] Commission Delegated Regulation (CDR) 2017/580 Art. 2, (CDR) 2017/590 Art. 8, ESMA Guidelines (ESMA/2016/1452) chapters 5.11.
[15] Annex II of Commission Delegated Regulation (EU) 2017/590
[16] ESMA70-1861941480-56, p.50

However, short codes used in an order/quote for the first time may be registered with the corresponding long codes latest by the end of the trading day following the trading day of the order submission (t+1). In contrast, it is not required that the long code assigned to a short code is already registered with the exchange prior to first usage of the short code. The requirement to use "stable", i.e. unique, and invariable short/long code combinations over time, remains unchanged.

2.3.3.2 Exemption

An exemption to the uniqueness of short/long code combinations may be granted, if a client of a trading participant holds more than one deposit account for securities (custody account) within the trading participant's firm. In such a case it is permitted to assign a unique short code for each custody account of that client. There is no pre-defined threshold of permitted short codes for such cases. However, the total of short codes must be identical to the total of custody accounts of that client, i.e. every single custody account is permitted to have one unique short code.
For such or similar cases the trading venues' management boards may grant exemptions upon written request.

Please contact for such queries:

- FSE: regulatory.processing@deutsche-boerse.com
- Eurex: eurex.reg.reporting@eurex.com

2.3.3.3 Modification

The short/long code combination is only allowed to be modified for an update of the long code, i.e. if this long code (LEI or NationalID pursuant to the ESMA requirements) has changed. For instance, permitted changes in long codes are an update of a passport number or the change of a CONCAT due to marriage and hence a change of the family name.

2.3.3.4 Deletion

Deletions of short/long code combinations are allowed if the contractual relationship between the trading participant and the legal or natural person ceases to exist. Hence, this short/long code combination is no longer in use. Those short codes can be re-used after the short/long code registration was successfully deleted. The deletion terminates the short/long code combination, which will be reported in the TR161 short code overview report with a "valid to" date of the day of the deletion. At least one business day must pass between the termination and re-registration of a short code.

It is only possible to delete short/long code combinations with validity for the future, i.e., with ValidFromDate T+1 (where T is the date of upload). Please note that the ValidFromDate must always be a trading day.[17]

For instance: Deletion record for a registered short code with a "valid from" date "2022-01-27" (27 January 2022) sent to the trading venue before 23:30 CE(S)T on 26 January 2022. The TR161 short code overview report documents this deletion with a "valid to" date 27 January 2022. Another registration

[17] Please refer to the trading calendar for simulation and production for XETR and XFRA (simulation and production: https://www.xetra.com/xetra-en/trading/trading-calendar-and-trading-hours) as well as for XEUR (simulation: https://www.eurex.com/ex-en/support/initiatives/simulation-calendar; production: https://www.eurex.com/ex-en/trade/trading-calendar).

record for that short code with another long code can be processed earliest 28 January 2022. It is not permitted to delete a short/long code combination and register that short code with another long code on the same business day.

2.3.3.5 Correction

Correction for missing error (error code 1)

For cases where a short code was used for the first time, it is permitted to register that short/long code combination on the day of usage or latest by 23:30 CE(S)T the following trading day (please refer for further details to chapter 2.3.3.1). For the correction of that missing on the following trading day it is necessary to set the "valid from" to the previous trading (t-1) day.

For example:

Trading participant uses a short code "123", which was not registered yet (e.g. a new client of the trading participant or a client of the trading participant, which has not traded on FSE or Eurex before) on trading day 10 November 2021. The TR160 for that day is provided to the trading participant after the overnight batch on 11 November 2021 and contains an error "missing" (error code 1) for the short code "123". The trading participant must correct that missing short/long code combination by registering that combination with the respective trading venue latest by 23:30 CE(S)T on 11 November 2021 as this is the following trading day after the order submission. The record in the upload file has to have the "valid from" field set to "2021-11-10" in order to correct the missing registration of day 10 November 2021. Please note that per ESMA definition[18] a correction of that missing registration is only permitted until the end of business of the consecutive trading day following the order submission, i.e. t+1 23:30 CE(S)T. If this short/long code combination was not registered in time, it will be subject of sanction proceedings (for more information please refer to chapter 2.3.6.1).

Correction due to short code typo in the order/quote submission (breach of uniqueness)

Where a trading participant enters an incorrect short code into an order, that participant is still required to comply with both the data provision and uniqueness requirements.

The participant should therefore:

1. Upload the correct long code mapping for that mistyped short code at the latest by T+1 (T being the day on which an order activity generated a "missing" in the TR160 for that Member ID). This ensures that the affected short code is registered with a long code at the exchange.
2. Send a deletion for the affected short code-long code mapping (i.e., delete the mapping containing the mistyped short code). Please note that the deletion record must be sent at the earliest on the trading day following the upload with a ValidFromDate of T+1, as it is not possible to send both an upload and deletion record for the same short code-long code mapping on the same trading day and it is not possible to send a deletion record with a ValidFromDate of T-1 or T. Please note that the ValidFromDate must always be a trading day.[19]

The short code-long code mapping for the mistyped short code should be deleted in a timely fashion in order to re-establish compliance with the uniqueness rule. Failure to do so may be subject to sanctioning.

[18] ESMA Guidelines (ESMA/2016/1452) chapters 6.2

[19] Please r files can also be uploaded in UTF-8 UNIX format efer to the trading calendar for simulation and production for XETR and XFRA (simulation and production: https://www.xetra.com/xetra-en/trading/trading-calendar-and-trading-hours) as well as for XEUR (simulation: https://www.eurex.com/ex-en/support/initiatives/simulation-calendar; production: https://www.eurex.com/ex-en/trade/trading-calendar).

In the course of the relevant exchange's regular monitoring, a trading participant may be asked to verify the reason(s) behind such an upload and re-deletion, at which point in time the explanation of the typo (Tippfehler) may be given. It is not necessary to notify the exchange in advance.

2.3.4 Registration of short / long codes

Once the trading participant has uniquely assigned short codes to his long codes, the data has to be registered with the trading venue. An upload file has to be created and provided to the trading venues via an upload functionality.

The uploads shall take place on business days between 00:00 and 23:30 CE(S)T. Uploads after 00:00 the following day are feasible. However, the date in the file name has to be changed to the next trading day[20] (not calendar day) and, if applicable, the ValidFromDates have to be adjusted accordingly.

There are two upload functionalities: one is available in the **Member Section** and another is available on the **Common Upload Engine (CUE)**. Both functionalities have a pre-validation tool installed, which applies validations on file structure and field length of the long values (according to LEI ISO 17442 and ESMA requirements for national identifiers[21] - please see chapter 6 for your convenience) and provide immediate response. Those validations are preliminary, the full data validation is processed in the overnight batch and the results are available in the TR160 error and the TR161 overview reports.

Please note: if the upload file contains an error, the file is rejected during the upload process completely and a log file indicating the error(s) is provided to the trading participant. The member section functionality responds via email and the CUE provides a log file retrievable from the respective "trading date" CUE folder. During the overnight batch the data is validated again and checked against the database. Only separate data records might be rejected dependent on the error reason and provided to the trading participant in the TR160 short code error report.

Please note: trading participants shall use either the CUE or the member section upload functionality for their uploads. In case files are sent via both functionalities on a trading day, the member section files are processed first (starting with the last file received), followed by the CUE files (starting with the last received file). Example: Member uploads files at 10 AM, 3PM and 11PM via CUE and a file at 8PM via member section. The member section file gets processed first, followed by the CUE files of 11 PM, 3 PM and 10 AM.

Please find user manuals on the webpages under the following paths:

- Xetra.com >> Newsroom >> Current regulatory topics >> MiFID II and MiFIR >> Reference data reporting
- Xetra.com >> Technology >> T7 trading architecture >> System documentation >> Release XY[22] >> Reports
- Eurex.com >> Rules-Regs >> MiFID II/MiFIR >> Client & Member Reference Data
- Eurex.com >> Support >> Initiatives & Releases >> T7 Release XY[23] >> Reports

[20] Please refer to the trading calendar for simulation and production for XETR and XFRA (simulation and production: https://www.xetra.com/xetra-en/trading/trading-calendar-and-trading-hours) as well as for XEUR (simulation: https://www.eurex.com/ex-en/support/initiatives/simulation-calendar; production: https://www.eurex.com/ex-en/trade/trading-calendar).

[21] Annex II of Commission Delegated Regulation (EU) 2017/590 and ESMA70-1861941480-56, p.50

[22] Please always refer to the most recent release for the latest documents

[23] See above

2.3.4.1 Upload file naming convention

2.3.4.1.1 Member section upload functionality

It is strongly recommended to apply the below naming convention. It follows the chronological sequence: reporting reason, upload date, MIC, memberID, timestamp, data format. Trading participants can use another file name and this file name is created automatically.
Example:
RTS2420211027XETRGDBXX20211027103159.csv

Field	Meaning	Comment
[0-9A-Z]{5}	Service name	RTS24
[0-9]{8}	Upload Date	YYYYMMDD
[XETR, XFRA, XEUR]{4}	MIC	XEUR, XETR, XFRA
[~~0-9~~A-Z]{5}	Member ID	ABCLO
[0-9]{4}[0-9]{2}[0-9]{2}[0-9]{2}[0-9]{2}[0-9]{2}	Timestamp	YYYYMMDDhhmmss
[.CSV]{4}[~~0-9A-Z]{3}~~	File type	.CSV

2.3.4.1.2 Common Upload Engine (CUE) upload functionality

The naming convention must be applied. It follows the chronological sequence: environmentID, service name, memberID, upload date, MIC, file type.
Please note that the file name must be in capital letters completely and the date in the file name must be either the current trading day or, if uploaded on a weekend or other non-trading day, the next trading day[24] (not calendar day).

Example:
88EXTREFDAABCLO20210216XETR.CSV

Field	Meaning	Comment
[0-9]{2}	Environment ID	88 for Prod
		89 for Simu
[EXTREFDA~~0-9A-Z~~]{8}	Service name	EXTREFDA
[~~0-9~~A-Z]{5}	Member ID	ABCLO
[0-9]{8}	Trading Date	YYYYMMDD
[XEUR, XETR, XFRA~~0-9A-Z~~]{4}	MIC	XEUR, XETR, XFRA
[.CSV~~0-9A-Z~~]{~~3~~4}	File type	.CSV

[24] Please refer to the trading calendar for simulation and production for XETR and XFRA (simulation and production: https://www.xetra.com/xetra-en/trading/trading-calendar-and-trading-hours) as well as for XEUR (simulation: https://www.eurex.com/ex-en/support/initiatives/simulation-calendar; production: https://www.eurex.com/ex-en/trade/trading-calendar).

2.3.4.2 Upload file structure and format

The upload file is a CSV file, i.e. comma separated (not semicolon). The file format has to be ASCII / UTF-8 Windows. Other UTF-8 encryption formats, most notably UTF-8 BOM, cannot be processed. The file size is limited to 5 megabyte.

Table: Example file structure

ParticipantID	MIC	StatusIndicator	ValidFromDate	ShortCodeID	ClassificationRule	NationalIDCountryCode	NationalIDPriority	ClientLongValue
GDBXX	XETR	N	2021-09-18	123125	N	AT	1	19900415EMMA#WATSO
GDBXX	XETR	M	2021-09-18	12315	N	ER	2	19860119LUAM#ALEME
GDBXX	XETR	D	2021-09-18	421123	N	ES	1	99111222M
GDBXX	XETR	N	2021-09-18	15612	N	US	2	19900401JOHN#DOE##
GDBXX	XETR	D	2021-09-18	85123	L			5493004PP58SUE3G8M27
GDBXX	XETR	N	2021-09-18	4	N	DE	1	19670709MAX##MUSTE
GDBXX	XETR	M	2021-09-18	1467	N	CZ	3	19830115ELLA#CENLA
PLEASE NOTE: one file per MIC and memberID (XETR, XFRA or XEUR)								
PLEASE NOTE: header specification (case senstive) has to be applied otherwise the file will be rejected								

Sample files are available on the webpages under the following paths:
Xetra.com >> Newsroom >> Current regulatory topics >> MiFID II and MiFIR >> Reference data reporting
Eurex.com >> Rules & Regs >> MiFID II/MiFIR >> Client & Member Reference Data

Please note that the short code fields are not permitted to have leading zeros, e.g. “00012345” or be a stand-alone “0”.

Data record examples of certain attributes
If you intend to use the industry standard short codes, please upload in the respective upload mapping file the following data records:
Aggregated
GDBXX,XETR,N,2018-01-17,1,,,,AGGR

Pending allocation
GDBXX,XETR,N,2018-01-17,2,,,,PNAL

NORE
GDBXX,XETR,N,2018-01-17,3,,,,NORE

2.3.4.3 Field description

1. Participant specific fields

ParticipantID and MIC are validated for permission, whether the trading participant is permitted to upload data for the MIC codes.

- “ParticipantID”
  The participant ID is the trading participants five-digit memberID. Valid values: [A-Z], mandatory length: {5}.

- MIC
  The MIC code is the four-digit operating MIC of the trading venues. Valid values: [XETR, XFRA, XEUR], mandatory length: {4}.

XETR	Xetra
XFRA	Börse Frankfurt and Börse Frankfurt Certificates
XEUR	Eurex

An upload file must be provided per MIC, i.e. all data records contained in a file have to have the same MIC.

2. Data record specific fields

- "StatusIndicator"
  The status indicator is a one-digit value and provides the status of the data record. Valid values: [DMN], mandatory length: {1}.

N	New short code registration
M	Modification of an already registered short code
D	Deletion of a registered short code

Please note: Short code registrations must be unique and consistent over time. Hence, a registered short code record is allowed to be changed only if the long code changed for legal reasons e.g. the change of the CONCAT due to a legal name change.

Changes to processing of StatusIndicators N and M with T7 Release 11.0: The processing of records with StatusIndicators N and M will change with T7 Release 11.0. Upload records intended to modify the long code of an already registered short code-long code combination must be uploaded with Status Indicator M ("Modification"). Any such records uploaded with Status Indicator N ("New") will be rejected. Conversely, upload records intended to register a new short-long code mapping must be uploaded with Status Indicator "N". Any such records uploaded with Status Indicator "M" will be rejected.

- "ValidFromDate"
  The valid from date provides the date the short code registration shall be valid. Date format is YYYY-MM-DD with the following valid values [] and mandatory length {}: [0-9]{4}-[0-9]{2}-[0-9]{2}. The acceptable date depends on the StatusIndicator:
  - StatusIndicator N: ValidFromDate may be T-1, T or T+1. To correct an Error Code 1 in the TR160 report, the ValidFromDate must be T-1.

- StatusIndicator M: ValidFromDate may be T-1, T orT+1.
- StatusIndicator D: ValidFromDate must be T+1.

		ValidFromDate, T = trading date of upload				
StatusIndicator		**T-2 or further in the past**	**T-1**	**T**	**T+1**	**T+2 or further in the future**
N	New Registration	X	Accepted	Accepted	Accepted	X*
M	Modification	X	Accepted	Accepted	Accepted	X*
D	Deletion	X	X*	X*	Accepted	X*

*X = rejection of mapping; * = changes with T7 Release 11.0*

In each of the above cases, T refers to the trading date of the upload: either the current date, if also a trading day, or the next trading day if uploaded on a weekend or other non-trading day. Trading Participants are encouraged to consult the Trading Calendar of the relevant exchange(s) in order to ensure that these dates are entered correctly:

- XETR and XFRA trading calendar (simulation and production): https://www.xetra.com/xetra-en/trading/trading-calendar-and-trading-hours)
- XEUR (simulation calendar): https://www.eurex.com/ex-en/support/initiatives/simulation-calendar; (production calendar): https://www.eurex.com/ex-en/trade/trading-calendar

Please note: Short code registrations must be unique and consistent over time. Hence, a registered short code must be assigned uniquely to a long code over time. Only if a short code is used for the first time, it is permitted to register this short code on the day of the usage or latest by the end of the following trading day (for corrections of missing errors (error code 1)).

- "ShortCodeID"
  The short code ID holds the numerical value of a short code. Valid values: [0-9], minimum and maximum length: {1,20}.

  Please note: A stand-alone zero and leading zeros are not permitted.

- "ClassificationRule"
  The classification rule is the indicator whether the long code is a national ID of a natural person or a legal entity identifier (LEI) of a legal person. Valid values: [L and N], length: {0,1}.

  L Legal person

  N Natural person

  This field is only applicable if field "ClientLongValue" holds data of a natural person or an LEI. This field shall be left blank for the registration of the ESMA values: AGGR, PNAL, NORE.

  Please note it is not possible to use a modification (StatusIndicator M) if this would result in the ClassificationRule changing. Where a legally valid reason to change the ClassificationRule of a validly registered short/longcode mapping has been identified, the affected mapping should be deleted and a new mapping with the correct ClassificationRule uploaded.

- "NationalIDCountryCode"
  The national ID country code provides the two-digit country code. Valid values: [A-Z], length: {0,2}. This field is only applicable if field "Classification rule" contains an "N" for natural person. If field "Classification rule" contains an L, leave this field (NationalIDCountryCode) blank. This field shall be left blank for the registration of the ESMA values: AGGR, PNAL, NORE.

  Please note: Follow the ESMA defined long codes (see chapter 6).

- "NationalIDPriority"
  The national ID priority provides the one-digit priority per country code. Valid values: [123], length: {0,1}. This field is only applicable if field "Classification rule" holds an "N" for natural person. If field "Classification rule" holds an L for a legal person, leave this field (NationalIDPriority) blank. This field shall be left blank for the registration of the ESMA values: AGGR, PNAL, NORE.

  Please note: Follow the ESMA defined long codes (see chapter 6).

- "ClientLongValue"
  The client long value holds the long code. Valid values: [0-9, A-Z, a-Z, #], minimum and maximum length: {4,35}. The long code can be a national ID, an LEI or the ESMA pre-defined values "AGGR", "PNAL" and "NORE". The LEI is a 20-character alphanumeric value. Besides the field length, the value is checked against the GLEIF database.

  Please note: Follow the ESMA defined long codes (see chapter 6) and LEI standard.

2.3.4.4 Validations

2.3.4.4.1 CUE validations

For CUE validations please refer to "CUE validation and file specification Short code and algoID" document under the following paths:

- Xetra.com >> Newsroom >> Current regulatory topics >> MiFID II and MiFIR >> Reference data reporting
- Eurex.com >> Rules & Regs >> MiFID II/MiFIR >> Client & Member Reference Data

2.3.4.4.2 Member section validations

1. Structure
The mapping file of RTS 24 shall have a CSV structure, commas will be used as separator, not semicolons. The structure is validated.

2. Validation of reported member and market
Based on the assigned markets and member IDs of the technical user, it will be verified for each record, if the uploading user is permitted to report. If "ParticipantID" and "MIC" (has to match the MIC for the whole upload file) in all records are assigned to the user, the next validations are performed. Otherwise, an error message will be returned, informing also about the first record in which the error occurred (e.g. "Member ID not allowed in line 231", "Upload rejected" or "Market (MIC) not allowed for user. Upload rejected").

Error messages:

- Member ID invalid in market
- Environment not supported
- MIC is initial
- Missing Environment
- Missing Filename
- No Portal User
- No Member ID
- Combination not allowed on this System

General checks

For each record the length of all fields will be validated. The fields “NationalID Country Code” and “National ID Priority” are mandatory if the field Classification Rule is “N”. If the Classification Rule is not filled, i.e. empty, the “Client Long value” can obtain the values “PNAL” or “AGGR”. If all records meet the field format requirements, the next validations will be performed. Otherwise, an error message will be returned, informing about the first record, which is erroneous (e.g. “Wrong format in field “Short Code in line 12. Upload rejected” or “Wrong file format. Upload rejected”).

Check short codes for uniqueness

Every short code is only allowed once per upload file. If a duplicate short code is encountered, an error message will be returned, informing also about the record in which the duplicate occurred (e.g. “Duplicate Short Code in line 242. Upload rejected”)

Validation of LEIs

The format of LEIs (Classification rule = L) and National IDs (Classification rule = N) will be validated.
If empty fields for National IDs are encountered, the file will be rejected. Other validation errors (e.g. 6 digits numerical vs. 8 digits alphanumerical) will be reported as warnings.

For LEIs, the length and format (20, alphanumeric) will be checked.

If all IDs are successfully validated, the upload file will be accepted. Otherwise, an error message will be returned, informing the member about the first record in which the error occurred (e.g. “Invalid LEI in line 34. Upload rejected”).

National ID validation logic

In order to validate the National IDs upon ESMA request, the “National ID country code” and “National ID Priority” are needed. Using this information, the system determines the National ID of the respective country and priority according to the ESMA requirements (please refer to chapter 6) and accordingly the format of the input.

Error Messages upload functionality in the member section

Validation Errors/Warnings:

- No value for field MIC
- Invalid value for field MIC
- Market (MIC) not allowed for user
- No value for field Status Indicator
- Invalid value for field Status Indicator
- No value for field Valid From Date
- Wrong format for field Valid From Date
- Invalid value for field Valid From Date
- No value for field Short Code ID
- Wrong format for field Short Code ID
- Invalid value for field Short Code ID
- Duplicate Short code
- Invalid value for field Classification Rule
- No value for field National ID Country Code
- Invalid value for field National ID Country Code
- No value for field National ID Priority
- Wrong format for field National ID Priority
- Invalid value for field National ID Priority
- No value for field Client Long Value
- Wrong format for field Client Long Value
- Invalid value for field Client Long Value
- Invalid LEI
- Invalid email address
- Invalid File structure

From Member Section Release 2.9 onwards, feedback on the file upload is provided via a JSON string with a popup window stating whether the upload was successful or displaying an error message (as applicable.)

2.3.4.4.3 Validations in the data warehouse

Validations are applied on file type, structure, and format. The fields are validated according to the valid values and length (see chapter 2.3.4.2 and 2.3.4.3), the database and the orderbook data. For the extensive validation of LEIs please see below. Errors are added to the TR160 error report with the respective error code. Valid short/long code combinations are added to the TR161 overview report, i.e. the database.

LEI validation

If a trading participant uploads an LEI as a long code, the following validations are applied.
In a first step the LEI is checked against the permitted length of 20 digits alphanumeric. If this check fails, the short/long code combination is rejected. If the check was positive, the LEI is checked against

the GLEIF.ORG database as a second step. If the LEI exists, the LEI registration status is checked in a third step. Please find the registration status values[25] and related results of the validation below.

Registration status	Description	Result
PENDING_VALIDATION	An application for an LEI that has been submitted and which is being processed and validated.	Reject
ISSUED	An LEI Registration that has been validated and issued, and which identifies an entity that was an operating legal entity as of the last update.	Registration successful
DUPLICATE	An LEI Registration that has been determined to be a duplicate registration of the same legal entity as another LEI Registration; the DUPLICATE status is assigned to the non-surviving registration (i.e. the LEI that should no longer be used).	Reject
LAPSED	An LEI registration that has not been renewed by the NextRenewalDate and is not known by public sources to have ceased operation.	Registration successful and generation of an error in TR160 as a warning
MERGED	An LEI registration for an entity that has been merged into another legal entity, such that this legal entity no longer exists as an operating entity.	Reject
RETIRED	An LEI registration for an entity that has ceased operation, without having been merged into another entity.	Reject
ANNULLED	An LEI registration that was marked as erroneous or invalid after it was issued	Reject
CANCELLED	An LEI registration that was abandoned prior to issuance of an LEI	Reject
TRANSFERRED	An LEI registration that has been transferred to a different LOU as the managing LOU.	Reject
PENDING_TRANSFER	An LEI registration that has been requested to be transferred to another LOU. The request is being processed at the sending LOU.	Registration successful and generation of an error in TR160 as a warning
PENDING_ARCHIVAL	An LEI registration is about to be transferred to a different LOU, after which its registration status will revert to a non-pending status.	Registration successful and generation of an error in TR160 as a warning

[25] ESMA65-8-2594_ANNEX_1_MIFIR_TRANSACTION_REPORTING_VALIDATION_RULES.XLSX and LEI Common Data File format V2.1 FINAL V2.1 2017-03-21

Error code description

Please find explanations to the errors below, for errors of "invalid" values please refer to the chapter 2.3.4.3.

Error code	Result	Explanation
Error code 1	WARNING	Client long value is missing: The short code used in the order/quote was not registered with a long code.
Error code 2	REJECT	Registration rejected, short code/algoID already registered in database: The short/long code combination was registered already. The data record is rejected.
Error code 5	REJECT	Duplicate record submitted on the same business date: The short/long code combination was submitted already on the same date. The data record is rejected.
Error code 6	REJECT	Invalid Short Code ID
Error code 7	REJECT	ParticipantID not assigned: The memberID is not admitted for that MIC code. The data record is rejected.
Error code 9	REJECT	Invalid uploadFile format
Error code 10	REJECT	Invalid value in the field Participant ID
Error code 11	REJECT	Invalid value in field MIC
Error code 12	REJECT	Invalid value in field Status Indicator
Error code 13	REJECT	Invalid value in field Valid from date
Error code 14	REJECT	Invalid value in field Classification rule
Error code 15	REJECT	Invalid value in field National ID Country Code
Error code 16	REJECT	Invalid value in field National ID Priority
Error code 17	REJECT	Invalid value in field Client long value
Error code 18	REJECT or WARNING	Invalid LEI format for Client long value; see further 2.3.4.4.3. Error code 18 is a warning where the LEI status in the GLEIF database = Lapsed, Pending_Archival or Pending_Transfer; in all other cases it is a reject.
Error code 25	WARNING	Client long value already registered: The long code (LEI, national identifier, ESMA value) is registered already. Short/long code combinations have to be unique, for further information please refer to chapter 2.3.3. Error code 25 may be disregarded by members holding exemptions to the short code uniqueness requirement provided that the affected short/long code mapping falls under the terms of their exemption.
Error code 26	REJECT	No existing short code registration to delete. The submitted deletion request by the member is rejected as there exists no related valid short code registration.

Error Code 27	REJECT	Retroactive or intraday changes are not permitted: Deletions (StatusIndicator D) cannot be processed for ValidFromDates T-1 and T. Affected records should be re-uploaded with ValidFromDate T+1. Uploads of any type (StatusIndicator N, M or D) with a ValidFromDate of T-2 or earlier are rejected with Error Code 13.
Error Code 28	REJECT	Uploads with ValidFromDate in the future can only be processed for the next trading day (T+1): Uploads of any type (StatusIndicator N, M or D) with validity in the future can only be processed for ValidFromDate T+1. Affected records should be re-uploaded with ValidFromDate T+1.
Error code 29	REJECT	Changing classification rule is not permitted: It is not possible to use a modification record (StatusIndicator M) in a manner that results in the change of the ClassificationRule. Where a legally valid reason to change the ClassificationRule of a validly registered short/longcode combination has been identified, the affected mapping should be deleted and a new record uploaded.
Error code 30	REJECT	Modification rejected, short code not registered in database: There is no valid short/longcode mapping registered for the affected short code. If it was intended to register a new mapping, the record should be re-uploaded with StatusIndicator N.
Error code 98	REJECT	Complete upload File rejected: The file format, structure or the file name is incorrect.

Error related rejects of data records are identified using the report field “transactionIdentifier” containing the value 9999999999999.
Error related warnings of data records are identified using the report field “transactionIdentifier” containing the value 9999999999998.

Warnings result in a valid registration of the affected record (where applicable), but indicate that there may be an issue with the mapping that should be corrected. Error Code 1 does not result in a valid registration: it is a reminder to register the long code assigned to the short code used in trading by the end of that trading day.

Files are validated one by one, starting with the oldest file first (timestamp sequence).

Please refer to the common report engine (CRE) to retrieve the reports and find more information on the TR160 and TR161 report structure in the XML report manual under the following path:

- Xetra.com >> Technology >> T7 trading architecture >> System documentation >> Release XY[26] >> Reports
- Eurex.com >> Support >> Initiatives & Releases >> T7 Release XY[27]>> Reports

[26] Please always refer to the most recent release for the latest documents
[27] See above

2.3.4.5 Reports

2.3.4.5.1 TR160 short code error report

The TR160 short code error report is processed in the overnight batch of trading day t and provided to the trading participant on the CRE the consecutive morning on t+1. This report contains errors occurred during trading day t, either during the upload or the trading.
Errors during the upload are for instance the provision of an LEI as long code, which do not fulfill the mandatory length of 20 characters. Hence, this data record would be rejected with error code 18 (invalid LEI format for Client long value).
Errors detected for trading data are missing short codes, i.e. the used short code in the order submission was not registered with a long code on the day of the order submission. This error is reported with error code 1 (client long value is missing).

TR160 report fields

1. Transaction identifier
This field contains the transaction identifier. For on exchange orders, it contains the "exchangeOrderId", for TES trades the "TesTradeId" and for Enlight the "txnID". In case an error is detected in the short/long code upload file without a relation to an order/quote, either 9999999999999 for rejects, or 9999999999998 for warnings are displayed. The format is alphanumeric 20 digits.

2. User
This field contains the trader who entered the order/quote. In case an error is detected in the short/long code upload file without a relation to an order/quote, this field remains empty.

3. Session ID
This field contains the session ID the order/quote was submitted. This field is empty for TES. In case an error is detected in the short/long code upload file without a relation to an order/quote, this field remains empty.

4. Text field 1
This field contains the text entered by the member. In case an error is detected in the short/long code upload file without a relation to an order/quote, this field remains empty.

5. Text field 2
This field contains the text entered by the member. In case an error is detected in the short/long code upload file without a relation to an order/quote, this field remains empty.

6. Text field 3
This field contains the text entered by the member. In case an error is detected in the short/long code upload file without a relation to an order/quote, this field remains empty.

6. Text field 4
This field contains the text entered by the member. In case an error is detected in the short/long code upload file without a relation to an order/quote, this field remains empty.

7. Type of origin
This field contains the information whether the error stems from an on-, or off-exchange order/quote. The format is alphanumeric 1 digit. Valid values [0,1] {1}. 0 = T7 Matching Engine, 1 = TES. In case an error is detected in the short/long code upload file without a relation to an order/quote, this field remains empty.

8. Short Code Id
The field contains the numeric short code the error was triggered by.

9. Short code source
This field contains for the error 1 (Client long value is missing) the information from which field in the order/quote the short code stems from. Either Client ID or Execution ID or Investment ID. In case an error is detected in the short/long code upload file without a relation to an order/quote, this field remains empty.

10. Error description
This field contains the error message. For further information about the errors please refer to chapter 2.3.4.4.3).

11. Upload file
This field provides the name of the upload file, the error stems from. In case an error 1 is detected in relation to an order/quote, this field remains empty.

12. Row number
This field provides the row number of the upload file where the error occurred. In case an error 1 is detected in relation to an order/quote, this field remains empty.

13. Ts field
This field provides the information of the field in which the error occurred.

2.3.4.5.2 TR161 short code overview report

The TR161 short code overview report is processed in the overnight batch of trading day t and provided to the trading participant on the CRE the consecutive morning on t+1. This report contains short/long code combinations which are valid on trading day t and for future days.

TR161 report fields

1. Date uploaded
This field provides the date when the valid short/long code combination was uploaded by the trading participant.

2. Short Code Id
The field contains the numeric short code, which was registered.

3. Long Value
This field provides the value of the long code. The long code can be a national ID, an LEI, the ESMA values AGGR, PNAL, NORE.

4. Classification rule
This field provides the type of the long code, i.e. “N” for national ID, “L” for LEI, or leave this field empty for the ESMA values AGGR, PNAL, NORE.

5. Valid from
This field provides the “valid from” date of the short/long code combination.

6. Valid to
This field provides the date the short/long code combination was terminated. If the short/long code combination is still valid, this field ~~remains empty~~contains the default value 9999-12-31.

7. Status Indicator
This field provides the status of the short/long code combination, i.e. “N” for new registration, “M” for modified registration and “D” for a deleted/terminated registration.

8. National ID country code
This field contains the country code of the national ID submitted by the member.

9. National ID priority
This field contains the priority of the national ID submitted by the member.

2.3.4.5.3 TR166 short code final error report

The TR166 short code final error report is a daily report and provides trading participants with final error results of trading day t on t+2. It contains the count of the used short/long codes on trading day t, the count of missing short/long code registrations of trading day t, the count of corrections performed on the following trading day t+1 and the count of final missing short/long code registrations for trading day t. In addition, every single relevant short code of the total values is provided. The report is provided to the trading participant on CRE.
For instance, a report of 27 October 2021 (“rptPrntEffDat” = 27 October 2021) was provided to the trading participant on the 28 October 2021 after the batch-run. This report contains a) the missing short/long code registrations of trading day 26 October 2021 (trading day t), b) the corrections made on the following trading day 27 October (trading day t+1) and hence c) the final missing registrations after the deadline t+1 23:30 CE(S)T, i.e. 28 October (t+2).

TR166 report fields

1. ShortCodesDayt0
This field contains the count of used short codes of the field "ClientID", "Execution Decision" and "Investment Decision" in order and quote messages of day t. Followed by every single short code used on trading on day t.

2. ShortCodesMissingDayt0
This field contains the count of missing short codes of the fields "ClientID", "Execution Decision" and "Investment Decision" of day t, which were not registered with a long code latest by trading day t. Followed by every single short code, which was missing on day t.

3. ShortCodesCorrDayt1
This field contains the count of uploaded short codes for the fields "ClientID", "Execution Decision" and "Investment Decision" on day t+1 in order to correct used but not registered short codes for those fields on day t. Followed by every single short code, which was corrected on day t+1.

4. FinalMissing
This field contains the count of missing short codes of the fields "ClientID", "Execution Decision" and "Investment Decision" of day t, which were neither registered with a long code on trading day t nor t+1 eob. Followed by every single short code, which was a final missing.

2.3.4.5.4 TR167 Non-Uniqueness Identifier report

The TR167 non-uniqueness identifier report is a daily report and provides trading participants with all short/long code mappings valid on the report date for which two or more short codes have been registered to the same long code (i.e., the non-unique mappings). In addition, for each mapping the Valid From, Valid To, Upload Date, and the Classification Rule are provided. The report supports trading participants in complying with their obligation to maintain only unique short/long code mappings and/or with the conditions of any exemption they may have been granted, as applicable.

TR167 report fields
1. Long Value
This field provides the value of the long code. The long code can be a national ID, an LEI, the ESMA values AGGR, PNAL, NORE.

2. Short Code Id
The field contains the numeric short code, which was registered.

3. Date uploaded
This field provides the date when the valid short/long code combination was uploaded by the trading participant.

4. Classification rule
This field provides the type of the long code, i.e. “N” for national ID, “L” for LEI, or empty for the ESMA values AGGR, PNAL, NORE.

5. Valid from
This field provides the “valid from” date of the short/long code combination.

6. Valid to
This field provides the date the short/long code combination was terminated. If the short/long code combination is still valid, this field remains empty.

7. National ID country code
This field contains the country code of the national ID submitted by the member.

8. National ID priority
This field contains the priority of the national ID submitted by the member.

2.3.4.5.5 TR168 Non-Consistency Identifier report

The TR168 non-consistency identifier report is a daily report and provides trading participants with all short codes for which the long code assigned has changed since the previous trading day (T-1) as a result of the trading participant having sent a modification message for that short code to the exchange. For each affected short code, the report shows:

- The previous long code, as well as the Valid From, Valid To, Classification Rule, National ID Country Code and National ID Priority for the previous mapping.
- The new (currently valid) long code, as well as the new Valid From, Valid To, Classification Rule, National ID Country Code and National ID Priority.

The report supports trading participants in complying with their obligation to maintain consistent/stable short code-long code mappings, i.e., to alter mappings solely for legally permissible reasons.

TR168 report fields

1. Short Code Id
The field contains the numeric short code, which was registered.

2. Long Value
This field provides the value of the long code. The long code can be a national ID, an LEI, the ESMA values AGGR, PNAL, NORE.

3. Classification rule
This field provides the type of the long code, i.e. “N” for national ID, “L” for LEI, or empty for the ESMA values AGGR, PNAL, NORE.

4. Valid from
This field provides the “valid from” date of the short/long code combination.

5. Valid to
This field provides the date the short/long code combination was terminated. If the short/long code combination is still valid, this field remains empty.

6. National ID country code
This field contains the country code of the national ID submitted by the member.

7. National ID priority
This field contains the priority of the national ID submitted by the member.

8. prevDayLongValue
This field contains the long value for a given short code ID of the previous day.

9. prevDayClassRule
This field contains the classification rule of the long value for a given short code ID of the previous day.

10. prevDayValidFrom
This field contains the valid from date for a given short code ID of the previous day.

11. prevDayValidTo
This field contains the valid to date for a given short code ID of the previous day.

12. prevNationalIDCountryCode
This field contains the country code of the NationalID of the long value for a given short code ID of the previous day.
13. prevNationalIDPriority
This field contains the priority of the NationalID of the long value for a given short code ID of the previous day.

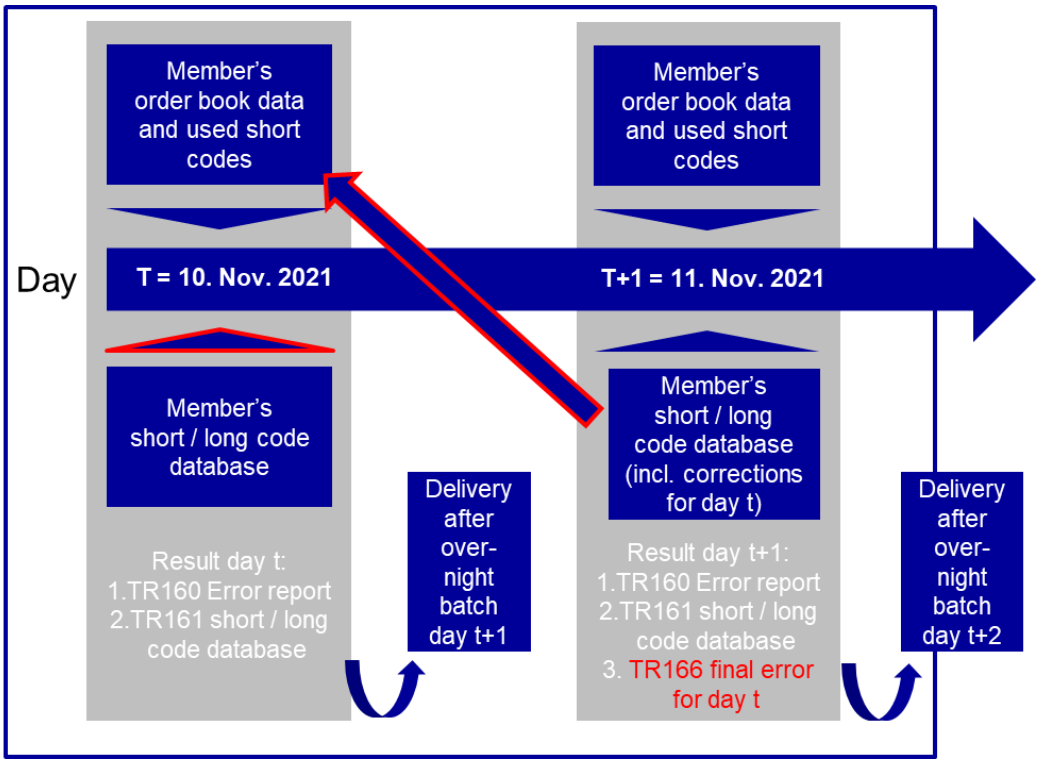
2.3.5 Short code management

Trading participants prepare the short/long code combinations they intend to use according to the requirements in chapters 2.3.3 and 2.3.4. We strongly recommend registering short/long code combinations before usage. However, short codes used in an order for the first time may be registered with the corresponding long code latest by the end of the trading day following the trading day of the order submission. In contrast, it is not required that the long code assigned to a short code is already registered with the trading venue prior to first usage of the short code. For example: The trading participant has a client John Doe, with a long code "19811025JOHN#DOE##". The trading participant registers that long code with a short code "123". Hence, short code "123" must be used for John Doe starting with the first order submission for this client and must be used for every consecutive future order submission. Please refer to the exemption to the rule in chapter 2.3.3.2.

Following the preparation, the upload shall take place. Please use the upload functionalities, available from 00:00 until 23:30 CE(S)T on trading days. The immediate feedback of the upload functionalities must be monitored, and corrections must be performed if needed. Uploads after business hours are possible. However, please note that files received after the cut-off time of 23:30 CE(S)T are processed with the overnight batch on the consecutive trading day. Please note that you have to change the file name date to the consecutive trading date. Validations in the data warehouse are applied on file format, structure, and content and in addition the upload data is validated against the database and the order book data. Results are provided in the reports TR160 and TR161 after the overnight batch and provided to the trading participants on the CRE. Trading participants shall especially monitor the error report TR160 and perform corrections if necessary.

If a missing registration was not resolved on the consecutive trading day (t+1) of the trading day (day t) the short code was used for the first time, a final error is reported in the TR166 final error report. This report serves as basis for sanctioning of missing registrations.

Processing of the TR166 final error report:



2.3.6 Monitoring and sanctioning

2.3.6.1 Missing short/long code registration

Short codes used in an order for the first time may be registered with the corresponding long codes latest by the end of the trading day (trading day t+1) following the trading day of the order submission (trading day t). In contrast, it is not required that the long code assigned to a short code is already registered with the Exchange prior to first usage of the short code.
However, the usage of a short code, which is not registered with a respective long code after t+1 is not permitted and is going to be handed over to the sanctions committee. Missing registrations of the trading day t are reported to the trading participant in the error report TR160 with error code 1. The missing registration can be performed until 23:30 CE(S)T of the consecutive trading day (t+1). Please note that a correction data record must have "valid from" filled with the date of trading day t in order to be considered a correction of the missing short/long code registration. After the deadline of t+1 23:.30 CE(S)T the used short codes of trading day t are again validated against the short code registrations, which were valid on that day and the TR166 final missing report is generated. This report contains the missing short/long code registrations of trading day t, which were not corrected on trading day t+1. These final missing registrations are handed over to the sanctions committee.

Please note that every short/long code combination must be registered, if you intend to use it in future otherwise a missing error will be generated ever consecutive day of usage.

2.3.6.2 Uniqueness violation

A short code has to be assigned uniquely to a long code. However, the assignment of more than one short code to a long code is not permitted as the uniqueness is not met. The short/long code registrations that violate the uniqueness requirement are reported to the trading participant in the

short code error report TR160 with error code 25 (client long value already registered). Please refer to the exemption to this rule in chapter 2.3.3.2. Violations of the uniqueness are monitored and handed over to the sanctioning committee.

2.3.6.3 Consistency violation

Each registered short code-long code mapping must remain stable/unchanged over time, i.e., the use of dynamic short codes is prohibited. Changes to the short code-long code pairings may be made only due to legal acts affecting the identified natural or legal person (eg. legal name change, corporate action resulting in change to LEI, etc.). The trading participant is already aware of any changes made to its registered short code-long code mappings, as changes can only be made by the participant by uploading a "modification" record to the exchange. Trading participants may be asked to confirm to the exchange that any changes made were done for permissible reasons; any non-permissible changes may be referred to the sanctioning committee.

2.3.7 Special: Upload functionality common upload engine (CUE)

Technical setup

The technical connection to the CUE has to be established in the same manner as to the CRE system. Deutsche Börse Group's Member Section is used for the respective account management, i.e. set up the technical connection to the CUE and CRE. Please find the CUE and CRE user manuals under the following paths:

- Xetra.com >> Technology >> T7 trading architecture >> System documentation >> Release XY[28]>> Reports
- Eurex.com >> Support >> Initiatives & Releases >> T7 Release XY[29] >> Reports

Upload processing

The CUE folder "mifid" has to be used for the upload of short/long code files (CUE >> memberID >> P >> mifid >> upload). Trading participants shall upload their CSV file(s) per memberID and MIC combination between 00:00 and 23:30 CE(S)T on trading days. Uploads after 00:00 the following day (also on non-trading days) are feasible. However, the date in the file name must be changed to the next trading day (not calendar day). The upload file is limited to 5MB and 25,000 data rows. The approx. validation time for files with 25,000 rows is 8 minutes. We recommend uploading files with a smaller size.

1. Please note: For non-MiFIR trading participants, the CUE "mifid" folder set up for the transaction reporting according to Article 26 (5) MiFIR shall also be used for the short code upload files.Provision of the upload file to the trading venues

Please access CUE and the "mifid" folder. Upload your files into the "UPLOAD" folder. Once processed, CUE sets up a "trading date" folder and adds the response.

File successfully passed the CUE validations

- A file which passed the CUE validation rules successfully and hence was transferred to the data warehouse for further validation and processing is named e.g.

[28] Please always refer to the most recent release for the latest documents

[29] See above

88EXTREFDAGDBXX20211014XETR.CSV_UPLOAD_SUCCESSFUL

- No further action is required during the upload process. However, **please note** that the CUE validation is an initial validation and the complete validations against orderbook data and the database are performed in the overnight batch in the data warehouse. The error report TR160 and the overview report TR161 will be provided to the trading participant in the CRE's respective market folders (XEUR, XETR, XFRA).

Numerous files successfully passed the CUE validations

- A trading participant can upload up to 100 files per day, CUE will add a version number to the file, e.g. 88EXTREFDAGDBXX20211014XETR-**V01**.CSV_UPLOAD_SUCCESSFUL

File did not pass the CUE validations

- A file which was rejected, i.e. did not pass the validation rules is named e.g.: 88EXTREFDAGDBXX20211014XETR.CSV_VALIDATION_FAILED
- This is provided with the log file, e.g. 88EXTREFDAGDBXX20211014XETR.LOG to the "trading date" folder. Trading participants can download the log file and must correct the upload file considering the reported errors.
- Further action is required as the full file is rejected. If errors were detected in the file, the erroneous records can either be cut off the file and the file can be uploaded again, followed by another upload file containing the corrected records. Or all errors can be corrected, and the full file can be uploaded again.
- The log file provides trading participants with the information about the row, the erroneous value submitted and the permitted values and field length. Please refer to the "CUE validation and file specification Short code and algoID" document (link below) for a comprehensive overview of error messages and respective validations.

File upload after cut-off time

In case the cut-off time 23:30 CE(S)T was not met, and the file is uploaded after 00:00 CE(S)T, the file is rejected with the error message, e.g. 88EXTREFDAGDBXX20211014XETR.CSV_WRONG_UPLOAD_DATE and provided to your "trading date" folder. Please change the date of your file to the next business day (not calendar day) and upload it again.

If an upload was made after the cut off time, the upload file will be processed in the overnight batch of the following trading day.

Other reject reasons for files

Reject reasons are:

- Header specification is not met
- Validation of one record was not successful
- wrong record format
- wrong file format

- empty file"

An example error message for a wrong file type:
88EXTREFDAGDBXX20211014XETR.CSV_WRONG_FILE_TYPE

“CUE validation and file specification Short code and algoID” document
For further details on this process and the validations please refer to “CUE validation and file specification Short code and algoID” document under the following paths:

Xetra.com >> Newsroom >> Current regulatory topics >> MiFID II and MiFIR >> Reference data reporting
Eurex.com >> Rules & Regs >> MiFID II/MiFIR >> Client & Member Reference Data

2. Retrieval of the report files

Please note that the CUE validation is an initial validation and the complete validations against format, structure, orderbook data and the database are performed in the overnight batch in the data warehouse (see chapter 2.3.4.4.3). The error report TR160, the overview report TR161 and the final missing report TR166 (see chapter 2.3.4.5) will be provided to the trading participant in the CRE’s respective market folders (XEUR, XETR, XFRA).

3 Algo IDs

3.1 Notification to regulators

Trading participants executing algorithmic trading need to notify the German authorities. A registration is necessary with:

1. The Federal Financial Supervisory Authority (BaFin)

- The Federal Financial Supervisory Authority (BaFin) requires a notification, the form is available on the BaFin webpage and has to be submitted via email to algoanzeige@bafin.de.
  BaFin notification algorithmic trading

2. Exchange Supervisory Authority, State of Hesse

- Exchange Supervisory Authority, State of Hesse requires a notification, the form is available on the Hesse webpage and has to be submitted via email to reporting@wirtschaft.hessen.de.
  Exchange Supervisory Authority, State of Hesse notification

~~3.1~~3.2 Regulatory requirement for identification

Under Art. 25(2) of MIFIR and CDR 2017/580 FSE and Eurex shall keep at the disposal of the competent authority the relevant data to identify the algorithm that is used within the trading participant of the trading venue primarily responsible for the investment decision or primarily responsible for the execution of a transaction. The algoID is therefore one of the options for the population of field 4 “Investment decision within firm” or field 5 “Execution within firm” of CDR 2017/580, Annex Table 2 and field 57 of CDR 2017/590 or field 59 of CDR 2017/590.

~~3.2~~3.3 Regulatory requirement for certification and testing

Algo IDs are assigned by the trading participant to their algorithms that comply with the requirements of Art. 48(6) of MiFID II and Art. 10 of CDR 2017/584. In accordance with these requirements, FSE and Eurex request all trading participants to test their algorithms in a testing environment before the algorithms are used in production in order to avoid market disturbance.
FSE and Eurex offer their participants the possibility to test their algorithms in the prevailing software production version in the standard simulation environment and in cloud simulation. Additionally, the Cloud Simulation offers the new release version.
Please refer to the Xetra and Eurex websites under the following paths for details on the Cloud Simulation service:

- Xetra.com >> Technology >> T7 >> Cloud Simulation
- Eurex.com >> Technology >> Eurex T7 Cloud Simulation

Participants must certify that all deployed algorithms have successfully passed the testing requirements imposed by MiFID II / MiFIR. The algorithm certificates should contain the algoID of the algorithm that was tested, and the name of the trading participant who would like to have the algorithm registered with FSE and Eurex. Certificates for new algorithms must be uploaded prior to usage.

~~3.2.1~~3.3.1 Technical fields in the trading system T7

Trading participants can insert algoIDs in the T7 fields execution decision and investment decision. The fields are available in the order and quote messages as 8-byte 20 digits numeric fields.

- Execution ID (for the MiFID field "Execution within firm")
- Investment ID (for the MiFID field "Investment decision within firm")

As the fields "execution decision" and "investment decision" can contain an algoID or a short code, there are respective qualifier fields. Please set the qualifier fields to the following values[30] in order to identify the numeric values in "execution decision" and "investment decision" as algo (22) or short code (24):

- Execution Qualifier value **22 = Algo** or **24 = Human**
- Investment Qualifier value **22 = Algo** or **24 = Human**

The submission of the executionID is mandatory, and the investmentID is optional as the field has to be blank in case the client of the trading participant took the investment decision. However, if a trading participant uses an algorithm in the execution and / or investment decision it is mandatory to fill in the T7 fields accordingly. Please find more information on all scenarios in 2.3.2.

~~3.2.2~~3.3.2 AlgoID fields and attributes

Please find an overview of all scenarios by account (ESMA trading capacity) and related flagging of the fields below and the detailed information on the fields in this chapter.

Proprietary accounts (trading capacity DEAL) and riskless principal account (trading capacity MTCH)

Flagging options	Execution Decision	Execution Qualifier	Investment Decision	Investment Qualifier	Client ID
Execution and investment decision taken by an algo.	**Algo ID**	T7: 22 (for an algo)	**Algo ID**	T7: 22 (for an algo)	-
Execution decision taken by an algo. Investment decision taken by the trader or another person within the member firm.	**Algo ID**	T7: 22 (for an algo)	Short code for the National ID of the trader/person	T7: 24 (for a natural person)	-
Execution decision taken by the trader or another person within the member firm. Investment decision taken by an algo.	Short code for the National ID of the trader/person	T7: 24 (for a natural person)	**Algo ID**	T7: 22 (for an algo)	-

[30] Values might differ with respect to different interfaces, e.g. ETI or FIX.

Agent account (Trading capacity AOTC), client ID mandatory

Flagging options	Execution Decision	Execution Qualifier	Investment Decision	Investment Qualifier	Client ID
Execution and investment decision taken by an algo.	**Algo ID**	T7: 22 (for an algo)	**Algo ID**	T7: 22 (for an algo)	Short code for LEI or National ID, PNAL or AGGR
Execution decision taken by an algo. Investment decision taken by the trader or another person within the member firm.	**Algo ID**	T7: 22 (for an algo)	Short code for the National ID of the trader/person	T7: 24 (for a natural person)	Short code for LEI or National ID, PNAL or AGGR
Execution decision taken by the trader or another person within the member firm. Investment decision taken by an algo.	Short code for the National ID of the trader/person	T7: 24 (for a natural person)	**Algo ID**	T7: 22 (for an algo)	Short code for LEI or National ID, PNAL or AGGR
Execution decision taken by an algo and the investment decision not taken within the investment firm.	**Algo ID**	T7: 22 (for an algo)	Empty	Empty	Short code for LEI or National ID, PNAL or AGGR

~~3.2.2.1~~3.3.2.1 Execution ID

The executionID is mandatory in every order and quote, irrespectively of the account (e.g. A-, R-, P-, M-account). As by ESMA definition[31] this decision is taken "within the member firm", there is no option to identify a client in this field. If a client took this decision, ESMA defines this field to be populated with the ESMA value "NORE". Hence, the trading participant must populate this field with a short code for this long code "NORE".

However, if this decision is taken within the trading participant's firm then an algoID or a short code for the natural person within the firm must be populated.

[31] Commission Delegated Regulation (CDR) 2017/580 Art. 2, (CDR) 2017/590 Art. 8, ESMA Guidelines (ESMA/2016/1452) chapters 5.12.

The algoID used in the "execution decision" must be registered with the trading venue. **The algoID must be registered prior to usage**.[32]

It is in the trading participant's responsibility to determine the decision maker (e.g. algorithm, natural person or client) who is primarily responsible for the execution in accordance with their governance model.

~~3.2.2.2~~3.3.2.2 Investment ID

The investmentID is mandatory in every order and quote, if trading in proprietary accounts e.g. P-, M-account. As by ESMA definition[33] this decision is taken "within the member firm", there is no option to identify a client in this field. If a client took this decision, ESMA defines this field to be empty[34]. For this purpose, please leave the qualifier field empty too.
However, if this decision is taken within the trading participant's firm then an algoID or a short code for the natural person within the firm must be populated.

The algoID used in the investment decision must be registered with the trading venue. The algoID must be registered prior to usage.[35]

It is in the trading participant's responsibility to determine the decision maker (e.g. algorithm, natural person or client) who is primarily responsible in accordance with their governance model.

~~3.2.3~~3.3.3 Data requirements of algoIDs

~~3.2.3.1~~3.3.3.1 Uniqueness and consistency

The algoID has to be unique and consistent over time, i.e. the algoID needs to be registered and hence certified as tested since the first day of usage.
For example: The trading participant has an algorithm tested and certified by registration. The algoID is "789". Hence, algoID "789" must be used for this algorithm starting with the first order submission and has to be used for every consecutive future order submission.

~~3.2.3.2~~3.3.3.2 Exemption

There is no exemption.

~~3.2.3.3~~3.3.3.3 Modification

The algoID registration is only allowed to be modified for an update of the responsible person.

~~3.2.3.4~~3.3.3.4 Deletion

Deletions of algoIDs are not permitted.

[32] FWB exchange rules article 40 (xetra.com >> Rules & Regulations); Eurex exchange rules article 63 (eurex.com >> Rules & Regs >> Eurex Rules & Regulations)
[33] Commission Delegated Regulation (CDR) 2017/580 Art. 2, (CDR) 2017/590 Art. 8, ESMA Guidelines (ESMA/2016/1452) chapters 5.11.
[34] ESMA/2016/1452, chapter 6.2.
[35] FWB exchange rules article 40 (xetra.com >> Rules & Regulations); Eurex exchange rules article 63 (eurex.com >> Rules & Regs >> Eurex Rules & Regulations)

~~3.2.4~~3.3.4 Registration of algoIDs

Once the trading participant has assigned a numerical ID to his algorithm (algoID) and tested the algo successfully, the algoID has to be certified, i.e. registered with the trading venue. The registration of the algoID has to be done prior to usage. An upload file has to be created and provided to the trading venues via an upload functionality.

The uploads shall take place on trading days between 00:00 and 23:30 CE(S)T. Uploads after 00:00 the following day are feasible. However, the date in the file name has to be changed to the next trading day[36] (not calendar day).

There are two upload functionalities: one is available in the member section and another is available on the common upload engine (CUE). Both functionalities have a pre-validation tool installed, which applies validations on file structure and field length and provide immediate response. Those validations are preliminary, the full data validation is processed in the overnight batch and the results are available in the TR162 algo error report and the TR163 algo overview reports.

Please note: if the upload file contains an error, the file is rejected during the upload process completely and a log file indicating the error is provided to the trading participant. The member section functionality responds via email and the CUE will provide a log file retrievable from the respective "trading date" CUE folder. During the overnight batch the data is validated again and checked against the database. Only separate data records might be rejected during the overnight processing dependent on the error reason and provided to the trading participant in the TR162 algo error report.

Please find user manuals on the webpages under the following paths:

- Xetra.com >> Newsroom >> Current regulatory topics >> MiFID II and MiFIR >> Reference data reporting
- Xetra.com >> Technology >> T7 trading architecture >> System documentation >> Release XY[37] >> Reports
- Eurex.com >> Rules & Regs >> MiFID II/MiFIR >> Client & Member Reference Data
- Eurex.com >> Support >> Initiatives & Releases >> T7 Release XY[38] >> Reports

~~3.2.4.1~~3.3.4.1 Upload file naming convention

~~3.2.4.1.1~~3.3.4.1.1 Member section upload functionality

It is strongly recommended to apply the below naming convention. It follows the chronological sequence: reporting reason, upload date, MIC, memberID, timestamp, data format. Trading participants can use another file name and this file name is created automatically.

[36] Please refer to the trading calendar for simulation and production for XETR and XFRA (simulation and production: https://www.xetra.com/xetra-en/trading/trading-calendar-and-trading-hours) as well as for XEUR (simulation: https://www.eurex.com/ex-en/support/initiatives/simulation-calendar; production: https://www.eurex.com/ex-en/trade/trading-calendar).

[37] Please always refer to the most recent release for the latest documents

[38] See above

Example:
ALGO20211027XETRGDBXX20211027103159.csv

Field	Meaning	Comment
[0-9A-Z]{5}	Service name	ALGO
[0-9]{8}	Upload Date	YYYYMMDD
[XETR, XFRA, XEUR]{4}	MIC	XEUR, XETR, XFRA
[~~0-9~~A-Z]{5}	Member ID	ABCLO
[0-9]{4}[0-9]{2}[0-9]{2}[0-9]{2}[0-9]{2}[0-9]{2}	Timestamp	YYYYMMDDhhmmss
[.CSV~~0-9A-Z~~]{~~43~~}	File type	.CSV

~~3.2.4.1.2~~3.3.4.1.2 Common Upload Engine (CUE) upload functionality

The naming convention must be applied. It follows the chronological sequence: environmentID, service name, memberID, upload date, MIC, file type.
Please note that the file name must be in capital letters completely.

Example:
88EXTALGO1AABCLO20210216XETR.CSV

Field	Meaning	Comment
[0-9]{2}	Environment ID	88 for Prod
		89 for Simu
[EXTALGO1~~0-9A-Z~~]{8}	Service name	EXTALGO1
[~~0-9~~A-Z]{5}	Member ID	ABCLO
[0-9]{8}	Upload Date	YYYYMMDD
[XEUR, XETR, XFRA~~0-9A-Z~~]{4}	MIC	XEUR, XETR, XFRA
[.CSV~~0-9A-Z~~]{~~43~~}	File type	.CSV

~~3.2.4.2~~3.3.4.2 Upload file structure and format

The upload file is a CSV file, i.e. comma separated (not semicolon). The file format has to be ASCII and the file size is limited to 5 megabyte.

Table: Example file structure

UploadDate	ValidFrom	AlgoID	ResponsibleID
2021-09-18	2021-09-18	2578	jon.doe@abcbank.com
2021-09-18	2021-09-18	135123	jon.doe@abcbank.com
PLEASE NOTE: one file per MIC and memberID (XETR, XFRA or XEUR)			

PLEASE NOTE: header specification (case sensitive) has to be applied otherwise the file will be rejected.

Sample files are available on the webpages under the following paths:

- Xetra.com >> Newsroom >> Current regulatory topics >> MiFID II and MiFIR >> Reference data reporting
- Eurex.com >> Rules & Regs >> MiFID II/MiFIR >> Client & Member Reference Data

Data record example
2021-09-27,2021-09-27,123456789012345,Tim.mustermann@testbank.com

~~3.2.4.3~~3.3.4.3 Field description

1. Participant specific fields

- "ResponsibleID"
  The responsible ID is the email address of the responsible person or team of the trading participant. Valid values and mandatory length: [A-Za-z]{1}[A-Za-z0-9\.\!\#\$\%\&\'*\+\-\=\?\^_\}\~]{0,62}[A-Za-z0-9]{1}@[A-Za-z]{1}[A-Za-z0-9\.\-_]{0,253}[A-Za-z0-9]{1}\.[A-Za-z]{2,4}

2. Data record specific fields

- "UploadDate"
  The "UploadDate" provides the date the algoID registration is uploaded. Valid values and mandatory length: [0-9]{4}-[0-9]{2}-[0-9]{2}

- "ValidFromDate"
  The valid from date provides the date the algoID registration shall be valid. Date format is YYYY-MM-DD with the following valid values [] and mandatory length {}: [0-9]{4}-[0-9]{2}-[0-9]{2}. The ~~date must be greater the upload date~~ ValidFromDate may be T or T+1 as algoIDs have to be certified and registered before usage. T refers to the trading date of the upload: either the current date, if also a trading day, or the next trading day if uploaded on a weekend or other non-trading day. Trading Participants are encouraged to consult the Trading Calendar of the relevant exchange(s) in order to ensure that these dates are entered correctly:
  - XETR and XFRA trading calendar (simulation and production): https://www.xetra.com/xetra-en/trading/trading-calendar-and-trading-hours)
  - XEUR (simulation calendar): https://www.eurex.com/ex-en/support/initiatives/simulation-calendar; (production calendar): https://www.eurex.com/ex-en/trade/trading-calendar

- "AlgoID"
  This field holds the numerical value of an algoID with the following valid values [] and mandatory length {}: [0-9]{1,20}

~~3.2.4.4~~3.3.4.4 Validations

~~3.2.4.4.1~~3.3.4.4.1 CUE validations

For CUE validations please refer to “CUE validation and file specification Short code and algoID” document under the following paths:

- Xetra.com >> Newsroom >> Current regulatory topics >> MiFID II and MiFIR >> Reference data reporting
- Eurex.com >> Rules & Regs >> MiFID II/MiFIR >> Client & Member Reference Data

~~3.2.4.4.2~~3.3.4.4.2 Member section validations

1. Structure

The mapping file of AlgoIDs shall have a CSV structure, commas will be used as separator, not semicolons. The structure is validated. Error message: “Invalid File structure”.

2. Validation of reported member and market

Based on the assigned markets and member IDs of the technical user, it will be verified for each record, if the uploading user is permitted to report. If “ParticipantID” and “MIC” are assigned to the user, the next validations are performed. Otherwise, an error message will be returned, informing also about the first record in which the error occurred (e.g. “Upload rejected” or “Market (MIC) not allowed for user. Upload rejected”).

Error messages:

- Member ID invalid in market
- Environment not supported
- MIC is initial
- Missing Environment
- Missing Filename
- No Portal User
- No Member ID
- Combination not allowed on this System

General checks

For each record the length of all fields will be validated. If all records meet the field format requirements, the next validations will be performed. Otherwise, an error message will be returned, informing about the first record, which is erroneous (e.g. “Wrong format in field “UploadDate” in line 12. Upload rejected” or “Wrong file format. Upload rejected”).

Check algoIDs for uniqueness

Every algoID is only allowed once per upload file. If a duplicate is encountered, an error message will be returned, informing also about the record in which the duplicate occurred (e.g. “Duplicate algoID in line 242. Upload rejected”)

Error Messages upload functionality in the member section

Validation Errors/Warnings:

- Market (MIC) not allowed for user
- No value for field Valid From Date
- Wrong format for field Valid From Date
- Invalid value for field Valid From Date
- Invalid email address
- Invalid File structure

~~Examples:~~

- ~~If the file is uploaded successfully, then the participant will receive the messageCode = 0 and the number of processed rows will be sent back:~~

~~{~~
~~"messageCode":0,~~
~~"processedLines":2,~~
~~"~unique_id~":"0",~~
~~"messages":[],~~
~~"class":"com.dbag.upload.service.dto.ResponseUploadService"~~
~~}~~

- ~~If the file is NOT uploaded successfully, then the participant will receive the messageCode = -1 (processedLines=0) and the error message will contain:~~

~~{~~
~~"messageCode": 1,~~
~~"processedLines":0,~~
~~"~unique_id~":"0",~~
~~"messages":[~~
~~{~~
~~"messageText":"Member ID invalid in market",~~
~~"~unique_id~":"1",~~
~~"class":"com.dbag.upload.service.dto.Message",~~
~~"messageType":"Error"~~
~~}],~~
~~"class":"com.dbag.upload.service.dto.ResponseUploadService"~~
~~}~~

~~3.2.4.4.3~~3.3.4.4.3 Validations in the data warehouse

Validations are applied on file type, structure, and format. The fields are validated according to the valid values and length (see chapter 3.3.4.2 and 3.3.4.3), the database and the orderbook data. Errors are added to the TR162 error report with the respective error code. Valid algoIDs are added to the TR163 overview report, i.e. the database.

Error code description

Please find explanations to the errors below, for errors of “invalid” values please refer to the chapter 3.3.4.3.

Error code	Explanation
Error code 1	Client long value is missing: The algoID used in trading was not registered.
Error code 2	Registration rejected, short code/algoID already registered in database: The algoID was registered already. The data record will be rejected.
Error code 5	Duplicate record submitted on the same business date: The algoID was submitted already on the same date. The data record will be rejected.
Error code 7	ParticipantID not assigned: The memberID is not admitted for that MIC code. The data record will be rejected.
Error code 9	Invalid uploadFile format
Error code 13	Invalid value in field Valid from date
Error code 20	Invalid Algo ID
Error code 21	Invalid value in field upload date
Error code 22	Invalid value in field email address
Error code 98	Complete upload File rejected: The file format, structure or the file name is incorrect.

Error related rejects of data records are identified using the report field “transactionIdentifier” containing the value 9999999999999.
Error related warnings of data records are identified using the report field “transactionIdentifier” containing the value 9999999999998.

Files are validated one by one, starting with the oldest file first (timestamp sequence).

Please refer to the common report engine (CRE) in order to retrieve the reports and find more information on the TR162 and TR163 report structure in the XML report manual under the following path:

- Xetra.com >> Technology >> T7 trading architecture >> System documentation >> Release XY[39] >> Reports
- Eurex.com >> Support >> Initiatives & Releases >> T7 Release XY[40] >> Reports

~~3.2.4.5~~3.3.4.5 Reports

~~3.2.4.5.1~~3.3.4.5.1 TR162 algo error report

The TR162 algo error report is processed in the overnight batch of trading day t and provided to the trading participant on the CRE the consecutive morning on t+1. This report contains errors occurred during trading day t, either during the upload or the trading.
Errors during the upload are for instance the provision of an algoID which is alphanumerical. Hence, this data record would be rejected with error code 20 (invalid Algo ID).

[39] Please always refer to the most recent release for the latest documents
[40] See above

Errors detected for trading data are missing algoIDs, i.e. the algoID in the order submission was not registered on the day of the order submission. This error is reported with error code 1 (client long value is missing).

TR162 report fields

1. Date Uploaded
This field contains the date when the valid mapping was uploaded by the participant.

2. AlgoID
This field contains the unique numeric representation for an algorithm.

3. Error description
This field contains the error message. For further information about the errors please refer to chapter (3.3.4.4.3).

6. Upload file
This field provides the name of the upload file, the error stems from.

7. Row number
This field provides the row number of the upload file where the error occurred.

8. Ts field
This field provides the information of the field in which the error occurred.

9. Transaction Identifier
This field contains the transaction identifier. For on exchange orders, it contains the "exchangeOrderId", for TES trades the "TesTradeId" and for Enlight the "txnID". In case an error is detected in the AlgoID upload file without a relation to an order/quote, either 9999999999999 for rejects, or 9999999999998 for warnings are displayed. The format is alphanumeric 20 digits.

10. User
This field contains the trader who entered the order/quote. In case an error is detected in the AlgoID upload file without relation to an order/quote, this field remains empty.

11. Session ID
This field contains the session ID the order/quote was submitted. This field is empty for TES. In case an error is detected in the AlgoID upload file without a relation to an order/quote, this field remains empty.

12. Text field 1
This field contains the text entered by the member. In case an error is detected in the AlgoID upload file without a relation to an order/quote, this field remains empty.

13. Text field 2
This field contains the text entered by the member. In case an error is detected in the AlgoID upload file without a relation to an order/quote, this field remains empty.

14. Text field 3
This field contains the text entered by the member. In case an error is detected in the AlgoID upload file without a relation to an order/quote, this field remains empty.

15. Text field 4
This field contains the text entered by the member. In case an error is detected in the AlgoID upload file without a relation to an order/quote, this field remains empty.

16. Type of origin
This field contains the information whether the error stems from an on-, or off-exchange order/quote. The format is alphanumeric 1 digit. Valid values [0,1] {1}. 0 = T7 Matching Engine, 1 = TES. In case an error is detected in the AlgoID upload file without a relation to an order/quote, this field remains empty.

~~3.2.4.5.2~~3.3.4.5.2 TR163 algo overview report

The TR163 algo overview report is processed in the overnight batch of trading day t and provided to the trading participant on the CRE the consecutive morning on t+1. This report contains algoIDs which are valid on trading day t and for future days.

TR163 report fields

1. Date uploaded
This field provides the date when the algoID was uploaded by the trading participant.

2. Valid from
This field provides the “valid from” date of the short/long code combination.

3. AlgoID
This field contains the unique numeric representation for an algorithm.

4. Responsible ID
The field contains the email address of the person responsible for the testing and certification of the algorithm.

~~3.2.5~~3.3.5 AlgoID management

Trading participants prepare the algoIDs they intend to use according to the requirements in chapters 3.3.3 and 3.3.4. Please note that an algoID has to be registered before usage. AlgoIDs used in an order / quote for the first time CANNOT be corrected afterwards. Hence, a correction on the following day as for short codes is not permitted. Hence, the error report TR162 serves as basis for sanctioning of missing registrations.

Following the preparation, the upload shall take place. Please use the upload functionalities, available from 00:00 until 23:30 CE(S)T on trading days. The immediate feedback of the upload functionalities must be monitored, and corrections must be performed if needed. Uploads after business hours are possible. However, please note that files received after the cut-off time are processed with the overnight batch on the consecutive trading day. Validations in the data warehouse are applied on file format, structure and content and in addition the upload data is validated against the database and order book data. Results are provided in the reports TR162 and TR163 after the overnight batch and

provided to the trading participants on the CRE. Trading participants shall especially monitor the error report TR162 and register their algoIDs if necessary.

~~3.2.6~~3.3.6 Monitoring and sanctioning

AlgoIDs used in an order / quote must be registered prior to the day of usage. If a missing algoID was detected and reported in the TR162 report it is going to be handed over to the sanctions committee.

~~3.2.7~~3.3.7 Special: Upload functionality common upload engine (CUE)

Technical setup

The technical connection to the CUE has to be established in the same manner as to the CRE system. Deutsche Börse Group's member section is used for the respective account management, i.e. set up the technical connection to the CUE and CRE. Please find the CUE and CRE user manuals under the following paths:

- Xetra.com >> Technology >> T7 trading architecture >> System documentation >> Release XY[41] >> Reports
- Eurex.com >> Support >> Initiatives & Releases >> T7 Release XY[42] >> Reports

Upload processing

The CUE folder "mifid" has to be used for the upload of algoID files. Trading participants shall upload their CSV file(s) per memberID and MIC combination between 00:00 and 23:30 CE(S)T on trading days. Uploads after 00:00 the following day (also on non-trading days) are feasible. However, the date in the file name must be changed to the next trading day (not calendar day). The upload file is limited to 5MB and 25,000 data rows. The approx. validation time for files with 25,000 rows is 8 minutes. We recommend uploading files with a smaller size.
Please note: For non-MIFIR trading participants, the CUE "mifid" folder set up for the transaction reporting according to Article 26 (5) MiFIR shall also be used for the short code upload files.

1. Provision of the upload file to the trading venue

Please access CUE and the "mifid" folder. Upload your files into the "UPLOAD" folder. Once processed, CUE sets up a "trading date" folder and adds the response.

File successfully passed the CUE validations

- A file which passed the CUE validation rules successfully and hence was transferred to the data warehouse for further validation and processing is named e.g. 88EXTALGO1DBXX20211014XETR.CSV_UPLOAD_SUCCESSFUL
- No further action is required during the upload process. However, **please note** that the CUE validation is an initial validation and the complete validations against orderbook data and the database are performed in the overnight batch in the data warehouse. The error report TR162 and the overview report TR163 will be provided to the trading participant in the CRE's respective market folders (XEUR, XETR, XFRA).

[41] Please always refer to the most recent release for the latest documents
[42] Please always refer to the most recent release for the latest documents

Numerous files successfully passed the CUE validations

- A trading participant can upload up to 100 files per day, CUE will add a version number to the file, e.g. 88EXTALGO1GDBXX20211014XETR-**V01**.CSV_UPLOAD_SUCCESSFUL

File did not pass the CUE validations

- A file which was rejected, i.e. did not pass the validation rules is named e.g.: 88EXTALGO1GDBXX20211014XETR.CSV_VALIDATION_FAILED
- This is provided with the log file, e.g. 88EXTALGO1GDBXX20211014XETR.LOG to the "trading date" folder. Trading participants can download the log file and must correct the upload file using the reported errors.
- Further action is required as the full file is rejected. If errors were detected in the file, the erroneous records can either be cut off the file and the file can be uploaded again, followed by another upload file containing the corrected records. Or all errors can be corrected, and the full file can be uploaded again.
- The log file provides trading participants with the information about the row, the erroneous value submitted and the permitted values and field length. Please refer to the "CUE validation and file specification Short code and algoID" document (link below) for a comprehensive overview of error messages and respective validations.

File upload after cut-off time

In case the cut-off time 23:30 CE(S)T was not met, and the file is uploaded after 00:00 CE(S)T, the file is rejected with the error message, e.g. 88EXTALGO1GDBXX20211014XETR.CSV_WRONG_UPLOAD_DATE and provided to your "trading date" folder. Please change the date of your file name to the next trading day (not calendar day) and upload it again.

If an upload was made after the cut off time, the upload file will be processed in the overnight batch of the following trading day.

Other reject reasons for files

Reject reasons are:

- Header specification is not met
- Validation of one record was not successful
- wrong record format
- wrong file format
- empty file"

An example error message for a wrong file type:
88EXTALGO1GDBXX20211014XETR.CSV_WRONG_FILE_TYPE

“CUE validation and file specification Short code and algoID” document
For further details on this process and the validations please refer to “CUE validation and file specification Short code and algoID” document under the following paths:

- Xetra.com >> Newsroom >> Current regulatory topics >> MiFID II and MiFIR >> Reference data reporting
- Eurex.com >> Rules & Regs >> MiFID II/MiFIR >> Client & Member Reference Data

2. Retrieval of the report files

Please note that the CUE validation is an initial validation and the complete validations against format, structure, orderbook data and the database are performed in the overnight batch in the data warehouse (see chapter 3.3.4.4.3). The algo error report TR162, the algo overview report TR163 will be provided to the trading participant in the CRE’s respective market folders (XEUR, XETR, XFRA).

4 Direct Market Access

Eurex and FSE are offering DMA to their members. Sponsored access is not permitted in Germany, hence not provided. DMA requirements are pursuant to the European and national regulatory requirements[43] and embedded in the exchange rules of the trading venues, § 5761 Eurex exchange rules, and § 38 FSE exchange rules.

4.1 FSE and Eurex solution

The member needs to register as DMA provider. After registration the DMA flag usage is enabled in the order request.

Please find more information on the webpages:

- Xetra.com >> Newsroom >> Current regulatory topics >> MiFID II and MiFIR >> Direct market access
- Eurex.com >> Rules & Regs >> MiFID II/MiFIR >> DEA/DMA/ORS

4.1.1 Registration

Trading participants offering DMA to their clients need to register as DMA provider. A registration is necessary with:

1. FWB and Eurex

- The registration form is available on request. Please contact your key account manager (KAM).

2. The Federal Financial Supervisory Authority (BaFin)

- The Federal Financial Supervisory Authority (BaFin) requires a notification, the form is available on the BaFin webpage and has to be submitted via email at deaanzeige@bafin.de.
  BaFin: DEA notification form of the Federal Financial Supervisory Authority (BaFin)

3. Exchange Supervisory Authority, State of Hesse

- Exchange Supervisory Authority, State of Hesse requires a notification, the form is available on the Hesse webpage and has to be submitted via email at reporting@wirtschaft.hessen.de.
  State of Hesse: DEA notification form of the Exchange Supervisory Authority Hesse

4.1.2 Technical submission

The DMA flag is available in order requests. The DMA flag “Order Origination” value “5” marks an order as DMA order.
The DMA flag is going to be reported in the TC810/TE810 “Daily trade confirmation” report and the TC540/TE540, “Daily order maintenance” report as well as other reports such as RD185, TC545/TE545, TC550/TE550, TC600/TE600, TC610/TE610.

[43] MiFID II, Directive 2014/65/EU
Delegated Acts, Commission Delegated Regulation 2017/565
RTS 6, Commission Delegated Regulation 2017/589
RTS 7, Commission Delegated Regulation 2017/584
German Exchange Act (BörsG)
Securities Trading Act (“WpHG”)
ESMA guidelines, ESMA/2016/145
ESMA Q&As, ESMA70-872942901-38

The DMA flag is not available in the GUI.

Please note: The DMA flag can only be set to 'true' if the order request is sent via the agent-, or riskless-account and the trading participant is registered. Otherwise, an order with the DMA flag set 'true' will be rejected.

4.1.3 DMA flagging

Trading participants shall apply the ESMA stipulated flagging of DMA order flow:

- Execution ID: short code for 'NORE'
- Investment ID: empty
- ClientID: short code for the client (LEI or National ID)

The FSE/Eurex technical necessities have to be set:

- Execution ID qualifier: 24 for human
- Investment ID qualifier: empty

In addition:

- Registered via form and approved by FWB or Eurex
- Orders sent via Agent-account (trading capacity = 1 (A=AOTC)) or Riskless-Principal-Account (trading capacity = 9 (R = MTCH))
- Order Origination = 5 (DMA flag: 'true')

5 Other MiFID II / MiFIR affected reports

5.1 Order-to-Trade Ratio (OTR) report

Content: Based on MiFID II, Article 48 (6), (12 b) and the related Commission Delegated Regulation (EU) 2017/566, the regulator defines an OTR regime based on two OTR measures and a mandatory calculation methodology. There is an OTR based on numbers and another OTR based on volumes. Both have to be calculated for each financial instrument traded on a business day.
Format: XML and TXT
Data source: FSE report TR101; Eurex TR100
The report provides each member with his daily values of both OTR measures per ISIN. In addition, the calculation details for each OTR measure are provided. The OTR values are provided per OTR instrument group and ISIN for one trading day.
For more information please refer to

- Eurex: Technology > T7 Trading Architecture > System Documentation> XML report manual; in the member section for FSE
- FSE: Newsroom > Current regulatory topics > MiFID II and MiFIR and the report structure under: Xetra > Technology > T7 trading architecture > System documentation > Release XY[44] > Reports

5.2 Message Rate report

Content: MiFID II, Article 4 (40c) characterizes high-frequency algorithmic trading technique by certain criteria. One criterion is a high message intraday rate. The related Article 19 of DELEGATED REGULATION (EU) …/... of 25.4.2016 supplementing Directive 2014/65/EU of the European Parliament and of the Council as regards organisational requirements and operating conditions for investment firms and defined terms for the purposes of that Directive (referred to as Delegated Regulation of 25.4.2016) defines granular details of a “high message intraday rate”, counting methodology and report requirements.
The message rate report is implemented in order to provide trading participants with their rates.
Format: XML and TXT
Data source: FSE report TR901; Eurex TR902
For more information, please refer to the XML report manual on the Eurex website (Technology > T7 Trading Architecture > System Documentation) or on the FSE webpage (Technology > T7 trading architecture > System documentation > Release XY[45] > Reports)

[44] Please always refer to the most recent release for the latest documents
[45] See above

6 Excursus: Participant reference data

Participant reference data are the legal entity identifier (legal entity), the NationalID (natural person), and the algoID.

6.1 Legal Entity identification codes of Participants

Regulatory requirement

Under Art. 25(2) MiFIR and CDR 2017/580 FSE and Eurex shall keep at the disposal of the competent authority the relevant data to identify the trading participant of the trading venue. For this the trading venues are required to provide the Legal Entity Identifier (LEI) of the firm as defined in Field 1 "Identification of the entity which submitted the order" of CDR 2017/580 Annex Table 2, which is the same requirement of Field 4 "Executing entity identification code" of Table 2 of Annex I, CDR 2017/590.

General format

The LEI, as defined in ISO 17442, contains 20 alphanumerical characters. LEIs are used to uniquely identify legally distinct entities that engage in financial transactions. LEIs are issued by "Local Operating Units" (LOUs) of the Global LEI System. For more information on how to obtain an LEI, please visit http://www.leiroc.org/lei/how.htm and http://www.leiportal.org/.

Submission method

The Central Coordinator of each Xetra or Eurex trading participant can provide and update the participant LEI in the Member Section under "User Administration".

Data renewal

LEIs must be renewed by LOUs annually, Participants shall assure the renewal of their LEIs.

6.2 National ID of traders of Participants

Regulatory requirement

Under Art. 25(2) of MiFIR and CDR 2017/580, FSE and Eurex shall keep at the disposal of the competent authority the relevant data to identify the person within the trading participant firm of the trading venue who is primarily responsible for the investment decision or primarily responsible for the execution of the transaction.

The NationalID of trading participants' admitted traders is one of the options for the population of Field 4 "Investment decision within firm" or Field 5 "Execution within firm" of CDR 2017/580, Annex Table 2.

General format – National ID

The NationalID requires joining the country code standard ISO 3166-1 of the nationality of the person with the identifier listed in the following table 1 (identical to table 1 of Annex II of CDR 2017/590), based on the nationality of the person.

- **CONCAT**

One of the required identifiers is the CONCAT ID, which is a concatenation of the following elements, in the following order:

a) the date of birth of the person, using format YYYYMMDD
b) the first five characters of the first name and
c) the first five characters of the surname

For more details on CONCAT, please see ESMA/2016/1452, Chapter 5.5.

- **Identifier priority**

The highest priority identifier available to the trading participants must be used. In case the first priority information is not available, other identifiers can be used strictly in accordance with the priority levels provided in the table. For traders from the Finland, e.g., trading participants must submit to trading venue the nationality (FI) and the FI personal identity code (first priority). If the national insurance number is not available, the nationality (FI) in combination with the CONCAT ID (second priority) can be submitted.

- **Traders with more than one nationality**

Where a trader has more than one nationality of different European Economic Area (EEA) countries, the country code of the first nationality when sorted alphabetically by its ISO 3166-1 alpha-2 code and the applicable identifier related to the first nationality as determined shall be used. Where a natural person has an EEA and a non-EEA nationality, the identifier related to the EEA nationality as determined shall be used.
The table below gives an overview of the priorities of national IDs identifiers according regulatory requirements:

ISO 3166-1 alpha-2	Country name	1st priority	2nd priority	3rd priority
AT	Austria	CONCAT		
BE	Belgium	Belgian National Number (Numéro de registre national – Rijksregisternummer)	CONCAT	
BG	Bulgaria	Bulgarian Personal Number	CONCAT	
CY	Cyprus	National Passport Number	CONCAT	
CZ	Czech Republic	National identification number (Rodné číslo)	Passport Number	CONCAT
DE	Germany	CONCAT		
DK	Denmark	Personal identity code 10 digits alphanumerical: DDMMYYXXXX	CONCAT	
EE	Estonia	Estonian Personal Identification Code (Isikukood)		
ES	Spain	Tax identification number (Código de identificación fiscal)		
FI	Finland	Personal identity code	CONCAT	
FR	France	CONCAT		

ISO 3166-1 alpha-2	Country name	1st priority	2nd priority	3rd priority
GR	Greece	10 DSS digit investor share	CONCAT	
HR	Croatia	Personal Identification Number (OIB – Osobni identifikacijski broj)	CONCAT	
HU	Hungary	CONCAT		
IE	Ireland	CONCAT		
IS	Iceland	Personal Identity Code (Kennitala)		
IT	Italy	Fiscal code (Codice fiscale)		
LI	Liechtenstein	National Passport Number	National Identity Card Number	CONCAT
LT	Lithuania	Personal code (Asmens kodas)	National Passport Number	CONCAT
LU	Luxembourg	CONCAT		
LV	Latvia	Personal code (Personas kods)	CONCAT	
MT	Malta	National Identification Number	National Passport Number	
NL	Netherlands	National Passport Number	National identity card number	CONCAT
NO	Norway	11-digit personal id (Foedselsnummer)	CONCAT	
PL	Poland	National Identification Number (PESEL)	Tax Number (Numer identyfikacjipodatkowej)	
PT	Portugal	Tax number (Número de Identificação Fiscal)	National Passport Number	CONCAT
RO	Romania	National Identification Number (Cod Numeric Personal)	National Passport Number	CONCAT
SE	Sweden	Personal identity number	CONCAT	
SI	Slovenia	Personal Identification Number (EMŠO: Enotna Matična Številka Občana)	CONCAT	

ISO 3166-1 alpha-2	Country name	1st priority	2nd priority	3rd priority
SK	Slovakia	Personal number (Rodné číslo)	National Passport Number	CONCAT
All other countries		National Passport Number	CONCAT	

Table 2: National client identifiers for natural persons (CDR 2017/590, Annex II)

- **Identifier format**

The format of valid national identifiers are determined by ESMA. These are used as validation rules for the long codes.

Country code	Country name	National client identifier	Format of the identifier	Potential source of the information
AT	Austria	CONCAT		
BE	Belgium	Belgian National Number (Numéro de registre national – Rijksregisternummer)	11 numerical digits where the first 6 are the date of birth (YYMMDD), the next 3 are an ordering number (uneven for men, even for women) and the last 2 a check digit.	National ID
		CONCAT		
BG	Bulgaria	Bulgarian Personal Number	It consists of 10 digits. The first 6 are the date of birth (YYMMDD). The next 3 digits have information about the area in Bulgaria and the order of birth, and the ninth digit is even for a boy and odd for a girl. Seventh and eighth are randomly generated according to the city. The tenth digit is a check digit.	Passport, National ID, Driving Licence
		CONCAT		
CY	Cyprus	National Passport Number	The number for passports issued before 13/12/2010 consists of the character 'E' followed by 6 digits i.e E123456. Biometric passports issued after 13/12/2010 have a number that starts with the character 'K', followed by 8 digits. i.e K12345678	The passport is issued by the Civil Registry Department of the Ministry of Interior.
		CONCAT		

Country code	Country name	National client identifier	Format of the identifier	Potential source of the information
CZ	Czech Republic	National identification number (Rodné číslo)	It is a nine or ten-digit number in the format of YYXXDD/SSSC, where XX=MM (month of birth) for male, i.e. numbers 01-12, and XX=MM+50 (or exceptionally XX=MM+70) for female, i.e. numbers 51-62 (or 71-82). For example, a number 785723 representing the first six digits is assigned to a woman born on 23rd of July 1978. SSS is a serial number distinguishing persons born on the same date and C is a check digit. For people born before January 1st, 1954 the number is without this check digit - YYXXDD/SSS (i.e. the nine-digit case). If the national identification number has ten digits, then the tenth (check) digit is the first nine digits modulo 11, unless this modulo is 10. In that case the tenth digit is 0. Therefore, the ten-digit number is usually divisible by 11. It should be noted that the special character "/" is just a separator and should be omitted in transaction reports.	It is assigned to a person shortly after birth by the birth registry and does not change throughout the life of a person. It is printed on a birth certificate (paper), national ID card (laminated or plastic card), drivers licence (laminated or plastic card), and possibly other documents.
		Passport Number	It is usually an eight-digit number, but it can be longer.	The passport is issued by the Ministry of the Interior of the Czech Republic.
		CONCAT		
DE	Germany	CONCAT		
DK	Denmark	Personal identity code 10 digits alphanumerical: DDMMYYXXXX	The Danish personal ID is called the CPR number. It is 10 digits and does only consist of numbers [0-9]. The first 6 numbers represent the date of birth in "DDMMYY" format.	The CPR number is used for unique personal identification can be found in documents such as passports, health care cards and driver's licenses.
		CONCAT		

Country code	Country name	National client identifier	Format of the identifier	Potential source of the information
EE	Estonia	Estonian Personal Identification Code (Isikukood)	It consists of 11 digits, generally given without any whitespace or other delimiters. The form is GYYMMDDSSSC, where G shows sex and century of birth (odd number male, even number female, 1-2 19th century, 3-4 20th century, 5-6 21st century), SSS is a serial number separating persons born on the same date and C a checksum.	Passport, National ID, Driving license
ES	Spain	Tax identification number (Código de identificación fiscal)	Code composed by 9 characters: 8 numbers and a control letter. Letters I, Ñ, O, and U are not used. It looks like 99111222M. Particular cases: - L + 7 numbers + control letter for non-resident Spaniards unless they have DNI, where then it would look like as above. - K + 7 numbers + control letter for Spaniards under 14 unless they have DNI, where then it would look like as above.	This code is in the National Identification Card (document nacional de identidad – DNI – or carnet de identidad), but it can also be found in the driving license or the social security card.
FI	Finland	Personal identity code	It consists of eleven characters of the form DDMMYYCZZZQ, where DDMMYY is the date of birth, C the century sign, ZZZ the individual number and Q the control character (checksum). The sign for the century is either + (1800–1899), - (1900–1999), or A (2000–2099). The individual number ZZZ is odd for males and even for females and for people born in Finland its range is 002-899 (larger numbers may be used in special cases). An example of a valid code is 311280-888Y.	Passport, National ID
		CONCAT		
FR	France	CONCAT		
GR	Greece	10 DSS digit investor share	It consists of 10 digits and it is linked with the personal details of the investor (name, identity number, passport number, tax registration number).	Investor share is the account of the investor in the DSS which is operated by the Central Securities Depository S.A.
		CONCAT		

Country code	Country name	National client identifier	Format of the identifier	Potential source of the information
HR	Croatia	Personal Identification Number (OIB – Osobni identifikacijski broj)	OIB consists of 11 digits. 10 digits are chosen randomly and do not contain information related to the holder of OIB. One digit is a control number. OIB is unique, unchangeable and unrepeatable. It is a permanent identification code of every Croatian citizen and legal person with head office in the Republic of Croatia.	Source is National Identity Card or Internet engines but it can also be found on other personal documents.
		CONCAT		
HU	Hungary	CONCAT		
IE	Ireland	CONCAT		
IS	Iceland	Personal Identity Code (Kennitala)	Ten-digit number, where the first six are the date of birth (DDMMYY).	Passport, National ID, Driving Licence
IT	Italy	Fiscal code (Codice fiscale)	The code is unique, widespread and consistent over time and it is a combination of 16 letters and numbers (3 letters for the last name + 3 letters for the name + 5 letters/numbers for the date of birth (with different combinations to distinguish between men and women) + 4 letters/numbers for the place of birth + 1 check letter/number). Example: RSS MRO 62B25 E205 Y	It can be printed on a paper card (old version) or on the National Health Service magnetic card (newer ones).
LI	Liechten-stein	National Passport Number	The Code is a combination of 1 letter and 5 numbers. For example, R00536	Passport
		National Identity Card Number	The Code of the national ID-Card is a combination of 2 letters and 8 numbers. For example, ID022143586	The number changes with each renewed ID-Card
		CONCAT		
LT	Lithuania	Personal code (Asmens kodas)	It is 11 digits long. Format GYYMMDDNNNC, where G is the gender (4 or 6 for women; 3 or 5 for men); YYMMDD is the date of birth; NNN - serial number; C - check digit.	Passport, National ID, Driving license
		National Passport Number	Passport or Identity card number - 8-digit number	Passport, National ID
		CONCAT		

Country code	Country name	National client identifier	Format of the identifier	Potential source of the information
LU	Luxem-bourg	CONCAT		
LV	Latvia	Personal code (Personas kods)	11 numerical digits of the form DDMMYY-CZZZZ where the first 6 are the date of birth (DDMMYY) and the C is century sign (where the digit "0" is the 19th century, the number "1" - the 20th century, "2" - 21th century). Or 11 numerical digits selected randomly, where the first six digits may be separated from other digits with a hyphen	Identification documents for Republic of Latvia - National ID and/or passport
		CONCAT		
MT	Malta	National Identification Number	8 characters: 7 numerical digits and 1 alphabetic letter (M, G, A, P, L, H, B, Z) Each ID Card has a unique Identity Number, based on a combination of: (a) a sequential registration number in the relevant year; (b) the relevant year number (2 digits), where the year is the year of birth (for Malta-born persons) or year of registration (for non-Malta born persons), and (c) a letter designating the geographic origin of the person. The definition of the letters is given by the Public Registry Department on the registration of a birth A = applicable to Foreigners in possession of an eRes Card B = applicable to Maltese births registered in the 1800+ G= applicable to Gozitan births registered in the 1900+ H= applicable to Gozitan births registered in the 2000+ L= applicable to Maltese births registered in the 2000+ M= applicable to Maltese births registered in the 1900+ P= applicable to Maltese citizens who are unable to obtain their original birth certificate from their country of birth to be registered in Malta. Z= applicable to Gozitan births registered in the 1800+	National ID
		National Passport Number	7 Numerical digits	Civil Registration Directorate
NL	Nether-lands	National Passport Number	9 characters of which: Position 1 and 2: [A-Z] except for "O"; Position 3 - 8: [A-Z] [0-9] except for "O"; Position 9: [0-9].	Dutch National Passport

Country code	Country name	National client identifier	Format of the identifier	Potential source of the information
		National identity card number	9 characters of which: Position 1 and 2: [A-Z] except for "O"; Position 3 - 8: [A-Z] [0-9] except for "O"; Position 9: [0-9]. The character "O" is not allowed while "0" is.	Dutch National ID
		CONCAT		
NO	Norway	11-digit personal id (Foedselsnummer)	The id is 11 digits long, where the first 6 represent birthdate in "ddmmyy" format.	Includes but not limited to: passport, national id card, driving license
		CONCAT		
PL	Poland	National Identification Number (PESEL)	11 NUMERIC. ID for natural persons is assigned to a person shortly after birth by the birth registry and does not change throughout the life of a person.	Birth Certificate, National ID, Driving License
		Tax Number (Numer identyfikacjipodatkowej)	10 NUMERIC. It is used by investment firms for the tax identification of a client.	Tax form PIT8 which is sent yearly by an IF on behalf of its client to the tax office.
PT	Portugal	Tax number (Número de Identificação Fiscal)	Code composed by one block of 9 digits (999999999). The first eight digits are sequential and the last one is used as a control: 1 to 3: Personal, 3 is not yet assigned; 45: Natural person. The initial digits "45" correspond to non-residents citizens that only get in Portuguese territory income subject to withholding at source; 5: legal person required to register in the National People Collective Registry; 6: The agencies of the Central Government, Regional or Local administration; 70, 74 and 75: Used to identify different types of Heritage Indivisible; 71: Collective non-residents subject to withholding at source definitively; 72: Investment Funds;	

Country code	Country name	National client identifier	Format of the identifier	Potential source of the information
			77: officious allocation of taxable NIF (entities that do not require NIF on the official bodies (RNPC); 78: officious assignment to non-residents covered by the proceeding VAT REFUND; 79: Exceptional rules - created in 98 exclusively to the Mundial Exposition (Expo 98); 8: "sole trader" (no longer used, is no longer valid); 90 and 91: Condos, Irregular Society and undivided inheritances; 98: Non-residents without permanent establishment; 99: Civil societies without legal personality.	
		National Passport Number	The passport of uniform and optical model issued before April 2018 consists of a notebook with 32 pages numbered, identified by one letter and six digits: Position 1: letter [A-Z] and Position 2 - 6: digits [0-9]. The passport of uniform and optical model issued after April 2018 consists of a notebook with 32 (requested by normal travel) or 48 (requested by a frequent travel) pages numbered, identified by two letters and six digits: Position 1-2: letter [A-Z] and Position 3 - 8: digits [0-9].	Portuguese National Passport
		CONCAT		
RO	Romania	National Identification Number (Cod Numeric Personal)	The Romanian National ID (Cod Numeric Personal, CNP) consists of 13 digits and is created by using the gender of the citizen and century (1 digit, 1/3/5/7 for men, 2/4/6/8 for women and 9 for foreign citizens), date of birth (6 digits, YYMMDD), the place of birth (2 digits), followed by a serial number (3 digits), and 1 control digit, at the end. The first digit encodes the person's gender as follows: 1 Male born between 1900 and 1999 2 Female born between 1900 and 1999 3 Male born between 1800 and 1899 4 Female born between 1800 and 1899	The CNP is a unique identifying number, assigned to each person at birth and is inscribed on Birth Certificate, Identity Card and Driving License.

Country code	Country name	National client identifier	Format of the identifier	Potential source of the information
			5 Male born after 2000 6 Female born after 2000 7 Male, foreign citizen, RO resident 8 Female, foreign citizen, RO resident 9 Foreign citizen	
		National Passport Number	Romanian Passport Number consist of 9 digits.	Romanian National Passport
		CONCAT		
SE	Sweden	Personal identity number	Personal identity number: 12 digits numerical in the format CCYYMMDDZZZQ CCYYMMDD is the date of birth, ZZZ the individual serial number, and Q is the control character (calculated with Luhn-algoritm). The individual number ZZZ is odd for males and even for females. CC is century, YY year, MM month and DD day. NB! The 12 digits numerical format is used, as the official 10 digits numerical format of the personal identity number includes a separator (YYMMDD-ZZZQ or YYMMDD+ZZZQ if the person has turned 100) which severely complicates data processing and storage.	Personal identity number is used for unique personal identification. This number, in its official 10 digits numerical format (i.e. excluding the CC for century and including a separator), is written on or into various personal documents such as passports, health care cards, and driver's licenses.
		CONCAT		
SI	Slovenia	Personal Identification Number (EMŠO: Enotna Matična Številka Občana)	It consists of 13 digits. The first 7 numbers represent the date of birth of the person - DDMMYYY. Digit 8 and 9 represent the number of a register where EMŠO was assigned: • 10-19 – Bosnia and Hercegovina (if signed in before 18 February 1999) • 20-29 – Montenegro (if signed in before 18 February 1999) • 30-39 – Croatia (if signed in before 18 February 1999)	Slovenian Personal Identity Card Slovenian National Passport

Country code	Country name	National client identifier	Format of the identifier	Potential source of the information
			• 40-49 – Macedonia (if signed in before 18 February 1999) • 50-59 – Slovenia (if signed in before 18 February 1999, if later number 50 is used) • 60-69 – (not in use) • 70-79 – Serbia (if signed in before 18 February 1999) • 80-89 – Autonomous Province of Vojvodina (if signed in before 18 February 1999) • 90-99 – Kosovo (if signed in before 18 February 1999)). Digit 10, 11 and 12 are a combination of gender and serial number for persons, born on the same day (000-499 for male and 500-999 for female). Number 13 is a control number and is calculated by a special procedure, defined in Article 4 of the Regulation on the way of assigning the personal identification number (Nos. no. 8/99).	
		CONCAT		
SK	Slovakia	Personal number (Rodné číslo)	The Personal Number consist of ten digits in the form YYMMDDCCCX. The first part is created from the date of birth (differently for male and female): YY - the last 2 digits of the year of birth; MM - month of birth for male (01 -12), month of birth plus 50 for female (51-62); DD - day of birth; CCC- number distinguishing persons born on the same date; X - check digit. The Person Number must be divisible by 11.	It is printed on a birth certificate (paper), national ID card (laminated or plastic card), drivers licence (laminated or plastic card), and possibly other documents.
		National Passport Number	It is issued in the format XXNNNNNNN. It is a 9-digit unique code where XX are block letters and NNNNNNN are numbers. It has a validity of 10 years.	Citizens can have two passports and this code can only be found on the first one.
		CONCAT		

Table 3: national client identifiers for natural persons (ESMA Questions and Answers on MiFIR data reporting, 25 May 2018 ESMA70-1861941480-56)

Country Codes ISO 3166-1 alpha 2 on the 2021-10-27	
Country code	**Country**
AD	Andorra
AE	United Arab Emirates (the)
AF	Afghanistan
AG	Antigua and Barbuda
AI	Anguilla
AL	Albania
AM	Armenia
AO	Angola
AQ	Antarctica
AR	Argentina
AS	American Samoa
AU	Australia
AW	Aruba
AX	Åland Islands
AZ	Azerbaijan
BA	Bosnia and Herzegovina
BB	Barbados
BD	Bangladesh
BF	Burkina Faso
BH	Bahrain
BI	Burundi
BJ	Benin
BL	Saint Barthélemy
BM	Bermuda
BN	Brunei Darussalam
BO	Bolivia (Plurinational State of)
BQ	Bonaire, Sint Eustatius and Saba
BR	Brazil
BS	Bahamas (the)
BT	Bhutan
BV	Bouvet Island
BW	Botswana
BY	Belarus
BZ	Belize
CA	Canada
CC	Cocos (Keeling) Islands (the)
CD	Congo (the Democratic Republic of the)
CF	Central African Republic (the)
CG	Congo (the)
CH	Switzerland
CI	Côte d'Ivoire

Country Codes ISO 3166-1 alpha 2 on the 2021-10-27	
Country code	**Country**
CK	Cook Islands (the)
CL	Chile
CM	Cameroon
CN	China
CO	Colombia
CR	Costa Rica
CU	Cuba
CV	Cabo Verde
CW	Curaçao
CX	Christmas Island
DJ	Djibouti
DM	Dominica
DO	Dominican Republic (the)
DZ	Algeria
EC	Ecuador
EG	Egypt
EH	Western Sahara*
ER	Eritrea
ET	Ethiopia
FJ	Fiji
FK	Falkland Islands (the) [Malvinas]
FM	Micronesia (Federated States of)
FO	Faroe Islands (the)
GA	Gabon
GB	United Kingdom of Great Britain and Northern Ireland (the)
GD	Grenada
GE	Georgia
GF	French Guiana
GG	Guernsey
GH	Ghana
GI	Gibraltar
GL	Greenland
GM	Gambia (the)
GN	Guinea
GP	Guadeloupe
GQ	Equatorial Guinea
GS	South Georgia and the South Sandwich Islands
GT	Guatemala
GU	Guam
GW	Guinea-Bissau
GY	Guyana

Country Codes ISO 3166-1 alpha 2 on the 2021-10-27	
Country code	**Country**
HK	Hong Kong
HM	Heard Island and McDonald Islands
HN	Honduras
HT	Haiti
ID	Indonesia
IL	Israel
IM	Isle of Man
IN	India
IO	British Indian Ocean Territory (the)
IQ	Iraq
IR	Iran (Islamic Republic of)
JE	Jersey
JM	Jamaica
JO	Jordan
JP	Japan
KE	Kenya
KG	Kyrgyzstan
KH	Cambodia
KI	Kiribati
KM	Comoros (the)
KN	Saint Kitts and Nevis
KP	Korea (the Democratic People's Republic of)
KR	Korea (the Republic of)
KW	Kuwait
KY	Cayman Islands (the)
KZ	Kazakhstan
LA	Lao People's Democratic Republic (the)
LB	Lebanon
LC	Saint Lucia
LK	Sri Lanka
LR	Liberia
LS	Lesotho
LY	Libya
MA	Morocco
MC	Monaco
MD	Moldova (the Republic of)
ME	Montenegro
MF	Saint Martin (French part)
MG	Madagascar
MH	Marshall Islands (the)
MK	North Macedonia

Country Codes ISO 3166-1 alpha 2 on the 2021-10-27	
Country code	**Country**
ML	Mali
MM	Myanmar
MN	Mongolia
MO	Macao
MP	Northern Mariana Islands (the)
MQ	Martinique
MR	Mauritania
MS	Montserrat
MU	Mauritius
MV	Maldives
MW	Malawi
MX	Mexico
MY	Malaysia
MZ	Mozambique
NA	Namibia
NC	New Caledonia
NE	Niger (the)
NF	Norfolk Island
NG	Nigeria
NI	Nicaragua
NP	Nepal
NR	Nauru
NU	Niue
NZ	New Zealand
OM	Oman
PA	Panama
PE	Peru
PF	French Polynesia
PG	Papua New Guinea
PH	Philippines (the)
PK	Pakistan
PM	Saint Pierre and Miquelon
PN	Pitcairn
PR	Puerto Rico
PS	Palestine, State of
PW	Palau
PY	Paraguay
QA	Qatar
RE	Réunion
RS	Serbia
RU	Russian Federation (the)

Country Codes ISO 3166-1 alpha 2 on the 2021-10-27	
Country code	**Country**
RW	Rwanda
SA	Saudi Arabia
SB	Solomon Islands
SC	Seychelles
SD	Sudan (the)
SG	Singapore
SH	Saint Helena, Ascension and Tristan da Cunha
SJ	Svalbard and Jan Mayen
SL	Sierra Leone
SM	San Marino
SN	Senegal
SO	Somalia
SR	Suriname
SS	South Sudan
ST	Sao Tome and Principe
SV	El Salvador
SX	Sint Maarten (Dutch part)
SY	Syrian Arab Republic (the)
SZ	Eswatini
TC	Turks and Caicos Islands (the)
TD	Chad
TF	French Southern Territories (the)
TG	Togo
TH	Thailand
TJ	Tajikistan
TK	Tokelau
TL	Timor-Leste
TM	Turkmenistan
TN	Tunisia
TO	Tonga
TR	Turkey
TT	Trinidad and Tobago
TV	Tuvalu
TW	Taiwan (Province of China)
TZ	Tanzania, the United Republic of
UA	Ukraine
UG	Uganda
UM	United States Minor Outlying Islands (the)
US	United States of America (the)
UY	Uruguay
UZ	Uzbekistan

Country Codes ISO 3166-1 alpha 2 on the 2021-10-27	
Country code	**Country**
VA	Holy See (the)
VC	Saint Vincent and the Grenadines
VE	Venezuela (Bolivarian Republic of)
VG	Virgin Islands (British)
VI	Virgin Islands (U.S.)
VN	Viet Nam
VU	Vanuatu
WF	Wallis and Futuna
WS	Samoa
YE	Yemen
YT	Mayotte
ZA	South Africa
ZM	Zambia
ZW	Zimbabwe

Submission method

To maintain the information for an individual trader, Participants can log in to the Xetra or Eurex Member Section and select “Admissions & User IDs” to enter the information. Traders in admission need to provide their National ID during the admission process.

7 Enclosure

MiFID II:
DIRECTIVE 2014/65/EU OF THE EUROPEAN PARLIAMENT AND OF THE COUNCIL of 15 May 2014 on markets in financial instruments and amending Directive 2002/92/EC and Directive 2011/61/EU
MiFIR:
REGULATION (EU) No 600/2014 OF THE EUROPEAN PARLIAMENT AND OF THE COUNCIL of 15 May 2014 on markets in financial instruments and amending Regulation (EU) No 648/2012
RTS 24:
COMMISSION DELEGATED REGULATION (EU) 2017/580 of 24 June 2016 supplementing Regulation (EU) No 600/2014 of the European Parliament and of the Council with regard to regulatory technical standards for the maintenance of relevant data relating to orders in financial instruments
ESMA guidelines:
ESMA/2016/1452 ESMA guidelines on Transaction reporting, order record keeping and clock synchronisation under MiFID II
ESMA Q&A:
ESMA Q&A on On MiFIR data reporting ESMA70-1861941480-56