DEUTSCHE BÖRSE CASH MARKET

EUREX

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

Frankfurter Wertpapierbörse (FWB) and Eurex Deutschland

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Change log

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)
4.1	30/10/2023	Update chapter 2.3 Short Code Solution and chapter 3 Algo IDs, in particular chapter 2.3.1 and 3.4.1 to reflect the amended T7 field validations. In addition, chapters 2.3.4.3 and 3.4.4.3 provide information about the new GUI, which enhances the current upload functionality in the member section.
4.2	29/08/2024	Update of the reporting handbook with respect to the enhancement to the Short Code and Algo ID solution 2.0 comprising chapter three and chapter four.
4.3	15/11/2024	Chapter 3.3.5 editorial changes, chapter 3.4.2.1 CUE versioning, chapters 3.4.2.1 and 4.5.2.1 editorial change of error messages and remark, chapter 3.4.3 and 4.5.3 additional information on intraday processing, chapter 3.4.3.3 additional information on LEI validation, chapter 7.2.1 editorial change

List of Abbreviations

CDR	Commission Delegated Regulation
CE(S)T	Central European (Summer) Time
CRE	Common Report Engine
CTS	Customer Technical Support
CUE	Common Upload Engine
DMA	Direct Market Access
FWB	Frankfurter Wertpapierbörse
GUI	Graphical User Interface
ISO	International Organization for Standardization
KAM	Key Account Manager
LEI	Legal Entity Identifier
MIC	Market Identifier Code
MIFID	Markets in Financial Instruments Directive
MIFIR	Markets in Financial Instruments Regulation
OTR	Order to Trade Ratio
PROD	Production environment
SIMU	Simulation environment
TKAM	Technical Key Account Manager
TVTIC	Trading Venue Transaction Identification Code

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1 General information

With MiFID II / MiFIR, applicable since 3 January 2018, Trading Participants and trading venues are required to comply with certain reporting requirements. This document outlines the audit trail related reporting requirements, which are also impacting the transaction reporting. It shall serve as guidance for Trading Participants in order to fulfil their reporting obligation. Furthermore, other MiFID II / MiFIR affected reports are included.

Chapter 2 encompasses an extract of reporting content originating from the audit trail, which is relevant for the transaction reporting. Chapter 3 provides Trading Participants with the information about the Short Code solution comprising the regulatory requirements, the T7 trading system as well as upload and data requirements. In addition, processing of data and output in the form of T7 XML reports are outlined. Chapter 4 encompasses this information with respect to Algo IDs.
Chapter 5 provides an overview about the venues' DMA offering. Chapter 6 provides information about other MiFID II / MiFIR related reports provided by the trading venues. Chapter 7 contains an excursus about ESMA data requirements.

2 Audit trail reporting and transaction reporting according to CDR 2017/590 and CDR 2017/580

According to Article 25 (2) of Regulation (EU) No 600/2014 (MiFIR), 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.

Certain data stemming from Article 25 (2) shall be reported in accordance with Article 26(1) and (3) MiFIR. Hence, to fulfill these requirements and provide Trading Participants with the necessary data, the trading venues implemented certain fields to the T7 trading system. Please find the ESMA data requirements and related T7 data source below.

T7 XML reports are provided to the Common Report Engine (CRE). Please find more information on the reports in the T7 XML Report Manual and related XSDs under the following path:

- Xetra.com > Technology > T7 trading architecture > System documentation > Release XY [1] > Reports
- Eurex.com > Support > Initiatives & Releases > T7 Release XY[2] > Reports

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: Trading Participants must flag these orders upon entry if applicable. The reporting takes place in FWB reports TC540, TC545, TC550, TC600, TC610, TC810; Eurex reports TE540, TE545, TE550, TE595, TE600, TC610, TE810 'dmaFlg'
For more information, please refer to chapter 5.

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 must flag these orders/quotes upon entry. The reporting takes place in FWB reports TC540, TC545, TC550, TC600, TC610, TC810; Eurex reports TE540, TE545, TE546, TE550, TE590, TE595, TE600, TC610, TE810 "liqProvActivity".
T7 field "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.

[1] Please refer to the latest T7 release
[2] See footnote above

- 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.
- 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' – Submitted RfQ
- ´RFQR´– RfQ Response

Data source: The T7 trading system sets this flag. The reporting takes place in FWB reports TC540, TC545, TC600, TC610 ; Eurex reports TE540, TE545, TE546, TE590, TE595, TE600, TE610 '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 T7 trading system sets this flag. The price notation information will be distributed via 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 FWB, 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 took liquidity (aggressive).
Format and Standard: 'PASV' – passive; 'AGRE' – aggressive
Data source: FWB TC540, TC810; Eurex TE540, TE810 'sideLiquidityInd'
This field must only be populated for executions of continuous trading sessions otherwise it shall be blank. Orders are neither passive nor aggressive during auction sessions. Börse Frankfurt: must be reported blank due to the continuous auction model.

Field 48: Trading venue transaction identification code
Content: Alphanumerical code assigned by the trading venue to the transaction pursuant to Article 12 of CDR 2017/580. 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
- Report FWB TC810; Eurex TE810
- CEF Core: TRANS_ID_CODE (846F)

FWB 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. For the concatenation of the TVTIC it is recommended to take the required data from T7 ETI interface.

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

FWB T7 rules:
- Envir_Flag (1):
  - Valid value "1" for the Xetra market (MIC XETR)
  - Valid value "3" for Börse Frankfurt (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):
  - Valid value “1” for the Eurex T7
  - Valid value “2” for FX T7

  Field length is one digit.
- 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 execution, the TVTIC is created on instrument leg level and the corresponding leg instrument Security ID is considered.

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 TVTICs which only differ by the SecurityID representing the corresponding T7 instrument ID of leg 1 and leg 2 (regardless of whether the matching event involves synthetic matching or not).
To retrieve all relevant information on complex instrument level, the Strategy Link Id (tag 1851) can be used.

Uniqueness

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

3 Short Code Solution

This chapter describes the regulatory requirements, the Short Code solution comprising the T7 trading system, the registration and maintenance of Short Codes and respective data requirements. In addition, the lifecycle management is described starting with the upload files, the upload functionalities and the subsequent processing and output of the data in T7 XML reports.

3.1 Regulatory requirements

3.1.1 Execution within firm

The "execute within firm" data shall be submitted in the T7 trading system field "ExecutionID". It is mandatory in every order and quote, irrespective of the T7 trading capacity / ESMA trading capacity. As by ESMA definition[3], 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 shall 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 Algo ID or a Short Code for the natural person within the firm must be populated.
The Short Code used in the "ExecutionID" 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[4] must follow the format requirements of valid national identifiers as outlined in the ESMA Questions and Answers on MiFIR data reporting[5]. Please refer to chapter 7 for your convenience.

ESMA valid value[6]
"NORE"
In cases where the execution decision 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.
The Short Code "3", representing industry standard, should be used to flag the ESMA permitted value "NORE" of the execution decision. Please note that it is required to register the respective Short Code with the trading venue. Please refer to chapter 3.4.1 for an example record.

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.

3.1.2 Investment decision within firm

The "investment decision within firm" data shall be submitted in the T7 trading system field "InvestmentID". It is mandatory in every order and quote for trading in trading capacities Proprietary, Market Making, Broker Dealer and Retail Market Making (ESMA trading capacity DEAL). It is optional for trading capacities Agency, Riskless Principal and Retail-Agency (ESMA trading capacities AOTC and MTCH). As by ESMA definition[7], 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, the qualifier field must be empty too. However, if this decision is taken within the trading participant's firm, an Algo ID or a Short Code for the natural person within the firm must be populated.

[3] Commission Delegated Regulation (CDR) 2017/580 Art. 2, (CDR) 2017/590 Art. 8, ESMA Guidelines (ESMA/2016/1452) chapters 5.12.
[4] Annex II of Commission Delegated Regulation (EU) 2017/590
[5] ESMA70-1861941480-56, Q&A 24.2, ESMA_QA_1510
[6] ESMA Guidelines (ESMA/2016/1452) chapter 6.3
[7] Commission Delegated Regulation (CDR) 2017/580 Art. 2, (CDR) 2017/590 Art. 8, ESMA Guidelines (ESMA/2016/1452) chapters 5.11.

The Short Code used in the "InvestmentID" 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[8] must follow the format requirements of valid national identifiers as outlined in the ESMA Questions and Answers on MiFIR data reporting[9]. Please refer to chapter 7 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.

3.1.3 Client identification code

The "client identification code" data shall be submitted in the T7 trading system field "ClientID". It must be populated with a Short Code of the Trading Participant's immediate client. It is a mandatory field for all orders entered in T7 trading capacities Agency, Retail Agency (ESMA trading capacity AOTC) and Riskless Principal (ESMA trading capacity MTCH)[10]. Without a Short Code (empty) the order submission will be rejected. If orders and quotes are entered in the T7 trading capacities Proprietary, Market Making, Broker Dealer and Retail Market Making (ESMA trading capacity DEAL), 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[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 7 for your convenience.

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

ESMA valid values[13]
"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".

The following Short Codes, representing industry standards, shall be used to flag the ESMA permitted attributes of the ClientID. Please note that it is required to upload the respective Short Codes with the trading venue. Please refer to chapter 3.4.1 for example records.

[8] Annex II of Commission Delegated Regulation (EU) 2017/590
[9] ESMA70-1861941480-56, Q&A 24.2, ESMA_QA_1510
[10] Commission Delegated Regulation (CDR) 2017/580 Art. 2, ESMA Guidelines (ESMA/2016/1452) chapter 6.3
[11] Annex II of Commission Delegated Regulation (EU) 2017/590
[12] ESMA70-1861941480-56, Q&A 24.2, ESMA_QA_1510
[13] ESMA Guidelines (ESMA/2016/1452) chapter 6.3

1 – Aggregated order flag “AGGR”
2 – Pending allocations flag “PNAL”

If PNAL or AGGR was used, Trading Participants are not required to provide the trading venues with the single ClientIDs for the purpose of the audit trail afterwards. For further details please refer to the ESMA guidelines[14].

Please note that, according to Article 26 (1) of the Regulation (EU) No. 600/2014, Trading Participants who are subject to MiFIR must provide those single ClientIDs and related data in the Trading Participants’ transaction reporting to the NCA. According to Article 26 (5) of the Regulation (EU) No. 600/2014 and the exchange rules of the trading venues (FWB: § 114; Eurex: § 68 and the relevant Circulars of the Management Boards) Trading Participants who are not subject to MiFIR must provide the data to the trading venues via the Regulatory Reporting Solution (RRS).

3.2 Submission of Short Code data in the T7 trading system

3.2.1 T7 trading system fields

FWB and Eurex Deutschland follow the EU-wide implemented “Short Code solution”. Trading Participants shall submit the data of the ESMA fields[15] “client identification code”, the “execution within firm” and the “investment decision within firm” in the respective T7 trading system fields using this logic. These fields are available in the order and quote messages as 8-byte 20 digits numeric fields.

- ClientID (for the MiFID field “Client identification code”)
- ExecutionID (for the MiFID field “Execution within firm”)
- InvestmentID (for the MiFID field “Investment decision within firm”)

As the fields execution decision and investment decision can contain an Algo ID or a Short Code, there are respective qualifier fields in order to distinguish whether the numeric value is a Short Code or an Algo ID. Trading Participants shall set the qualifier fields to the following values[16] in order to provide this information:

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

Following the ESMA requirements[17], the submission of the ExecutionID is mandatory for all trading capacities (ESMA trading capacities DEAL, AOTC, MTCH). The InvestmentID is technically optional for trading capacities Agency, Riskless Principal and Retail-Agency (ESMA trading capacities AOTC and MTCH) because the field must be blank in case the client of the Trading Participant took the investment decision. The InvestmentID is mandatory in trading capacities Proprietary, Market Making, Broker Dealer and Retail Market Making (ESMA trading capacity DEAL).

The ClientID is mandatory for the trading capacities Agency, Riskless Principal, Retail Agency (ESMA trading capacities AOTC and MTCH) and must be empty in all other trading capacities.
Please find more information on all scenarios in chapter 3.2.2.

Please note that the values of Short Codes and Algo IDs are not permitted having leading zeros, e.g. “00012345”. The value ”0” is no permissible value for Short Codes and Algo IDs.

[14] ESMA/2016/1452, chapter 6.3
[15] Commission Delegated Regulation (CDR) 2017/580, article 2
[16] Values might differ with respect to different interfaces, e.g. ETI or FIX
[17] Commission Delegated Regulation (CDR) 2017/580, article 2 and ESMA guidelines ESMA/2016/1452, chapters 5.11, 5.12

3.2.2 MiFID II / MiFIR field flagging by trading scenario

T7 trading capacities proprietary, market making, broker dealer and retail market making (ESMA trading capacity DEAL)

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)	Empty
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)	Empty
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)	Empty

T7 trading capacities agency, retail agency (ESMA trading capacity AOTC) and riskless principal (ESMA trading capacity MTCH); ClientID mandatory

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)	**Short Code** for LEI or National ID, PNAL or AGGR

T7 trading capacities agency, retail agency (ESMA trading capacity AOTC) and riskless principal (ESMA trading capacity MTCH); ClientID mandatory

Flagging options	Execution Decision	Execution Qualifier	Investment Decision	Investment Qualifier	Client ID
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
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 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 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

T7 trading capacities agency, retail agency (ESMA trading capacity AOTC) and riskless principal (ESMA trading capacity MTCH); ClientID mandatory

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

3.3 Short Code management and data requirements

3.3.1 Registration

Trading Participants must register Short Codes with the trading venues. It is strongly recommended to register these before usage. However, Short Codes used in trading for the first time must be registered with the corresponding Long Code latest by the end of the trading day following the trading day of the order submission.[18]

A Short Code registration shall be submitted with status indicator "N – new registration". If there is no registration for this Short Code yet and the data record passes the validations successfully, the registration is valid as of the "ValidFromDate", which can be t-1, t or t+1. Please note that the "ValidFromDate" must be a trading day[19]. The submission of an intended Short Code registration with Status Indicator "M – modification" will be rejected.

Valid Short Code registrations are documented in the "TR161 – Short Code ID – Valid Registrations Report". Short Codes used in trading without a valid registrations and other upload errors are documented in the "TR160 – Short Code ID – Error Report".

The reports of a reporting day are generated three times intraday (10:00, 14:00, 18:00 CE(S)T) and with the overnight batch. For erroneous uploads during the trading day, Trading Participants can take immediate action and ensure that the data is successfully accepted to fulfil the data submission obligation within the deadline. In case of an upload error for a record, the Trading Participant can submit an updated data record until the correct Short Code registration is processed successfully. For these cases, i.e. numerous submissions for one Short Code on a trading day, each record is processed and documented in the "TR160 – Short Code ID – Error Report" or "TR161 – Short Code ID – Valid Registrations Report". During the overnight batch, the on the trading day last received and successfully validated Short Code is legally binding for that trading day and marked as such.

For intraday submissions the general principle holds that the initial registration of a Short Code must be submitted with "Status Indicator = N – new registration" and subsequent submissions for that Short Code must be submitted with "Status Indicator = M – modification".

The submission of registrations or attempts can be found in the following member reports:

TR160 – Short Code ID – Error Report	▪ Short Codes submitted in orders / quotes / TES / Enlight with no registration (error 1 – ShortCodeID registration is missing) ▪ Short Code errors of the upload file
TR161 – Short Code ID – Valid Registrations Report	▪ Valid Short Code registrations (incl. all details)

3.3.1.1 Uniqueness and consistency

Registrations of Short Codes shall be unique and consistent. For instance, 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, which is defined as unique. The Long Code of a registration shall only be changed for legally permitted reasons, e.g. marriage or change of passport number, which is defined as consistent. There is an exemption to the uniqueness rule outlined in the next chapter. [20]

[18] Please refer to the FWB Exchange Rules §114, Eurex Exchange Rules §68 and ESMA/2016/1452 ESMA guidelines on Transaction reporting, order record keeping and clock synchronisation under MiFID II, p. 223

[19] Please refer to the trading calendar for simulation and production:
- XETR and XFRA: Xetra > Trading > Trading calendar and trading hours
- XEUR (simu): Eurex > Support > Initiatives & Releases > Simulation Calendar
- XEUR (prod): Eurex > Trade > Trading Calendar

[20] Please refer to the FWB Exchange Rules §114, Eurex Exchange Rules §68

Non-unique Short Codes, i.e. where a Long Code is registered with more than one Short Code on the respective reporting day, are documented in the "TR167 – Short Code ID – Non-uniqueness Report", which serves as basis for potential sanctioning measures.

Non-consistent Short Codes, i.e. where the Long Codes were modified on the respective reporting day, are documented in the "TR168 – Short Code ID – Non-consistency Report", which serves as basis for potential sanctioning measures.

Every new registration of a non-unique Short Code and modifications altering the Long Code of a valid registration (non-consistency) are documented as a warning in the "TR160 – Short Code ID – Error Report". This serves as information to Trading Participants only.

The valid registrations, related results of uniqueness and consistency and warnings can be found in the following member reports:

TR160 – Short Code ID – Error Report	▪ Warnings ○ Non-uniqueness: error type 25 - "ClientLongValue already registered" ○ Non-consistency: error type 32 - "ClientLongValue was modified"
TR167 – Short Code ID – Non-uniqueness Report	▪ Long Codes with at least two or more Short Code registrations valid on the reporting day
TR168 – Short Code ID – Non-consistency Report	▪ Long Codes, which were modified on the reporting day

3.3.1.2 Exemption

An exemption to the uniqueness of Short Codes 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 cases 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.

For such enquiries please contact:

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

3.3.2 Modification

The Short Code registration 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. Due to this requirement, the modification of a Short Code registration from a NationalID to a LEI et v.v. is not permitted and technically disabled, i.e. the attempt will be rejected (error code 29 – "Changing the ClassificationRule is not permitted"). If a registered Short Code shall be used for a different person (legal / natural person) then the deletion of the valid registration and the new registration is necessary.

A Short Code modification shall be submitted with status indicator "M – modification". If there already is a valid registration for this Short Code and the data record passes the validations successfully, the modification is valid as of the "ValidFromDate", which can be t-1, t or t+1. Please note that the "ValidFromDate" must always be a

trading day[21]. If there is no valid registration of that Short Code in the database, the record is rejected with error code 30 "Modification rejected, short code not registered in database". The submission of an intended Short Code modification with Status Indicator "N – new registration" will be rejected if the Short Code is registered already.

The reports "TR160 – Short Code ID – Error Report" and "TR161 – Short Code ID – Valid Registrations Report" of a reporting day are generated three times intraday (10:00, 14:00, 18:00 CE(S)T) and with the overnight batch. For erroneous uploads during the trading day, Trading Participants can take immediate action and ensure that the data is successfully accepted to fulfil the data submission obligation within the deadline. In case of an upload error for a record, the Trading Participant can submit an updated data record until the correct Short Code modification is processed successfully. For these cases, i.e. numerous submissions for one Short Code on a trading day, each record is processed and documented in the respective "TR160 – Short Code ID – Error Report" or "TR161 – Short Code ID – Valid Registrations Report". During the end of day batch, the on the trading day last received and successfully validated Short Code is legally binding for that trading day and marked as such. In case no modification of a Short Code registration was successfully submitted, the prevailing combination is legally binding for that trading day.

For intraday submissions the general principle holds that the initial registration of a Short Code must be submitted with "Status Indicator = N – new registration" and subsequent submissions for that Short Code must be submitted with "Status Indicator = M – modification".

The submission for modifications and attempts can be found in the following member reports:

TR160 – Short Code ID – Error Report	▪ Short Code errors of the upload file ▪ Warnings ○ Non-uniqueness: error type 25 - "ClientLongValue already registered" ○ Non-consistency: error type 32 - "ClientLongValue was modified"
TR161 – Short Code ID – Valid Registrations Report	▪ Valid Short Code registrations (incl. all details)
TR167 – Short Code ID – Non-uniqueness Report	▪ Long Codes with at least two or more Short Code registrations valid on the reporting day
TR168 – Short Code ID – Non-consistency Report	▪ Long Codes, which were modified on the reporting day

3.3.3 Deletion

Deletions of Short Codes are allowed if the contractual relationship between the Trading Participant and the legal or natural person ceases to exist. Hence, this Short Code registration is no longer in use. These Short Codes can be re-used after the Short Code registration was successfully deleted. The deletion terminates the Short Code registration, which will be reported in the "TR161 Short Code ID – Valid Registrations Report" in field "ValidToDate".

Deletions of Short Codes must be submitted with Status Indicator "D – deletion" and with "ValidFromDate" = t+1, where t is the date of upload and t+1 must be the next trading day[22]. For instance, a deletion record for a Short Code with a "ValidFromDate" = 2024-11-19 sent to the trading venue before 23:30 CE(S)T on the 18 November 2024. "TR161 Short Code ID – Valid Registrations Report" documents this deletion with a "ValidToDate" of 18 November 2024 as the deletion is effective on the given "ValidFromDate" = 2024-11-19. Another registration record for that Short Code with another Long Code can be processed with a "ValidFromDate" = 2024-11-19. Please note that the Short Code and Long Code of the deletion record must be

[21] Please refer to footnote 19
[22] Please refer to footnote 19

the same as those of the registration. Moreover, deletions submitted with t-1 or t are rejected with error code 27 “Retroactive or intraday changes are not permitted”.

The reports “TR160 – Short Code ID – Error Report” and “TR161 – Short Code ID – Valid Registrations Report” of a reporting day are generated three times intraday (10:00, 14:00, 18:00 CE(S)T) and with the overnight batch. For erroneous uploads, Trading Participants can take immediate action and ensure that the data is successfully accepted. In case of an upload error for a record, the Trading Participant can submit an updated data record until the correct Short Code deletion is processed successfully. For these cases, i.e. numerous submissions for one Short Code on a trading day, each record is processed and documented in the respective “TR160 – Short Code ID – Error Report” or “TR161 – Short Code ID – Valid Registrations Report”. Once the deletion was submitted and validated successfully no further action can be taken for that Short Code intraday, i.e. the deletion will be effective with the next trading day and cannot be overwritten. However, a new registration of this Short Code can be sent with a “ValidFrom” of t+1.

The submission for deletion attempts can be found in the following member reports:

TR160 – Short Code ID – Error Report	▪ Short Codes submitted in orders / quotes / TES / Enlight with no registration (error 1 – ShortCodeID registration is missing) ▪ Short Code errors of the upload file
TR161 – Short Code ID – Valid Registrations Report	▪ Valid Short Code registrations (incl. all details)

3.3.4 Ongoing corrections

3.3.4.1 Correction of missing errors (TR160 report)

Where a Short Code was used for the first time, it is permitted to register that Short Code on the day of usage or latest by 23:30 CE(S)T the following trading day (please refer for further details to chapter 3.3.1). If the Short Code was not registered on the day of usage, an error record (error code 1 – ShortCodeID registration is missing) was provided to the Trading Participant in the “TR160 – Short Code ID – Error Report” in the intraday and the end of day batch report(s) if not corrected by the end of the trading day. For the correction of the missing registration on the following trading day, it is necessary to set the “ValidFromDate” to the previous trading (t-1) day. Please note that the “ValidFromDate” must always be a trading day[23].

For instance, a Trading Participant uses Short Code “123”, which was not registered (e.g. a new client of the Trading Participant or a client of the Trading Participant, which has not traded on FWB or Eurex Deutschland before) on trading day 18 November 2024 at 4 PM CE(S)T. The TR160 intraday report (generation time 6 PM CE(S)T) is provided to the Trading Participant and contains a “missing” error (error code 1 – ShortCodeID registration is missing) for that Short Code. If no correction was conducted by the end of the trading day, the TR160 end of day report for the 18 November 2024 contains this “missing” error (error code 1 – ShortCodeID registration is missing) for Short Code “123”. The Trading Participant must correct that missing Short Code by registering it with the trading venue latest by 23:30 CE(S)T on 19 November 2024 as this is the following trading day after the order submission. The record in the upload file must have the “ValidFromDate” field set to “2024-11-18” to correct the missing registration of day 18 November 2024. Please note that per ESMA definition[24] 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. The Short Code must be submitted with Status Indicator “N – new registration”.
If this Short Code was not registered in time, it will be subject to potential sanction proceedings (for more information please refer to chapter 3.3.1 and chapter 3.3.6).

[23] Please refer to footnote 19

[24] ESMA Guidelines (ESMA/2016/1452) chapters 6.2 and exchange rules for the Frankfurter Wertpapierbörse (FWB) § 114; Exchange rules of Eurex Deutschland § 68

The error 1 missings and potential related corrections can be found in the following member reports:

TR160 – Short Code ID – Error Report	▪ Short Codes submitted in orders / quotes / TES / Enlight with no registration (error 1 – ShortCodeID registration is missing) ▪ Short Code errors of the upload file
TR161 – Short Code ID – Valid Registrations Report	▪ Valid Short Code registrations (incl. all details)

3.3.4.2 Correction of final missing errors (TR166 and TR169 reports)

If a Short Code registration was not provided within the deadline, i.e. until the end of business of the consecutive trading day following the order submission (please refer to chapter 3.3.1 and 3.3.4.1), the Short Code is identified as a "final missing" and provided to the Trading Participant in the "TR166 – Short Code ID – Final Missing Report". This report is generated after the deadline of T+1 eob passed, i.e. on t+2. For instance, on trading day Monday (t) the Trading Participant incurred 10 missing Short Codes and did not correct them by Tuesday (t+1). The TR166 report, identifying the 10 final missings, is generated with the overnight batch and provided to the Trading Participant on Wednesday (t+2).

The "TR166 – Short Code ID – Final Missing Report" serves as basis for potential sanctioning proceedings as the Trading Participant's data delivery obligation according to the exchange rules of the FWB § 114 (respectively Exchange rules of Eurex Deutschland § 68) was violated.

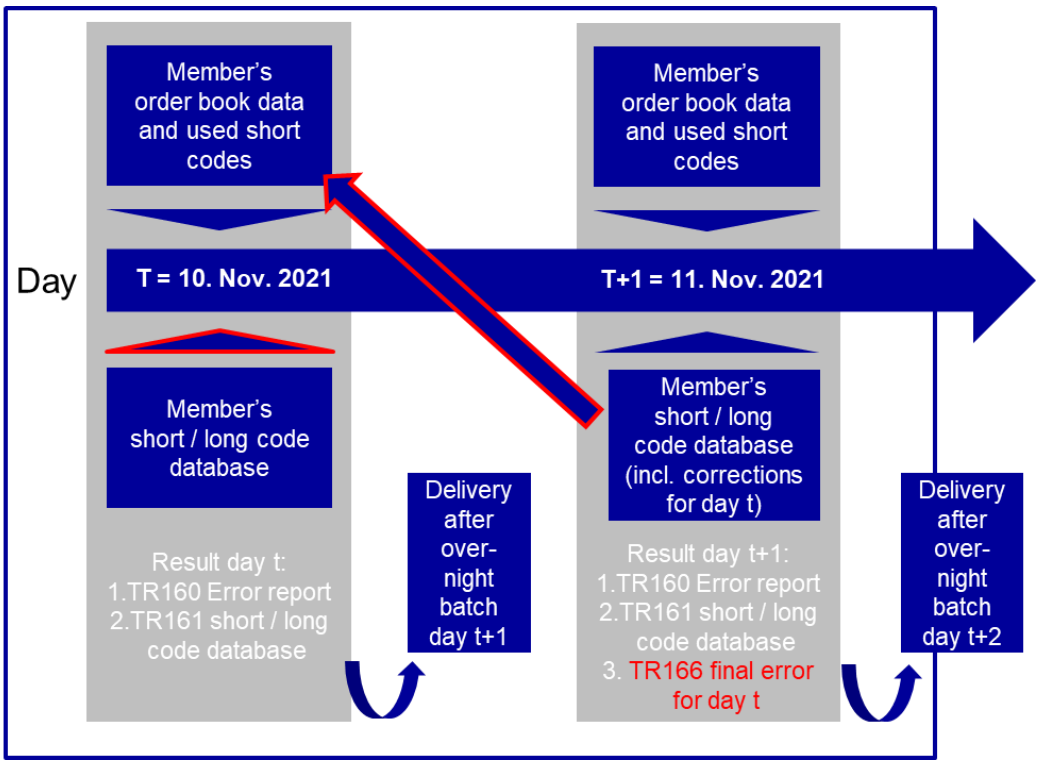

Figure 1: "TR166 – Short Code ID – Final Missing Report" processing

However, starting with T7 Release 13.0 on the 18 November 2024, a new report "TR169 – Short Code ID – Correction Report" will be introduced in order to provide a summary of all incurred final missings (identified in the daily TR166) since that date. Trading Participants are required to submit the Short Code registrations for the final missings in due course to comply with the ESMA requirements and the exchange rules of the trading venues.

The report covers two sections, all final missings incurred since 18 November 2024 and, if provided by the Trading Participant, successful corrections submitted on the reporting day.
For example, a Trading Participant uses Short Code "123", which was not yet registered on trading day 18 November 2024. The "TR160 – Short Code ID – Error Report" eod report is provided to the Trading Participant on t+1 and contains a "missing" error (error code 1 – ShortCodeID registration is missing) for that Short Code. There was no correction conducted by the end of the following trading day and the Trading Participant was provided with the identification of the final missing in "TR166 – Short Code ID – Final Missing Report" on t+2. The final missing Short Code "123" of trading day 18 November 2024 is added to the first section of the new report "TR169 – Short Code ID – Correction Report". Trading Participants shall correct that final missing in due course, i.e. create a data record in the upload file with a "C – Correction" in the field "Status Indicator" and put in the "ValidFromDate" and the "ValidToDate" as provided in the "TR169 – Short Code ID – Correction Report". If the final missing gap, i.e. the dates were not met the error message "3 - Correction not feasible, wrong time data" is provided. For corrections the dates must exactly match the provided dates of the report and must be older than or equal to t-2. For final missing Short Codes which shall also be valid on t-1, t, t+1 and future dates, another upload record shall be submitted with "N – new registration" in field "StatusIndicator". However, once the Trading Participant corrected that Short Code, the upload record is covered in section two of the report of the upload, i.e. the trading day and removed from the first section.

The final missings can be found in the following member reports:

TR166 – Short Code ID – Final Missing Report	▪ Short Codes submitted in orders / quotes / TES / Enlight with no registration by t+1 eob
TR169 – Short Code ID – Correction Report	▪ Short Code final missings, which must be corrected by the Trading Participant and pot. submitted correction records by the Trading Participant on the reporting day

3.3.4.3 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 Trading Participant is still required to comply with both the data provision and uniqueness requirements.

The Trading Participant should therefore:

- Upload the correct Short Code combination 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 – Short Code ID – Error Report"). This ensures that the affected Short Code is registered with a Long Code with the trading venue and no final missing is detected.
- Send a deletion for the affected Short Code combination (i.e. delete the registration containing the mistyped Short Code). Please note that the deletion record can be submitted following the registration with a "ValidFromDate" = t+1. Hence, the registration's deletion is effective on the upload day 23.59.99 CE(S)T. Please note that the "ValidFromDate" must always be a trading day[25].

The registration 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.
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.

[25] Please refer to footnote 19

The submission for registrations or attempts can be found in the following member reports:

TR160 – Short Code ID – Error Report	▪ Short Codes submitted in orders / quotes / TES / Enlight with no registration (error 1 – ShortCodeID registration is missing) ▪ Short Code errors of the upload file
TR161 – Short Code ID – Valid Registrations Report	▪ Valid Short Code registrations (incl. all details) and related terminations/deletions
TR167 – Short Code ID – Non-uniqueness Report	▪ Long Codes with at least two or more Short Code registrations valid on the reporting day

3.3.5 Historical corrections

A historical corrections exercise is necessary for Short Codes, which were used in trading in the past and which have not been delivered to the trading venues and for Short Codes registered in the past, which have an incorrect Long Code assigned. The correction scope is determined by the regulation. MiFIR Art. 25 (2) stipulates that "The operator of a trading venue shall keep at the disposal of the competent authority, for at least five years, the relevant data relating to all orders in financial instruments which are advertised through their systems". Hence, the last five years must be corrected.

The historical correction is a one-time exercise for affected Trading Participants. The correction exercise is planned for the timeframe of 3 February 2025 until 30 January 2026, i.e. latest by end of January 2026 the corrections shall be submitted completely.

The corrections scope subject is:

- Short Codes used in trading, which were not submitted with a valid Long Code to the trading venues between 3 February 2020 and 15 November 2024.
- Registered Short Codes, which have an incorrect Long Code assigned between 3 February and 15 November 2024.

The trading venues introduced two new reports in order to provide Trading Participants with their individual correction scope. The "TR170 – Short Code ID – Historical Correction Report" will cover the missing Short Code registrations. Trading Participants can take over the records of the report into an upload file and complete the data records with the necessary data. The "ValidFromDate" and "ValidToDate" will be prefilled. It is strongly recommended to take these over. The data must be submitted with Status Indicator "C – correction" in the regular upload file and the regular Common Upload Engine (CUE) service (EXTREFD**A**) or the Short Code and Algo ID upload GUI respectively.

The "TR171 – Short Code ID – Historical Long Code Correction Report" will cover the Short Code registrations with an incorrect Long Code assigned. A Long Code is considered incorrect if the provided data of classification rule or country or priority does not match with the provided Long Code. For instance, a Short Code record was provided with the country "DE" and priority "1" for which ESMA defined the Long Code being a CONCAT. However, the registered Long Code does not conform to the CONCAT definition, e.g. is a passport number. Trading Participants can take over the records of the report into an upload file and complete the data records with the necessary data. The "ValidFromDate" and "ValidToDate" will be prefilled. It is strongly recommended to take these over. The data must be submitted with Status Indicator "C – correction" in the regular upload file.

However, there is a new additional CUE upload service (EXTREFD**H**) or the Short Code and Algo ID upload GUI respectively. Please refer to chapter 3.4.2.4 for more information. The new report "TR169 – Short Code ID – Correction Report" will contain the by the Trading Participant provided successful corrections submitted on the reporting day and erroneous correction attempts will be provided in the "TR160 – Short Code ID – Error Report".

The reports will be generated with the individual correction scope of the Trading Participants and provided to the Common Report Engine (CRE) on the 3 February 2025. The reports will be available for 10 business days. Trading Participants are required to retrieve these in time. Daily processing of historical corrections will be started in Production on the 1 April 2025.

The correction scope can be found in the following member reports:

TR160 – Short Code ID – Error Report	▪ Short Code correction errors of the upload file
TR169 – Short Code ID – Correction Report	▪ Short Code final missings, which must be corrected by the Trading Participant and pot. submitted correction records by the Trading Participant on the reporting day~~Corrections of incorrect Long Codes submitted by the Trading Participant on the reporting day.~~
TR170 – Short Code ID – Historical Correction Report	▪ Short Codes submitted in orders / quotes / TES / Enlight between 3 February 2020 and 15 November 2024 with no registration by t+1 eob.
TR171 – Short Code ID – Historical Long Code Correction Report	▪ Short Code registrations valid between 3 February 2020 and 15 November 2024, which have an incorrect Long Code assigned.

Dedicated documentation will be published in due course.

3.3.6 Monitoring and sanctioning

Final missing Short Code registrations, the breach of uniqueness and the breach of consistency are considered violations of the exchange rules for Short Codes (please refer to the FWB exchange rules § 114, respectively Eurex exchange rules § 68).

Final Missing Short Codes

Short Codes used in trading for the first time must be registered with the corresponding Long Code latest by the end of the trading day following the trading day of the order submission. Short Codes, which are not provided by the deadline are considered “final missing” and a violation of the registration obligation. They are monitored and are subject to potential sanction proceedings.
Please find the registration requirements and correction requirements in chapter 3.3.1 and 3.3.4.

The data is provided to the Trading Participant in the “TR166 – Short Code ID – Final Missing Report” and ““TR169 – Short Code ID – Correction Report”, which serve as basis for potential sanctioning.

Uniqueness violation

One Short Code must be assigned uniquely to a Long Code, i.e. the assignment of more than one Short Code to a Long Code is not permitted. The Short Code registration(s) that violate the uniqueness requirement are reported to the Trading Participant in “TR160 – Short Code ID – Error Report” with error code 25 (ClientLongValue already registered) on the upload date. Please refer to the exemption to this rule in chapter 3.3.1. and 3.3.4. Uniqueness violations are monitored and are subject to potential sanction proceedings.

The data is provided to the Trading Participant in the “TR167 – Short Code ID – Non-Uniqueness Report”, which serves as basis for potential sanctioning.

Consistency violation
Short Code registrations must remain stable/unchanged over time, i.e., the use of dynamic Short Codes is prohibited. Changes to the registrations may be made only due to legal acts affecting the identified natural or legal person (e.g. legal name change, corporate action resulting in change to LEI, etc.). The Trading Participant is already aware of any changes made to its Short Code registrations, as changes can only be made by the Trading Participant by uploading a "modification" record to the trading venues, which is reported in "TR160 – Short Code ID – Error Report" with error code 32 (ClientLongValue was modified) on the upload date. Trading Participants may be asked to confirm to the trading venue that any changes made were done for permissible reasons. Consistency violations are monitored and are subject to potential sanction proceedings.

The data is provided to the Trading Participant in the "TR168 – Short Code ID – Non-Consistency Report", which serves as basis for potential sanctioning.

3.4 Short Code lifecycle management

Trading Participants shall register and maintain Short Codes using CSV upload files and submit these using the CUE and the Short Code ID and Algo ID upload GUI. Files undergo a preliminary validation on CUE and are provided with potential error messages in due course. Files are transferred to the data warehouse. The data is processed, i.e. validations are applied and the results are provided in the respective T7 XML reports.

3.4.1 Upload file

3.4.1.1 Upload file structure and format

The upload file is a CSV file, i.e. comma separated (not semicolon). The file format must be ASCII / UTF-8 Windows or Linux and ISO-8859. Other UTF-8 encryption formats, most notably UTF-8 BOM, cannot be processed. The file size is limited to 5 megabyte.

ParticipantID	MIC	StatusIndicator	ValidFromDate	ValidToDate	ShortCodeID	ClassificationRule	NationalIDCountryCode	NationalIDPriority	ClientLongValue
GDBXX	XETR	N	2024-11-18		123125	N	AT	1	19900415EMMA#WATSO
GDBXX	XETR	N	2024-11-18		12315	N	ER	2	19860119LUAM#ALEME
GDBXX	XETR	N	2024-11-18		421123	N	IN	1	F7802033
GDBXX	XETR	N	2024-11-18		41235	N	RU	1	755327941
GDBXX	XETR	N	2024-11-18		15612	N	US	2	19900401JOHN#DOE##
GDBXX	XETR	M	2024-11-15		85123	L			5493004PP58SUE3G8M27
GDBXX	XETR	D	2024-11-19		1579	L			5493007NY5KHBJW5HT02
GDBXX	XETR	C	2021-10-12	2021-10-14	4	N	DE	1	19670709MAX##MUSTE
GDBXX	XETR	C	2021-10-19	2021-10-19	1467	N	CZ	3	19830115ELLA#CENLA
GDBXX	XETR	N	2024-11-18		1				AGGR
GDBXX	XETR	N	2024-11-18		2				PNAL
GDBXX	XETR	N	2024-11-18		3				NORE

Figure 2: Example file structure

The header specification shall be met.
An upload file must be provided per MIC, i.e. all data records contained in a file must have the same MIC.

Please note that the Short Codes values are not permitted to have leading zeros, e.g. "00012345" and that the value "0" is no permissible value for Short Codes.[26]

Data record examples of ESMA attributes (please refer to chapter 3.1 for more information):
For the usage of the industry standard Short Codes for the ESMA values "AGGR", "PNAL", "NORE" the following data records must be uploaded:

[26] Please note that the upload of a Short Code value "0" is permitted for historical corrections, i.e. Status Indicator "C". Please refer to chapter 3.3.5 for further details.

Aggregated
GDBXX,XETR,N,2024-11-18,,1,,,,AGGR

Pending allocation
GDBXX,XETR,N,2024-11-18,,2,,,,PNAL

NORE
GDBXX,XETR,N,2024-11-18,,3,,,,NORE

A sample file is available on the webpages under the following paths:
- FWB: xetra.com > Newsroom > Current regulatory topics > MiFID II and MiFIR > Reference data reporting
- Eurex: eurex.com > Rules & Regs > MiFID II/MiFIR > Client & Member Reference Data

3.4.1.2 Field description

Trading Participant specific fields

1. "ParticipantID"
   The "ParticipantID" is the Trading Participants five-digit memberID.
   Valid values: [A-Z], mandatory length: {5}

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

   - XETR = Xetra
   - XFRA = Börse Frankfurt
   - XEUR = Eurex

Data record specific fields

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

   - N = New registration
   - M = Modification
   - D = Deletion
   - C = Correction

4. "ValidFromDate"
   The "ValidFromDate" provides the date the Short Code 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":
   - N: ValidFromDate may be t-1, t or t+1. To correct an Error Code 1 of the TR160 report, the ValidFromDate must be t-1 (reporting date of the error 1)
   - M: ValidFromDate may be t-1, t or t+1
   - D: ValidFromDate must be t+1, the deletion is effective as of this date
   - C: ValidFromDate must be equal or older than t-2

   The ValidFromDate must be a trading date. If uploaded on a weekend or other non-trading day the next trading date must be added. Trading Participants are encouraged to consult the Trading Calendar of the relevant trading venues in order to ensure that these dates are entered correctly:

   - XETR and XFRA: Xetra > Trading > Trading calendar and trading hours

- XEUR (simu): Eurex > Support > Initiatives & Releases > Simulation calendar
- XEUR (prod): Eurex > Trade > Trading Calendar

5. “ValidToDate”
   The “ValidToDate” provides the end date until the Short Code 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”:
   - N: not required, to be left EMPTY
   - M: not required, to be left EMPTY
   - D: not required, to be left EMPTY
   - C: ValidToDate must be equal to or older than trading date t-2

6. “ShortCodeID”
   The Short Code ID holds the numerical value of a Short Code.
   Valid values: [0-9], minimum and maximum length: {1,20}
   The value “0” is no permissible value and leading zeros are not permitted.

7. “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. This field must be left EMPTY for the registration of the ESMA values “AGGR”, “PNAL”, “NORE”.
   Valid values: [L, N], length: {0,1}

   - L = Legal person
   - N = Natural person

8. “NationalIDCountryCode”[27]
   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 "ClassificationRule" contains an "N" for natural person. If field "ClassificationRule" holds an “L” for a legal person, or for the registration of the ESMA values “AGGR”, “PNAL”, “NORE”, this field must be EMPTY.

9. “NationalIDPriority”[28]
   The national ID priority provides the one-digit priority per country code.
   Valid values: [1, 2, 3], length: {0,1}.
   This field is only applicable if field "ClassificationRule" holds an "N" for natural person. If field "ClassificationRule" holds an L for a legal person, or for the registration of the ESMA values “AGGR”, “PNAL”, “NORE”, this field must be EMPTY.

10. “ClientLongValue”[29]
    The “ClientLongValue” holds the Long Code.
    Valid values: [0-9, A-Z, a-z, +, -, #], minimum and maximum length: {4,35}.
    The Long Code can be a NationalID, a LEI or the ESMA values "AGGR", "PNAL" and "NORE".

[27] Please refer to chapters 3.1 and 7 for more information
[28] See footnote 27
[29] See footnote 27

3.4.2 Upload functionalities

The Common Upload Engine (CUE) is a service which is provided as a SSH File Transfer Protocol (SFTP) server and allows Trading Participants the upload of Short Code and Algo ID data to dedicated services. Trading Participants can automate the upload of data files via SFTP. The Short Code ID and Algo ID upload GUI is offered in addition and is a browser-based GUI. The GUI allows the upload and submission of the data, which is then transferred to the CUE in order to use the pre-validation tool and provide streamlined feedback at the time of the upload.

3.4.2.1 Common Upload Engine (CUE)

Technical set-up

The technical connection to the CUE must 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 for the technical connection to the CUE and CRE.

Please find the "Common Report & Upload Engine User Guide" under the following paths:
- FWB: xetra.com > Technology > T7 trading architecture > System documentation > Release XY[30] > Reports
- Eurex: eurex.com > Support > Initiatives & Releases > T7 Release XY[31] > Reports

Upload processing

Trading Participants shall access CUE and the "mifid" folder. The files shall be uploaded into the "upload" folder. Once processed, CUE sets up a "trading date" folder and adds the response.

- CUE > participantID > P > mifid > upload

Trading Participants shall upload their CSV file(s) per participantID and MIC combination between 00:00 and 23:30 CE(S)T on trading days. Uploads on non-trading days are also feasible. However, the date in the file name must be upload calendar day. The file(s) are transferred to the data warehouse and processed with the next report generation.

The upload file is limited to 5 MB and 25,000 data rows. The approx. validation time for files with 25,000 rows is 8 minutes. It is strongly recommended to upload files with a smaller size.

Upload file naming convention

The naming convention must be applied. It follows the chronological sequence environmentID, service name, participantID, upload date, MIC, file type. The file name must be in capital letters completely and the date in the file name must be the current upload date.

Example:
"88EXTREFDAGDBXX20241118XETR.CSV"

CUE adds the timestamp and also applies versioning if more than one file is uploaded per ~~second~~day, e.g. "88EXTREFDAGDBXX20241118**155256**XETR-**V01**.CSV"

CUE upload file naming convention

Field	Length	Meaning	Remark
[88, 89]	{2}	Environment ID	88 for Prod 89 for Simu
[EXTREFDA]	{8}	Service name	EXTREFDA
[A-Z]	{5}	Participant ID	GDBXX

[30] Please refer to the latest T7 release
[31] See footnote above

[0-9]	{8}	Calendar Date	YYYYMMDD
[XEUR, XETR, XFRA]	{4}	MIC	XEUR, XETR, XFRA
[.CSV]	{4}	File type	.CSV

CUE validation tool
CUE applies validations on file type, structure, and the data records with respect to syntax and ESMA requirements and provides immediate feedback.

Please refer to the "CUE validation and file specification Short Code ID and Algo ID" under the following paths:
- FWB: xetra.com > Newsroom > Current regulatory topics > MiFID II and MiFIR > Reference data reporting
- Eurex: eurex.com > Rules & Regs > MiFID II/MiFIR > Client & Member Reference Data

Validation results
A file which is uploaded and in validation is named e.g.
"88EXTREFDAGDBXX20241118155256XETR.CSV_PROCESSING"

A file which passed the CUE validation without negative results of the records and was transferred to the data warehouse for further validation and processing is named e.g.
"88EXTREFDAGDBXX20241118155256XETR.CSV_UPLOAD_SUCCESSFUL"

A file which passed the CUE validation with negative results of the records and was transferred to the data warehouse for further validation and processing is named e.g.
"88EXTREFDAGDBXX20241118155256XETR.CSV_UPLOAD_SUCCESSFUL_WITH_ERRORS"

The file is provided with a log file, e.g. "88EXTREFDAGDBXX20241118155256XETR.LOG" to the "trading date" folder. The log file provides Trading Participants with the information about the row, the erroneous value submitted and the permitted values and field length.

Trading Participants can download the log file and can correct the upload file considering the reported errors or wait for the next report generation and the final validation results in the data warehouse as the CUE validation is an initial validation providing feedback at the time of the upload. Comprehensive validations are applied in the data warehouse, including orderbook data and the database. The final validation results are documented in the "TR160 – Short Code ID – Error Report" and the "TR161 – Short Code ID – Valid Registrations Report" and are provided to the Trading Participants in the CRE's respective market folders (XEUR, XETR, XFRA) and in the Short Code ID and Algo ID upload GUI.

However, files can be rejected on CUE for certain reasons with respect to naming convention and structure:

CUE file reject error messages

Reject reason	**Error message**
Incorrect service name or environment in file name	88**ABC**REFDAGDBXX20241118155256XETR.CSV_SERVICE_NOT_FOUND
Incorrect participantID in file name	88EXTREFDA**GDB**20241118155256XETR.CSV_MEMBERID_FAILED
Incorrect date in file name	88EXTREFDAGDBXX20**18**1118XETR.CSV_WRONG_UPLOAD_DATE[32]
Incorrect MIC in file name	88EXTREFDAGDBXX20241118X155256**ABCD**.CSV_XMIC_NOT_FOUND
Incorrect file suffix	88EXTREFDAGDBXX20241118155256XETR.**cs**_WRONG_FILE_SUFFIX
Incorrect file type	88EXTREFDAGDBXX20241118155256XETR.**PDF**_WRONG_FILE_TYPE

[32] Please note that this error message does not contain a timestamp.

Incorrect number of commas, empty file	88EXTREFDAGDBXX20241118155256XETR.CSV_PARSING_FAILED
File upload failed	88EXTREFDAGDBXX20241118155256XETR.CSV_UPLOAD_FAILED

File upload cut-off time and service availability
For Short Code uploads the trading day's cut-off time is 23:30 CE(S)T. Files uploaded by then are processed in the overnight batch. The upload functionality is disabled between 23:30 and 00:00 CE(S)T. 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 with the same date in the file name, the related error message is e.g.
88EXTREFDAGDBXX20241118~~155256~~XETR.CSV_WRONG_UPLOAD_DATE

The file name must be changed to the current upload calendar date and uploaded again.

Retrieval of the reports
Please note that the CUE validation is an initial validation and the complete validations against format, structure, orderbook data, the database and regulatory requirements are performed in the data warehouse. The final results of errors and successful submissions are provided to the Trading Participant in the reports "TR160 – Short Code ID – Error Report" and "TR161 – Shot Code ID – Valid registrations Report" in the CRE's respective market folders (XEUR, XETR, XFRA) and in the Short Code ID and Algo ID upload GUI.

3.4.2.2 Short Code ID and Algo ID upload GUI

In addition to the CUE, a web-based upload GUI is offered. In the GUI either files can be submitted directly, or manual entries can be made via eForm of which the GUI creates files automatically. The GUI forwards all files to the CUE in order to use the CUE pre-validation tool. The CUE feedback is transferred back to the GUI.

The Short Code and Algo ID upload GUI will provide the T7 XML Member Reports TR160-171 for download purposes.

Please find a short summary of the process in the subchapters below and a dedicated "User Guide for Short Code ID and Algo ID Upload GUI" document under the following paths:

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

Technical set-up
In order to use the GUI, there are two pre-requisites to fulfil. Firstly, the Trading Participant must have an active Member Section account and the respective user rights. Secondly, the trading participant must have a CUE technical user set up. Please refer to chapter 3.4.2.1 for the CUE set-up and to the "User Guide for Short Code ID and Algo ID Upload GUI" document for the member section set-up.

Upload processing
The GUI can be accessed in the Member Section under the following path or using the link:
- membersection.deutsche-boerse.com > Company Administration > Short Code ID / Algo ID Upload GUI
- https://e-listing.deutsche-boerse.com/e-listing/ext?sclc

Trading Participants shall upload their CSV file(s) per participantID and MIC combination between 00:00 and 23:30 CE(S)T on trading days. Uploads on non-trading days are also feasible. The date in the file name must be upload calendar day, which the GUI automatically applies to the file name. The file(s) are transferred to the CUE and then to the data warehouse and processed with the next report generation.

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 strongly recommend uploading files with a smaller size.

Provision of the upload file to the trading venues and naming convention
The file can be uploaded in section "Upload Short Code ID" or via eForm. Trading Participants shall select environment, MIC and participantID. The GUI will automatically rename the file to the applicable naming convention based on the selected items. For information on the upload file naming convention please refer to chapter 3.4.2.1.

File transfer to CUE for pre-validation
The GUI will transfer the upload file to CUE for pre-validation. The CUE feedback is displayed in the GUI and, in case of a file reject, the error file (i.e. the CUE log file) is available for download in the GUI. Please find more information on the CUE processing in chapter 3.4.2.1.

Please note that the CUE validation is an initial validation. The complete validations and also validations against orderbook data and the database are performed in the intraday report generation runs, which start 10:00, 14:00, 18:00 CE(S)T and the overnight batch in the data warehouse. The final validation results are documented in the "TR160 – Short Code ID – Error Report" and the "TR161 – Short Code ID – Valid Registrations Report" and are provided to the Trading Participants in the CRE's respective market folders (XEUR, XETR, XFRA) and in the Short Code ID and Algo ID upload GUI.
For information on the applied CUE validations to chapter 3.4.2.1.

File upload cut-off time and service availability
For Short Code uploads, the trading day's cut-off time is 23:30 CE(S)T. Files uploaded by then are processed in the overnight batch. The upload functionality is disabled between 23:30 and 00:00 CE(S)T.

3.4.2.3 Contact
For technical support please contact the Customer Technical Support (CTS), which is available 24/5, from Monday 00:00 to Friday 22:00 CE(S)T:
- Technical Key Account Manager (TKAM) via dedicated phone number
- CTS via hotline +49 69 211 10 888 or by email at cts@deutsche-boerse.com

For functional support please contact the Regulatory Reporting Analysts, which are available from Monday to Friday between 09:00 and 18:00 CE(S)T:
- Regulatory Reporting Analyst via hotline +49 69 211 28991 or by email at client.services@deutsche-boerse.com

3.4.2.4 Upload of historical corrections
As stated in chapter 3.3.5, there are two types of historical corrections.
The corrections scope subject is:
- Short Codes used in trading, which were not submitted with a valid Long Code to the trading venues between 3 February 2020 and 15 November 2024.
- Registered Short Codes of the past, which have an incorrect Long Code assigned between 3 February 2020 and 15 November 2024.

For the upload of missing Short Code registrations, Trading Participants must use the regular upload file and submit these records with Status Indicator "C – correction" via the regular CUE service (EXTREFDA) or in the Short Code ID and Algo ID upload GUI.

For the upload of registered Short Codes of the past, which have an incorrect Long Code, Trading Participants must use the regular upload file and submit these records with Status Indicator "C – correction". However, there is a new CUE service (EXTREFD**H**) to be used for that matter or in the Short Code ID and Algo ID upload GUI. Please find the naming convention of the files for new service below.

Historical upload of Short Codes with an incorrect Long Code // Upload file naming convention
The naming convention must be applied. It follows the chronological sequence environmentID, service name, participantID, upload date, MIC, file type. The file name must be in capital letters completely and the date in the file name must be the current upload date.

Example:
"88EXTREFD**H**GDBXX20241118XETR.CSV"

CUE adds the timestamp and also applies versioning if more than one file is uploaded per day, e.g.
"88EXTREFD**H**GDBXX20241118**155256**XETR-**V01**.CSV"

CUE upload file naming convention

Field	**Length**	**Meaning**	**Remark**
[88, 89]	{2}	Environment ID	88 for Prod 89 for Simu
[EXTREFD**H**]	{8}	Service name	EXTREFD**H** (Historical Corrections of Short Codes with an incorrect Long Code)
[A-Z]	{5}	Participant ID	GDBXX
[0-9]	{8}	Trading Date	YYYYMMDD
[XEUR, XETR, XFRA]	{4}	MIC	XEUR, XETR, XFRA
[.CSV]	{4}	File type	.CSV

3.4.3 Data warehouse processing and validations

Data submissions via Short Code ID and Algo ID upload GUI and CUE are transferred to the data warehouse. Files submitted after the cut-off time 23.30 CE(S)T are stored and will be processed subsequently starting at 6.00 CE(S)T on the next trading day. The data is processed according to the First-In-First-Out (FIFO) principle and the feedback about the validation results is provided back in the Reports "TR160 – Short Code ID – Error Report" and the "TR161 – Short Code ID – Valid Registrations Report" and are available on CRE and in the Short Code and Algo ID upload GUI. There are three intraday report generation runs at 10:00, 14:00 and 18:00 CE(S)T and the end of day batch. Please note that the intraday report generation begins at the specified times and only data received up to those times is processed. In the event of technical issues, such as processing delays, the reports may not display all received data (trading data, upload files) up to that point in time. Throughout the day, the next intraday report will capture any available data i.e. since processing start of that trading day. However, the end of day reports process all trading data and trading participant uploads until the cut-off time 23.30 CE(S)T and hence are the legally binding reports for the trading day.

The intraday reports contain data of the actual trading day, such as uploads conducted on that trading day and any missing registrations detected. That means short codes used in trading on that actual trading day, but not registered at the time of the intraday report generation.

Intraday processed records are documented by the time of reception, i.e. processing according to the FIFO principle. For erroneous uploads, Trading Participants can take immediate action and ensure that the data is successfully accepted to fulfil the data submission obligation within the deadline. In case of an upload error for a record, the Trading Participant can submit an updated data record until the correct Short Code registration or modification is processed successfully. For these cases, i.e. numerous submissions for one Short Code on a trading day, each record is processed and documented in the respective "TR160 – Short Code ID – Error Report" and the "TR161 – Short Code ID – Valid Registrations Report". In intraday reports the legally binding mark is prevailing. During the end of day batch, the on the trading day last received and successfully validated Short Code

is legally binding for that trading day and marked as such. In case no modification of a Short Code registration was successfully submitted, the prevailing combination is legally binding for that trading day.

For intraday submissions, the general principle holds that the initial registration of a Short Code must be submitted with "Status Indicator = N – new registration" and subsequent submissions for that Short Code must be submitted with "Status Indicator = M – modification".

For correction submissions with "Status Indicator = C – correction" the processing differs. Submissions with upload errors, i.e. which are rejected, can be conducted again until the correction was successful. However, once a submission was successfully accepted it cannot be overwritten with another "Status Indicator = C – correction". Upload attempts for accepted correction submissions will be technically rejected.

In the overnight batch, in addition to the final "TR160 – Short Code ID – Error Report" and the "TR161 – Short Code ID – Valid Registrations Report" (which contains the legally binding Short Codes for the trading day), the reports "TR166 – Short Code ID – Final Missing Report", "TR169 – Short Code ID – Correction Report", "TR167 – Short Code ID – Non-uniqueness Report" and the "TR168 – Short Code ID – Non-consistency Report" are provided. The latter are only provided on a daily basis, because they contain the results for the entire trading day. For further information, please refer to chapter 3.3.

Validations are applied on format, syntax (see chapter 3.4.1) and regulatory requirements. The fields are validated according to the valid values and length, the database and the orderbook data.

3.4.3.1 Validation of orderbook data (incl. TES and Xetra and Eurex Enlight)

The Short Codes used in trading are checked against the valid registrations of the Trading Participant ("TR161 – Short Code ID – Valid Registrations Report"). In case a Short Code does not have a valid registration, it is considered missing and reported with error code 1 "ShortCodeID registration is missing" in the "TR160 – Short Code ID – Error Report". Please refer to chapter 3.3 for the Short Code management and data requirements.

3.4.3.2 Validations against the database

In upload files submitted Short Codes with Status Indicator "N – new registration" are checked if the Short Code is already registered. If not, the validation of the record continues. If there is a valid registration of that Short Code already in the database, the record is rejected with error code 2 "Registration rejected, ShortCodeID already registered" in the "TR160 – Short Code ID – Error Report".

In upload files submitted Short Codes with Status Indicator "M – modification" are checked if the Short Code is already registered. If the Short Code is registered, the validation of the record continues. If there is no valid registration of that Short Code in the database, the record is rejected with error code 30 "Modification rejected, Short Code not registered in database" in the "TR160 – Short Code ID – Error Report".

If the same modification record is sent multiple times on a trading day or if a modification record would not change the existing registration, then the record(s) are rejected with error code 5 "Duplicate record submitted".

If a modification record would change the classification rule, i.e. the Long Code from a LEI to a NationalID et v.v., this record is rejected with error code 29 "Changing classification rule is not permitted".

In upload files submitted Short Codes, which are a new registration of a Short Code with an already registered Long Code or, which modify a Long Code of an existing registration to a Long Code already registered with another Short Code (non-uniqueness), are reported as a warning with error code 25 "Client long value already registered". Short Code modifications (non-consistency) are reported as a warning with the error code 32 "Client long value changed" in the "TR160 – Short Code ID – Error Report". Warnings serve informational matters only and the registrations and modifications are accepted by the system. However, the warnings support Trading Participants with the identification and overview of Short Code uniqueness and consistency requirements.

In upload files submitted Short Codes with Status Indicator "D – deletion" are checked if the Short Code is registered, which shall be deleted. If the Short Code is registered, the validation of the record continues. If there is no valid registration of that Short Code in the database, the record is rejected with error code 26 "No existing Short Code registration to delete". If the Long Code of the deletion record is not the same as the Long Code of the registration, then the record is rejected with error 17 "Invalid value in field Client long value" in the "TR160 – Short Code ID – Error Report".

Please refer to chapter 3.3 for the Short Code management and data requirements.

3.4.3.3 Validations of the Long Code

Natural persons are identified with NationalIDs according to the ESMA requirements (please see chapter 3.1 and 7). Hence, the Long Code is validated according to the country code and priority and related ESMA requirements of the field length and permitted values. If the requirements are not met, the error code 17 "Invalid value in field Client long value" is reported in "TR160 – Short Code ID – Error Report".

Legal persons are identified with the LEI according to ESMA requirements (please see chapter 3.1 and 7). The corresponding LEI validations are applied on length, GLEIF database entries and related GLEIF registration status.

Please note that the intraday report validations are based on the GLEIF golden copy file of 02.00 UTC of a trading day. For the end of day batch, the GLEIF golden copy file of 18.00 UTC is used in order to ensure that the most recent GLEIF data is considered.

In a first step, the LEI is checked against the permitted length of 20 digits alphanumeric. Followed by the validation of the LEI with the GLEIF.ORG database. If the LEI exists, the LEI registration status is checked. Please find the registration status values[33] and related results of the validation below.

LEI registration status and validation result

Registration status	Description	Result
PENDING_VALIDATION	An application for a LEI that has been submitted and which is being processed and validated.	Reject
ISSUED	A 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	A 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	A LEI registration that has not been renewed by the NextRenewalDate and is not known by public sources to have ceased operation.	Registration successful
MERGED	A 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	A LEI registration for an entity that has ceased operation, without having been merged into another entity.	Reject

[33] https://www.esma.europa.eu/sites/default/files/library/esma65-8-2594_annex_1_mifir_transaction_reporting_validation_rules.xlsx

ANNULLED	A LEI registration that was marked as erroneous or in valid after it was issued.	Reject
CANCELLED	A LEI registration that was abandoned prior to issuance of a LEI.	Reject
TRANSFERRED	A LEI registration that has been transferred to a different LOU as the managing LOU.	Reject
PENDING_TRANSFER	A LEI registration that has been requested to be transferred to another LOU. The request is being processed at the sending LOU.	Registration successful
PENDING_ARCHIVAL	A 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

If the conditions are not met, the record is rejected with error code 18 “Invalid LEI format for Client long value” and reported in “TR160 – Short Code ID – Error Report”.

The validations of format, syntax, permitted values and field length are also reported in the “TR160 – Short Code ID – Error Report”. An overview about all errors and the validation results are listed below.

Error code description and validation result

Error code	Explanation	Result
Error code 1	ShortCodeID registration is missing.	WARNING
Error code 2	Registration rejected, ShortCodeID already registered.	REJECT
Error code 3	Correction not feasible, wrong time data.	REJECT
Error code 4	Invalid value in field ValidToDate.	REJECT
Error code 5	Modification rejected, duplicate record submitted.	REJECT
Error code 6	Invalid value in field ShortCodeID.	REJECT
Error code 10	Invalid value in field ParticipantID.	REJECT
Error code 11	Invalid value in field MIC.	REJECT
Error code 12	Invalid value in field StatusIndicator.	REJECT
Error code 13	Invalid value in field ValidFromDate.	REJECT
Error code 14	Invalid value in field ClassificationRule.	REJECT
Error code 15	Invalid value in field NationalIDCountryCode.	REJECT
Error code 16	Invalid value in field NationalIDPriority.	REJECT
Error code 17	Invalid national identifier value in field ClientLongValue.	REJECT
Error code 18	Invalid LEI value in field ClientLongValue.	REJECT
Error code 25	ClientLongValue already registered.	WARNING
Error code 26	No existing ShortCodeID registration to delete.	REJECT
Error Code 27	Retroactive or intraday changes are not permitted.	REJECT

Error Code 28	Uploads with a future ValidFromDate must be set to the next trading day (t+1).	REJECT
Error code 29	Changing the ClassificationRule is not permitted.	REJECT
Error code 30	Modification rejected, ShortCodeID not registered.	REJECT
Error code 31	ValidToDate field must be empty for N, M, D.	REJECT
Error code 32	ClientLongValue was modified.	WARNING

Please refer to CRE or the Short Code and Algo ID upload GUI to retrieve the reports.

3.4.4 T7 XML Reports

After processing of the relevant Short Code data, the Trading Participants are provided with the results in the T7 XML reports, which are provided to CRE and the Short Code ID and Algo ID upload GUI. The reports “TR160 – Short Code ID – Error Report” and the “TR161 – Short Code ID – Valid Registrations Report” contain all errors and processed records during the day, e.g. the 18:00 CE(S)T report contains the data of the previous intraday reports.

Please find more information on the report structure in the T7 XML Report Manual and related XSDs under the following path:

- Xetra.com > Technology > T7 trading architecture > System documentation > Release XY [34] > Reports
- Eurex.com > Support > Initiatives & Releases > T7 Release XY[35] > Reports

Report	Report name	Description
TR160	Short Code ID – Error Report	▪ Overview of ShortCodeID errors, which originate from the upload file and trading. ▪ Errors are sorted by ShortCodeID, origin and processing time. ▪ Provision: three times intraday and end of day.
TR161	Short Code ID – Valid Registrations Report	▪ Overview of ShortCodeID registrations. ▪ Registrations are sorted by ShortCodeID and legal status, which is preliminary (intraday) or legally binding for the reporting day (eod) and processing time. ▪ In addition to the legally binding registrations of reporting day "t", those of days "t-1" and "t+1" are provided if applicable. ▪ Provision: three times intraday and end of day.
TR166	Short Code ID – Final Missing Report	▪ Provision of the final missing ShortCodeIDs of reporting day "t" after the deadline "t+1" has passed. ▪ For the identification of final missings, the used and missing ShortCodeIDs of reporting day "t" and corrections of day "t+1" are provided including each single ShortCodeID and count. ▪ The percentage (day and month-to-date) of final missing to used ShortCodeIDs is provided. ▪ Provision: end of day.
TR167	Short Code ID – Non-Uniqueness Report	▪ Overview of non-unique ShortCodeID registrations of the reporting day. ▪ Provision of registered ShortCodeIDs with the respective same Long Code, which is considered non-unique.

[34] Please refer to the latest T7 release

[35] See footnote above

		▪ Provision: end of day.
TR168	Short Code ID – Non-Consistency Report	▪ Overview of unique ShortCodeID registrations modified from the previous day to the reporting day, which is considered non-consistent. ▪ Provision: end of day.
TR169	Short Code ID – Correction Report	▪ Overview of identified final missing ShortCodeIDs since T7 release 13.0 and potential corrections submitted by the Trading Participant. ▪ The report is sorted by ShortCodeID and ValidFromDate. ▪ Provision: end of day.
TR170	Short Code ID – Historical Correction Report	▪ Overview of identified historical missing ShortCodeIDs previous to T7 release 13.0. ▪ The missing ShortCodeIDs are provided with the date of occurrence prefilled in fields ValidFrom and ValidTo. ▪ The report is sorted by ShortCodeID and ValidFromDate. ▪ Provision on 3 February 2025 with daily processing starting 1 April 2025. More information will be announced in due course.
TR171	Short Code ID – Historical Long Code Correction Report	▪ Overview of identified incorrect ShortCodeID registrations, which possess incorrect ClientLongValues. ▪ The report is sorted by ShortCodeID and ValidFromDate. ▪ The report is provided per business unit and trading venue. ▪ Provision on 3 February 2025 with daily processing starting 1 April 2025. More information will be announced in due course.

3.4.4.1 TR160 – Short Code ID – Error Report

Report fields

1. ShortCodeID

The field contains the numeric ShortCodeID.

2. ShortCodeErrSource

This field contains the origin of the error.

- 0 - Upload File
- 1 - T7 Trading System

3. ErrDescription

This field contains the error message.

For valid values and descriptions, please refer to table “Error code description and validation result” in chapter 3.4.3.3.

4. TransactionIdentifier

This field contains the transaction Identifier. For orders, it contains the exchangeOrderID. For TES, it contains the tesTradeID. For Xetra EnLight and Eurex EnLight, it contains the negotiationID.

This field is empty for upload related errors.

5. User

This field indicates the user.

This field is empty for upload related errors.

6. SessionId
This field contains the session ID.
This field is empty for upload related errors.

7. FreeText1-4
This field contains the text entered by the trading participant.
This field is empty for upload related errors.

8. TypOrig
This field indicates in which trading type (on-book or off-book) the ShortCodeID was used.
- 0 - T7 on-book trading.
- 1 - TES off-book trading type (TES, Xetra EnLight and Eurex EnLight).

This field is empty for upload related errors.

9. ShortCodeSrc
This field contains the identifier field of the order / quote field in which the missing ShortCodeID was submitted.
- C – clientIdentifier – ClientID
- E – executionIdentifier – ExecutionID
- I – investmentIdentifier – InvestmentID

This field is empty for upload related errors.

10. UploadFile
This field contains the name of the upload file in which the error appeared.
This field is empty for trading related errors.

11. TsField
This field contains the name of the field in the upload file in which the error occurred.
This field is empty for trading related errors.

12. RowNumber
This field contains the row number of the upload file in which the error occurred.
This field is empty for trading related errors.

13. ProcessingTime
This field contains the processing time of the data record.

3.4.4.2 TR161 – Short Code ID – Valid Registrations Report

Report fields

1. ShortCodeID
The field contains the numeric ShortCodeID.

2. ShortCodeValidityDef
This field contains the legal status of a Short Code registration.
- 0 - Preliminary (intraday)
- 1 - Legally binding (eod)

3. StatusInd
This field contains the status indicator of the ShortCodeID.
- N – New: New ShortCodeID was registered and is valid as stated in field ValidFromDate.
- M – Modify: The ShortCodeID registration was changed and is valid as stated in field ValidFromDate.
- D – Delete: The ShortCodeID registration was deleted and terminates at validity t+1 of the date provided in field ValidFromDate.
- C – Correction: The correction of the ShortCodeID registration was provided and is valid as stated in field ValidFromDate.

4. ValidFrom
This field contains the date provided in field ValidFromDate of the ShortCodeID registration.

5. ValidTo
This field contains the date provided in field ValidToDate of the of the ShortCodeID registration. For registrations with indefinite validity, this field contains the value 9999-12-31. For registrations, which have been terminated, this field contains the date of the validity end.

6. LongValue
This field contains the ClientLongValue. Valid values are:
- National ID: natural person with max. 35 alphanumerical characters.
- LEI: legal person with 20 alphanumerical characters.
- AGGR: ESMA defined value for "Client identification code" in case of aggregated orders.
- PNAL: ESMA defined value for "Client identification code" in case of pending allocations.
- NORE: ESMA defined value for "Execution within firm" in case that decision was not taken within the trading participant firm.

7. ClassRule
This field contains the type of the ClientLongValue.
- N – NationalID: NationalID to identify a natural person.
- L – LEI: LEI to identify a legal entity.
- EMPTY: ClientLongValue contains AGGR, PNAL or NORE.

8. NationalIDCountryCode
This field contains the NationalIDCountryCode.

9. NationalIDPriority
This field contains the NationalIDPriority.

10. DateUploaded
This field contains the date of the upload.

11. ProcessingTime
This field contains the processing time of the data record.

3.4.4.3 TR166 – Short Code ID – Final Missing Report

Report fields

1. ShortCodesDayt0
This field contains the count of used ShortCodeIDs of the fields "ClientID", "Execution Decision" and "Investment Decision" in order and quote messages of trading day t. Followed by every single Short Code used on reporting day t.

2. ShortCodesMissingDayt0
This field contains the count of missing ShortCodeID registrations of reporting day t, which were not submitted latest by reporting day t eob. Followed by every single Short Code, which was missing on reporting day t.

3. ShortCodesCorrDayt1
This field contains the count of ShortCodeID registrations submitted on t+1 that successfully corrected the missing ShortCodeIDs of reporting day t. Followed by every single Short Code, which was corrected on day t+1.

4. FinalMissing
This field contains the count of ShortCodeIDs used on reporting day t, which were neither registered on reporting day t nor corrected until t+1 eob and are therefore considered "final missing". Followed by every single Short Code, which was a final missing.

5. FinalMissingPerc
This field contains the value defined as "finalMissing" divided by "shortCodesDayt0" expressed in percentage terms.

6. FinalMissingMtd
This field contains the month-to-date (mtd) value defined as mtd aggregate of "finalMissing" divided by the mtd aggregate of "shortCodesDayt0" expressed in percentage terms.

3.4.4.4 TR167 – Short Code ID – Non-Uniqueness Report

Report fields

1. LongValue
   - This field contains the ClientLongValue. Valid values are:
   - National ID: natural person with max. 35 alphanumerical characters.
   - LEI: legal person with 20 alphanumerical characters.
   - AGGR: ESMA defined value for "Client identification code" in case of aggregated orders.
   - PNAL: ESMA defined value for "Client identification code" in case of pending allocations.
   - NORE: ESMA defined value for "Execution within firm" in case that decision was not taken within the trading participant firm.

2. ShortCodeID
The field contains the numeric ShortCodeID.

3. DateUploaded
This field contains the date of the upload.

4. ClassRule
This field contains the type of the ClientLongValue.
- N – NationalID: NationalID to identify a natural person.
- L – LEI: LEI to identify a legal entity.
- EMPTY: ClientLongValue contains AGGR, PNAL or NORE.

5. ValidFrom
This field contains the date provided in field ValidFromDate of the ShortCodeID registration.

6. ValidTo
This field contains the date provided in field ValidToDate of the of the ShortCodeID registration. For registrations with indefinite validity, this field contains the value 9999-12-31. For registrations, which have been terminated, this field contains the date of the validity end.

7. NationalIDCountryCode
This field contains the NationalIDCountryCode.

8. NationalIDPriority
This field contains the NationalIDPriority.

3.4.4.5 TR168 – Short Code ID – Non-Consistency Report

Report fields

1. ShortCodeID

The field contains the numeric ShortCodeID.

2. LongValue

- This field contains the ClientLongValue. Valid values are:
- National ID: natural person with max. 35 alphanumerical characters.
- LEI: legal person with 20 alphanumerical characters.
- AGGR: ESMA defined value for "Client identification code" in case of aggregated orders.
- PNAL: ESMA defined value for "Client identification code" in case of pending allocations.
- NORE: ESMA defined value for "Execution within firm" in case that decision was not taken within the trading participant firm.

3. ClassRule

This field contains the type of the ClientLongValue.

- N – NationalID: NationalID to identify a natural person.
- L – LEI: LEI to identify a legal entity.
- EMPTY: ClientLongValue contains AGGR, PNAL or NORE.

4. ValidFrom

This field contains the date provided in field ValidFromDate of the ShortCodeID registration.

5. ValidTo

This field contains the date provided in field ValidToDate of the of the ShortCodeID registration. For registrations with indefinite validity, this field contains the value 9999-12-31. For registrations, which have been terminated, this field contains the date of the validity end.

6. NationalIDCountryCode

This field contains the NationalIDCountryCode.

7. NationalIDPriority

This field contains the NationalIDPriority.

8. PrevDayLongValue

This field contains the ClientLongValue of a given ShortCodeID of the previous reporting day.

9. PrevDayClassRule

This field states the ClassRule of the ClientLongValue for a given ShortCodeID for the previous day.

10. PrevDayValidFrom

This field contains the ValidFromDate of a given ShortCodeID of the previous reporting day.

11. PrevDayValidTo

This field contains the ValidToDate of a given ShortCodeID of the previous reporting day.

12. PrevNationalIDCountryCode

This field contains the NationalIDCountryCode of the ClientLongValue of a given ShortCodeID of the previous reporting day.

13. PrevNationalIDPriority

This field contains the NationalIDPriority of the ClientLongValue of a given ShortCodeID of the previous trading day.

3.4.4.6 TR169 – Short Code ID – Correction Report

Report fields

1. ShortCodeID
The field contains the numeric ShortCodeID.

2. TypeOfEvent
This field contains the type of the ShortCodeID data record.
- 0 - Final missing
- 1 - Corrected

3. CorrOrig
This field contains the origin of the correction record.

4. Participant
This field indicates the name of the participant, which is a legal entity.

5. MIC
This field contains the Market Identifier Code (MIC) (ISO 10383), which is a unique identification code used to identify securities trading exchanges, regulated and non-regulated trading markets.

6. StatusInd
This field contains the status indicator of the ShortCodeID.
- N – New: New ShortCodeID was registered and is valid as stated in field ValidFromDate.
- M – Modify: The ShortCodeID registration was changed and is valid as stated in field ValidFromDate.
- D – Delete: The ShortCodeID registration was deleted and terminates at validity t+1 of the date provided in field ValidFromDate.
- C – Correction: The correction of the ShortCodeID registration was provided and is valid as stated in field ValidFromDate.

7. ValidFrom
This field contains the date provided in field ValidFromDate of the ShortCodeID registration.

8. ValidTo
This field contains the date provided in field ValidToDate of the of the ShortCodeID registration. For registrations with indefinite validity, this field contains the value 9999-12-31. For registrations, which have been terminated, this field contains the date of the validity end.

9. ClassRule
This field contains the type of the ClientLongValue.
- N – NationalID: NationalID to identify a natural person.
- L – LEI: LEI to identify a legal entity.
- EMPTY: ClientLongValue contains AGGR, PNAL or NORE.

10. NationalIDCountryCode
This field contains the NationalIDCountryCode.

11. NationalIDPriority
This field contains the NationalIDPriority.

12. LongValue
This field contains the ClientLongValue. Valid values are:
- National ID: natural person with max. 35 alphanumerical characters.
- LEI: legal person with 20 alphanumerical characters.
- AGGR: ESMA defined value for "Client identification code" in case of aggregated orders.

- PNAL: ESMA defined value for "Client identification code" in case of pending allocations.
- NORE: ESMA defined value for "Execution within firm" in case that decision was not taken within the trading participant firm.

13. UploadRecord
This field contains the uploaded record of a successful correction.

14. DateUploaded
This field contains the date of the upload.

15. ProcessingTime
This field contains the processing time of the data record.

3.4.4.7 TR170 – Short Code ID – Historical Correction Report

Report fields

1. ShortCodeID
The field contains the numeric ShortCodeID.

2. TypeOfEvent
This field contains the type of the ShortCodeID data record.
- 0 - Final missing
- 1 - Corrected

3. CorrOrig
This field contains the origin of the correction record.

4. Participant
This field indicates the name of the participant, which is a legal entity.

5. MIC
This field contains the Market Identifier Code (MIC) (ISO 10383), which is a unique identification code used to identify securities trading exchanges, regulated and non-regulated trading markets.

6. StatusInd
This field contains the status indicator of the ShortCodeID.
- N – New: New ShortCodeID was registered and is valid as stated in field ValidFromDate.
- M – Modify: The ShortCodeID registration was changed and is valid as stated in field ValidFromDate.
- D – Delete: The ShortCodeID registration was deleted and terminates at validity t+1 of the date provided in field ValidFromDate.
- C – Correction: The correction of the ShortCodeID registration was provided and is valid as stated in field ValidFromDate.

7. ValidFrom
This field contains the date provided in field ValidFromDate of the ShortCodeID registration.

8. ValidTo
This field contains the date provided in field ValidToDate of the of the ShortCodeID registration. For registrations with indefinite validity, this field contains the value 9999-12-31. For registrations, which have been terminated, this field contains the date of the validity end.

9. ClassRule
This field contains the type of the ClientLongValue.
- N – NationalID: NationalID to identify a natural person.
- L – LEI: LEI to identify a legal entity.
- EMPTY: ClientLongValue contains AGGR, PNAL or NORE.

10. NationalIDCountryCode
This field contains the NationalIDCountryCode.

11. NationalIDPriority
This field contains the NationalIDPriority.

12. LongValue
This field contains the ClientLongValue. Valid values are:
- National ID: natural person with max. 35 alphanumerical characters.
- LEI: legal person with 20 alphanumerical characters.
- AGGR: ESMA defined value for "Client identification code" in case of aggregated orders.
- PNAL: ESMA defined value for "Client identification code" in case of pending allocations.
- NORE: ESMA defined value for "Execution within firm" in case that decision was not taken within the trading participant firm.

13. UploadRecord
This field contains the uploaded record of a successful correction.

14. DateUploaded
This field contains the date of the upload.

15. ProcessingTime
This field contains the processing time of the data record.

3.4.4.8 TR171 – Short Code ID – Historical Long Code Correction Report

Report fields

1. ShortCodeID
The field contains the numeric ShortCodeID.

2. ShortCodeValidityDef
This field contains the legal status of a Short Code registration.
- 0 - Preliminary (intraday)
- 1 - Legally binding (eod)

3. StatusInd
This field contains the status indicator of the ShortCodeID.
- N – New: New ShortCodeID was registered and is valid as stated in field ValidFromDate.
- M – Modify: The ShortCodeID registration was changed and is valid as stated in field ValidFromDate.
- D – Delete: The ShortCodeID registration was deleted and terminates at validity t+1 of the date provided in field ValidFromDate.
- C – Correction: The correction of the ShortCodeID registration was provided and is valid as stated in field ValidFromDate.

4. ValidFrom
This field contains the date provided in field ValidFromDate of the ShortCodeID registration.

5. ValidTo
This field contains the date provided in field ValidToDate of the of the ShortCodeID registration. For registrations with indefinite validity, this field contains the value 9999-12-31. For registrations, which have been terminated, this field contains the date of the validity end.

6. LongValue
This field contains the ClientLongValue. Valid values are:
- National ID: natural person with max. 35 alphanumerical characters.
- LEI: legal person with 20 alphanumerical characters.
- AGGR: ESMA defined value for "Client identification code" in case of aggregated orders.
- PNAL: ESMA defined value for "Client identification code" in case of pending allocations.
- NORE: ESMA defined value for "Execution within firm" in case that decision was not taken within the trading participant firm.

7. ClassRule
This field contains the type of the ClientLongValue.
- N – NationalID: NationalID to identify a natural person.
- L – LEI: LEI to identify a legal entity.
- EMPTY: ClientLongValue contains AGGR, PNAL or NORE.

8. NationalIDCountryCode
This field contains the NationalIDCountryCode.

9. NationalIDPriority
This field contains the NationalIDPriority.

10. DateUploaded
This field contains the date of the upload.

11. ProcessingTime
This field contains the processing time of the data record.

4 Algo ID solution

This chapter describes the notification obligation, regulatory requirements, the Algo ID solution comprising the T7 trading system, the registration and maintenance of Algo IDs and respective data requirements. In addition, the lifecycle management is described starting with the upload files, the upload functionalities and the subsequent processing and output of the data in T7 XML reports.

4.1 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 must 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 must be submitted via email to reporting@wirtschaft.hessen.de.
Exchange Supervisory Authority, State of Hesse notification

4.2 Regulatory requirements

4.2.1 Requirement of 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, FWB 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.

FWB and Eurex offer their Trading 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

Trading Participants must certify that all deployed algorithms have successfully passed the testing requirements imposed by MiFID II / MiFIR. The algorithm certificates should contain the Algo ID of the algorithm that was tested, and the name of the Trading Participant who would like to have the algorithm registered with FWB and Eurex. **The Algo ID must be registered prior to usage**.[36]

[36] FWB exchange rules § 40; Eurex exchange rules § 59

4.2.2 Execution within firm

The "execute within firm" data shall be submitted in the T7 trading system field "ExecutionID". It is mandatory in every order and quote, irrespective of the T7 trading capacity / ESMA trading capacity. As by ESMA definition[37], 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 shall 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 Algo ID or a Short Code for the natural person within the firm must be populated.
The Algo ID used in the "ExecutionID" must be registered with the trading venue.

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.

4.2.3 Investment decision within firm

The "investment decision within firm" data shall be submitted in the T7 trading system field "InvestmentID". It is mandatory in every order and quote for trading in trading capacities Proprietary, Market Making, Broker Dealer and Retail Market Making (ESMA trading capacity DEAL). It is optional for trading capacities Agency, Riskless Principal and Retail-Agency (ESMA trading capacities AOTC and MTCH). As by ESMA definition[38], 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 Algo ID or a Short Code for the natural person within the firm must be populated.
The Algo ID used in the "InvestmentID" must be registered with the trading venue.

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.

4.3 Submission of Algo ID data in the T7 trading system

4.3.1 T7 trading system fields

Trading Participants can insert Algo IDs in the T7 fields ExecutionID and InvestmentID. The fields are available in the order and quote messages as 8-byte 20 digits numeric fields.

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

As the fields execution decision and investment decision can contain an Algo ID or a Short Code, there are respective qualifier fields in order to distinguish whether the numeric value is a Short Code or an Algo ID. Trading Participants shall set the qualifier fields to the following values[39] in order to provide this information:

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

[37] Commission Delegated Regulation (CDR) 2017/580 Art. 2, (CDR) 2017/590 Art. 8, ESMA Guidelines (ESMA/2016/1452) chapters 5.12.
[38] Commission Delegated Regulation (CDR) 2017/580 Art. 2, (CDR) 2017/590 Art. 8, ESMA Guidelines (ESMA/2016/1452) chapters 5.11.
[39] Values might differ with respect to different interfaces, e.g. ETI or FIX

Following the ESMA requirements[40], the submission of the ExecutionID is mandatory for all trading capacities (ESMA trading capacities DEAL, AOTC, MTCH). The InvestmentID is technically optional for trading capacities Agency, Riskless Principal and Retail-Agency (ESMA trading capacities AOTC and MTCH), because the field must be blank in case the client of the Trading Participant took the investment decision. The InvestmentID is mandatory in trading capacities Proprietary, Market Making, Broker Dealer and Retail Market Making (ESMA trading capacity DEAL).

Please find more information on all scenarios in chapter 4.3.2.

Please note that the Algo ID values are not permitted having leading zeros, e.g. “00012345”. The value ”0” is no permissible value for Algo IDs.

4.3.2 MiFID II / MiFIR field flagging by trading scenario

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.

T7 trading capacities proprietary, market making, broker dealer and retail market making (ESMA trading capacity DEAL)

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)	Empty
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)	Empty
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)	Empty

[40] Commission Delegated Regulation (CDR) 2017/580, article 2 and ESMA guidelines ESMA/2016/1452, chapters 5.11, 5.12

T7 trading capacities agency, retail agency (ESMA trading capacity AOTC) and riskless principal (ESMA trading capacity MTCH); 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

4.4 Algo ID management and data requirements

4.4.1 Registration

Trading Participants must register Algo IDs with the trading venues. Algo IDs must be registered before usage.[41]

An Algo ID registration shall be submitted to the trading venue. If there is no registration for this Algo ID yet, and the data record passes the validations successfully, the registration is valid as of the "ValidFromDate", which can be t or t+1. Please note that the "ValidFromDate" must be a trading day[42].

Valid Algo ID registrations are documented in the "TR163 – Algo ID – Valid Registrations Report". Algo IDs used in trading but not registered yet and other upload errors are documented in the "TR162 – Algo ID – Error Report".

The reports of a reporting day are generated three times intraday (10:00, 14:00 and 18:00 CE(S)T) and with the overnight batch. For erroneous uploads during the trading day, Trading Participants can take immediate action and ensure that the data is successfully accepted to fulfil the data submission obligation within the deadline. In case of an upload error for a record, the Trading Participant can submit an updated data record until the correct Algo ID registration is processed successfully. For these cases, i.e. numerous submissions for one Algo ID on a trading day, each record is processed and documented in the "TR162 – Algo ID – Error Report" or "TR163 – Algo ID – Valid Registrations Report". During the overnight batch, the on the trading day last received and successfully validated Algo ID is legally binding for that trading day and marked as such.

The submission of registrations or attempts can be found in the following member reports:

TR162 – Algo ID – Error Report	▪ Algo IDs submitted in orders / quotes / TES / Enlight with no registration (error 1 – Algo ID registration is missing) ▪ Algo ID errors of the upload file
TR163 – Algo ID – Valid Registrations Report	▪ Valid Algo ID registrations (incl. all details)

4.4.1.1 Uniqueness and consistency

The Algo ID must be unique and consistent over time, i.e. the Algo ID 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 Algo ID is "789". Hence, Algo ID "789" must be used for this algorithm starting with the first order submission and must be used for every consecutive future order submission.[43]

4.4.1.2 Exemption

There is no exemption.

4.4.2 Modification

The Algo ID registration is only allowed to be modified for an update of the responsible person. In order to change the responsible person of an Algo ID, the data record shall be submitted with the new responsible person and the "ValidFromDate" set to t or t+1. Please note that the "ValidFromDate" must always be a trading day[44].

[41] Please refer to the FWB exchange rules § 40; Eurex exchange rules § 59.

[42] Please refer to the trading calendar for simulation and production:
- XETR and XFRA: Xetra > Trading > Trading calendar and trading hours
- XEUR (simu): Eurex > Support > Initiatives & Releases > Simulation Calendar
- XEUR (prod): Eurex > Trade > Trading Calendar

[43] Please refer to FWB exchange rules Art. 40; Eurex exchange rules article 59.

[44] Please refer to footnote 19

Valid Algo ID registrations are documented in the "TR163 – Algo ID – Valid Registrations Report". Algo IDs used in trading but not registered yet and other upload errors are documented in the "TR162 – Algo ID – Error Report".

The reports are generated three times intraday (10:00, 14:00 and 18:00 CE(S)T) and with the overnight batch. For erroneous uploads during the trading day, Trading Participants can take immediate action and ensure that the data is successfully accepted to fulfil the data submission obligation within the deadline. In case of an upload error for a record, the Trading Participant can submit an updated data record until the correct Algo ID registration is processed successfully. For these cases, i.e. numerous submissions for one Algo ID on a trading day, each record is processed and documented in the "TR162 – Algo ID – Error Report" or "TR163 – Algo ID – Valid Registrations Report". During the overnight batch, the on the trading day last received and successfully validated Algo ID is legally binding for that trading day and marked as such.

The submission of registrations or attempts can be found in the following member reports:

TR162 – Algo ID – Error Report	▪ Algo IDs submitted in orders / quotes / TES / Enlight with no registration (error 1 – Algo ID registration is missing) ▪ Algo ID errors of the upload file
TR163 – Algo ID – Valid Registrations Report	▪ Valid Algo ID registrations (incl. all details)

4.4.3 Deletion

Deletions of Algo IDs are not permitted.

4.4.4 Monitoring and sanctioning

Missing Algo ID registrations are considered as violations of the exchange rules for Algo IDs. Please refer to the FWB exchange rules § 40, respectively Eurex exchange rules § 59.

The data is provided to the Trading Participant in the "TR162 – Algo ID – Error Report", which serves as basis for potential sanctioning.

4.5 Algo ID lifecycle management

Trading Participants shall register and maintain Algo IDs using CSV upload files and submit these using the CUE and the Short Code ID and Algo ID upload GUI. Files undergo a preliminary validation on CUE and are provided with potential error messages in due course. Files are transferred to the data warehouse. The data is processed, i.e. validations are applied and the results are provided in the respective reports.

4.5.1 Upload file

4.5.1.1 Upload file structure and format

The upload file is a CSV file, i.e. comma separated (not semicolon). The file format must be ASCII / UTF-8 Windows or Linux and ISO-8859. Other UTF-8 encryption formats, most notably UTF-8 BOM, cannot be processed. The file size is limited to 5 megabyte.

ParticipantID	MIC	ValidFromDate	AlgoID	ResponsibleID
GDBXX	XETR	2024-11-18	2578	jon.doe@abcbank.com
GDBXX	XETR	2024-11-18	135123	jon.doe@abcbank.com

Figure 3: Example file structure

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

Please note that the Algo ID values are not permitted to have leading zeros, e.g. “00012345” and that the value ”0” is no permissible value for Algo IDs.

A sample file is available on the webpages under the following paths:
- FWB: xetra.com > Newsroom > Current regulatory topics > MiFID II and MiFIR > Reference data reporting
- Eurex: eurex.com > Rules & Regs > MiFID II/MiFIR > Client & Member Reference Data

4.5.1.2 Field description

Trading Participant specific fields

1. “ParticipantID”
   The “ParticipantID” is the Trading Participants five-digit memberID.
   Valid values: [A-Z], mandatory length: {5}

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

   - XETR = Xetra
   - XFRA = Börse Frankfurt
   - XEUR = Eurex

Data record specific fields

3. “ValidFromDate”
   The “ValidFromDate” provides the date the Algo ID 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 “ValidFromDate” must be a trading date. If uploaded on a weekend or other non-trading day the next trading date must be added. Trading Participants are encouraged to consult the Trading Calendar of the relevant trading venues in order to ensure that these dates are entered correctly:

   - XETR and XFRA: Xetra > Trading > Trading calendar and trading hours
   - XEUR (simu): Eurex > Support > Initiatives & Releases > Simulation calendar
   - XEUR (prod): Eurex > Trade > Trading Calendar

4. “AlgoID”
   The Algo ID holds the numerical value of an algorithm.
   Valid values: [0-9], minimum and maximum length: {1,20}
   The value “0” is no permissible value and leading zeros are not permitted.

5. “ResponsibleID”
   The “ResponsibleID” contains the email address of the responsible person of the algorithm testing and certification.
   Valid values: [("2[0-9]{3}-[0-9]{2}-[0-9]{2}" "2[0-9]{3}-[0-9]{2}-[0-9]{2}" "[0-9]{1,20}" "[A-Za-z0-9._%+-]+@[A-Za-z0-9._-]+\.[A-Za-z]{2,4}")\-_]{0,253}[A-Za-z0-9]{1}\.[A-Za-z]{2,32})], minimum and maximum length: {4,35}.

4.5.2 Upload functionalities

The Common Upload Engine (CUE) is a service, which is provided as a SSH File Transfer Protocol (SFTP) server and allows Trading Participants the upload of Short Code and Algo ID data to dedicated services. Trading Participants can automate the upload of data files via SFTP. The Short Code ID and Algo ID upload GUI is offered in addition and is a browser-based GUI. The GUI allows the upload and submission of the data, which is then transferred to the CUE in order to use the pre-validation tool and provide streamlined feedback at the time of the upload.

4.5.2.1 Common Upload Engine (CUE)

Technical set-up

The technical connection to the CUE must 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 for the technical connection to the CUE and CRE.

Please find the "Common Report & Upload Engine User Guide" under the following paths:

- FWB: xetra.com > Technology > T7 trading architecture > System documentation > Release XY[45] > Reports
- Eurex: eurex.com > Support > Initiatives & Releases > T7 Release XY[46] > Reports

Upload processing

Trading Participants shall access CUE and the "mifid" folder. The files shall be uploaded into the "upload" folder. Once processed, CUE sets up a "trading date" folder and adds the response.

- CUE > participantID > P > mifid > upload

Trading Participants shall upload their CSV file(s) per participantID and MIC combination between 00:00 and 23:30 CE(S)T on trading days. Uploads on non-trading days are also feasible. However, the date in the file name must be upload calendar day. The file(s) are transferred to the data warehouse and processed with the next report generation.

The upload file is limited to 5 MB and 25,000 data rows. The approx. validation time for files with 25,000 rows is 8 minutes. We strongly recommend uploading files with a smaller size.

Upload file naming convention

The naming convention must be applied. It follows the chronological sequence environmentID, service name, participantID, upload date, MIC, file type. The file name must be in capital letters completely and the date in the file name must be the current upload date.

Example:
"88EXTALGO1GDBXX20241118XETR.CSV"

CUE adds the timestamp and also applies versioning if more than one file is uploaded per day, e.g.
"88EXTALGO1GDBXX20241118**155256**XETR-**V01**.CSV"

[45] Please refer to the latest T7 release
[46] See footnote above

CUE upload file naming convention

Field	Length	Meaning	Remark
[88, 89]	{2}	Environment ID	88 for Prod 89 for Simu
[EXTALGO1]	{8}	Service name	EXTALGO1
[A-Z]	{5}	Participant ID	GDBXX
[0-9]	{8}	Calendar Date	YYYYMMDD
[XEUR, XETR, XFRA]	{4}	MIC	XEUR, XETR, XFRA
[.CSV]	{4}	File type	.CSV

CUE validation tool
CUE applies validations on file type, structure, and the data records with respect to syntax and data requirements and provides immediate feedback.

Please refer to the "CUE validation and file specification Short Code ID and Algo ID" under the following paths:
- FWB: xetra.com > Newsroom > Current regulatory topics > MiFID II and MiFIR > Reference data reporting
- Eurex: eurex.com > Rules & Regs > MiFID II/MiFIR > Client & Member Reference Data

Validation results
A file which is uploaded and in validation is named e.g.
"88EXTALGO1GDBXX20241118155256XETR.CSV_PROCESSING"

A file which passed the CUE validation without negative results of the records and was transferred to the data warehouse for further validation and processing is named e.g.
"88EXTALGO1GDBXX20241118155256XETR.CSV_UPLOAD_SUCCESSFUL"

A file which passed the CUE validation with negative results of the records and was transferred to the data warehouse for further validation and processing is named e.g.
"88EXTALGO1GDBXX20241118155256XETR.CSV_UPLOAD_SUCCESSFUL_WITH_ERRORS"

The file is provided with a log file, e.g. "88EXTALGO1GDBXX20241118155256XETR.LOG" to the "trading date" folder. The log file provides Trading Participants with the information about the row, the erroneous value submitted and the permitted values and field length.

Trading Participants can download the log file and can correct the upload file considering the reported errors or wait for the next report generation and the final validation results in the data warehouse as the CUE validation is an initial validation providing feedback at the time of the upload. Comprehensive validations are applied in the data warehouse, including orderbook data and the database. The final validation results are documented in the "TR162 – Algo ID – Error Report" and the "TR163 – Algo ID – Valid Registrations Report" and are provided to the Trading Participants in the CRE's respective market folders (XEUR, XETR, XFRA) and in the Short Code ID and Algo ID upload GUI.

However, files can be rejected for certain reasons with respect to naming convention and structure:

Reject reason	Error message
Incorrect service name or environment in file name	88**ABC**ALGO1GDBXX20241118155256XETR.CSV_SERVICE_NOT_FOUND
Incorrect participantID in file name	88EXTALGO1**GDB**20241118155256XETR.CSV_MEMBERID_FAILED
Incorrect date in file name	88EXTALGO1GDBXX20**18**1118XETR.CSV_WRONG_UPLOAD_DATE[47]
Incorrect MIC in file name	88EXTALGO1GDBXX20241118155256**ABCD**.CSV_XMIC_NOT_FOUND
Incorrect file suffix	88EXTALGO1GDBXX20241118155256XETR.**cs**_WRONG_FILE_SUFFIX
Incorrect file type	88EXTALGO1GDBXX20241118155256XETR.**PDF**_WRONG_FILE_TYPE
Incorrect number of commas, empty file	88EXTALGO1GDBXX20241118155256XETR.CSV_PARSING_FAILED
File upload failed	88EXTALGO1GDBXX20241118155256XETR.CSV_UPLOAD_FAILED

File upload cut-off time and service availability
For Algo ID uploads the trading day's cut-off time is 23:30 CE(S)T. Files uploaded by then are processed in the overnight batch. The upload functionality is disabled between 23:30 and 00:00 CE(S)T. 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 with the same date in the file name, the related error message is e.g.
88EXTALGO1GDBXX20241118~~155256~~XETR.CSV_WRONG_UPLOAD_DATE

The file name must be changed to the current upload calendar date and uploaded again.

Retrieval of the reports
Please note that the CUE validation is an initial validation and the complete validations against format, structure, orderbook data, the database and regulatory requirements are performed in the data warehouse. The final results of errors and successful submissions are provided to the Trading Participant in the reports "TR163 – Algo ID – Valid Registrations Report" and in the "TR162 – Algo ID – Error Report" in the CRE's respective market folders (XEUR, XETR, XFRA) and in the Short Code ID and Algo ID upload GUI.

4.5.2.2 Short Code ID and Algo ID upload GUI

In addition to the CUE, a web-based upload GUI is offered. In the GUI either files can be submitted directly or manual entries can be made via eForm of which the GUI creates files automatically. The GUI forwards all files to the CUE in order to use the CUE pre-validation tool. The CUE feedback is transferred back to the GUI.
The Short Code and Algo ID upload GUI will provide the T7 XML Member Reports TR160-169 for download.

Please find a short summary of the process in the subchapters below and a dedicated "User Guide for Short Code ID and Algo ID Upload GUI" document under the following paths:

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

Technical set-up
In order to use the GUI, there are two pre-requisites to fulfil. Firstly, the Trading Participant must have an active Member Section account and the respective user rights. Secondly, the trading participant must have a CUE

[47] Please note that this error message does not contain a timestamp.

technical user set up. Please refer to chapter 4.5.2.1 for the CUE set-up and to the "User Guide for Short Code ID and Algo ID Upload GUI" document for the member section set-up.

Upload processing
The GUI can be accessed in the Member Section under the following path or using the link:
- membersection.deutsche-boerse.com > Company Administration > Short Code ID / Algo ID Upload GUI
- https://e-listing.deutsche-boerse.com/e-listing/ext?sclc

Trading Participants shall upload their CSV file(s) per participantID and MIC combination between 00:00 and 23:30 CE(S)T on trading days. Uploads on non-trading days are also feasible. The date in the file name must be upload calendar day, which the GUI automatically applies to the file name. The file(s) are transferred to the CUE and then to the data warehouse. The files will be processed with the next report generation.

The upload file is limited to 5 MB and 25,000 data rows. The approx. validation time for files with 25,000 rows is 8 minutes. We strongly recommend uploading files with a smaller size.

Provision of the upload file to the trading venues and naming convention
The file can be uploaded in section "Upload Algo ID" or via eForm. Trading Participants shall select environment, MIC and participantID. The GUI will automatically rename the file to the applicable naming convention based on the selected items. For information on the upload file naming convention please refer to chapter 4.5.2.1.

File transfer to CUE for pre-validation
The GUI will transfer the upload file to CUE for pre-validation. The CUE feedback is displayed in the GUI and, in case of a file reject, the error file (i.e. the CUE log file), is available for download in the GUI. Please find more information on the CUE processing in chapter 4.5.2.1.

Please note that the CUE validation is an initial validation and the complete validations and also validations against orderbook data and the database are performed in the intraday report generation runs, which start 10:00, 14:00 and 18:00 CE(S)T and the overnight batch in the data warehouse. The final validation results are documented in the "TR163 – Algo ID – Valid Registrations Report" and in the "TR162 – Algo ID – Error Report" and are provided to the Trading Participants in the CRE's respective market folders (XEUR, XETR, XFRA) and in the Short Code ID and Algo ID upload GUI. For information on the applied CUE validations to chapter 4.5.2.1.

File upload cut-off time and service availability
For Algo ID uploads the trading day's cut-off time is 23:30 CE(S)T. Files uploaded by then are processed in the overnight batch. The upload functionality is disabled between 23:30 and 00:00 CE(S)T.

4.5.2.3 Contact
For technical support, please contact the Customer Technical Support (CTS), which is available 24/5, from Monday 00:00 to Friday 22:00 CE(S)T:
- Technical Key Account Manager (TKAM) via dedicated phone number
- CTS via hotline +49 69 211 10 888 or by email at cts@deutsche-boerse.com

For functional support please contact the Regulatory Reporting Analysts, which are available from Monday to Friday between 09:00 and 18:00 CE(S)T:
- Regulatory Reporting Analyst via hotline +49 69 211 28991 or by email at client.services@deutsche-boerse.com

4.5.3 Data warehouse processing and validations

Data submissions via Short Code ID and Algo ID upload GUI and CUE are transferred to the data warehouse. Files submitted after the cut-off time 23.30 CE(S)T are stored and will be processed subsequently starting at 6.00 CE(S)T on the next trading day. The data is processed according to the First-In-First-Out (FIFO) principle and the feedback about the validation results is provided back in the reports "TR163 – Algo ID – Valid Registrations Report" and in the "TR162 – Algo ID – Error Report" and are available on CRE and in the Short Code and Algo ID upload GUI. There are three intraday report generation runs at 10:00, 14:00 and 18:00 CE(S)T and the end of day batch. Please note that the intraday report generation begins at the specified times and only data received up to those times is processed. In the event of technical issues, such as processing delays, the reports may not display all received data (trading data, upload files) up to that point in time. Throughout the day, the next intraday report will capture any available data i.e. since processing start of that trading day. However, the end of day reports process all trading data and trading participant uploads until the cut-off time 23.30 CE(S)T and hence are the legally binding reports for the trading day.

The intraday reports contain data of the actual trading day, such as uploads conducted on that trading day and any missing registrations detected. That means Algo IDs used in trading on that actual trading day, but not registered at the time of the intraday report generation.

Intraday processed records are documented by the time of reception, i.e. processing according to the FIFO principle. For erroneous uploads, Trading Participants can take immediate action and ensure that the data is successfully accepted to fulfil the data submission obligation within the deadline. In case of an upload error for a record, the Trading Participant can submit an updated data record until the correct Algo ID registration or modification is processed successfully. For these cases, i.e. numerous submissions for one Algo ID on a trading day, each record is processed and documented in the respective "TR163 – Algo ID – Valid Registrations Report" and in the "TR162 – Algo ID – Error Report". In intraday reports the legally binding mark is prevailing. During the end of day batch, the on the trading day last received and successfully validated Algo ID is legally binding for that trading day and marked as such. In case no modification of an Algo ID registration was successfully submitted, the prevailing combination is legally binding for that trading day.

In the overnight batch, the final reports "TR162 – Algo ID – Error Report" and "TR163 – Algo ID – Valid Registrations Report", which contains the legally binding Algo IDs for the trading day are provided. For further information, please refer to chapter 4.4.

Validations are applied on format, syntax (see chapter 4.5.1) and data requirements. The fields are validated according to the valid values and length, the database and the orderbook data.

4.5.3.1 Validation of orderbook data (incl. TES and Xetra and Eurex Enlight)

The Algo IDs used in trading are checked against the valid registrations of the Trading Participant in the "TR163 – Algo ID – Valid Registrations Report". In case an Algo ID does not have a valid registration, it is considered missing and reported with error code 1 "Algo ID registration is missing" in the "TR162 – Algo ID – Error Report". Please refer to chapter 4.4 for the Algo ID management and data requirements.

4.5.3.2 Validations against the database

In upload files submitted Algo IDs are checked if the Algo ID is already registered. If not, the validation of the record continues. If there is a valid registration of that Algo ID with the exact same data, the record is rejected with error code 2 "Registration rejected, AlgoID already registered" in the "TR162 – Algo ID – Error Report".

Please refer to chapter 4.3 for the Algo ID management and data requirements.

4.5.3.3 Validations of the data record

The validations of format, syntax, permitted values and field length are also reported in the "TR162 – Algo ID – Error Report". An overview about all errors and the validation results are listed below.

Error code description and validation result

Error code	Explanation	Result
Error code 1	AlgoID registration is missing.	WARNING
Error code 2	Registration rejected, AlgoID already registered.	REJECT
Error code 10	Invalid value in field ParticipantID.	REJECT
Error code 11	Invalid value in field MIC.	REJECT
Error code 13	Invalid value in field ValidFromDate.	REJECT
Error code 20	Invalid value in field AlgoID.	REJECT
Error code 22	Invalid value in field ResponsibleID.	REJECT
Error Code 28	Uploads with a future ValidFromDate must be set to the next trading day (t+1).	REJECT

Please refer to CRE or the Short Code and Algo ID upload GUI to retrieve the reports.

4.5.4 T7 XML Reports

After processing the relevant Algo ID data, the Trading Participants are provided with the results in the T7 XML reports, which are provided to CRE and the Short Code ID and Algo ID upload GUI. The reports "TR162 – Algo ID – Error Report" and the "TR163 – Algo ID – Valid Registrations Report" contain all errors and processed records during the day, e.g. the 18:00 CE(S)T report contains the data of the previous intraday reports.

Please find more information on the report structure in the T7 XML Report Manual and related XSDs under the following path:

- Xetra.com > Technology > T7 trading architecture > System documentation > Release XY [48] > Reports
- Eurex.com > Support > Initiatives & Releases > T7 Release XY[49] > Reports

Report	Report name	Description
TR162	Algo ID – Error Report	▪ Overview of Algo ID errors, which originate from the upload file and trading. ▪ Errors are sorted by Algo ID, origin and processing time. ▪ Provision: three times intraday and end of day.
TR163	Algo ID – Valid Registrations Report	▪ Overview of Algo ID registrations. ▪ Registrations are sorted by Algo ID and legal status, which is preliminary (intraday) or legally binding for the reporting day (eod) and processing time. ▪ In addition to the legally binding registrations of reporting day "t", also "t+1" are provided if applicable. ▪ Provision: three times intraday and end of day.

[48] Please refer to the latest T7 release

[49] See footnote above

4.5.4.1 TR162 – Algo ID – Error Report

Report fields

1. AlgoId
This field contains the numeric Algo ID.

2. AlgoIdErrSource
This field contains the origin of the error.
- 0 - Upload File
- 1 - T7 Trading System

3. ErrDescription
This field contains the error message.
For valid values and descriptions, please refer to table “Error code description and validation result” in chapter 4.5.3.3.

4. TransactionIdentifier
This field contains the transaction Identifier. For orders, it contains the exchangeOrderID. For TES, it contains the tesTradeID. For Xetra EnLight and Eurex EnLight, it contains the negotiationID.
This field is empty for upload related errors.

5. User
This field indicates the user.
This field is empty for upload related errors.

6. SessionId
This field contains the session ID.
This field is empty for upload related errors.

7. FreeText1-4
This field contains the text entered by the trading participant.
This field is empty for upload related errors.

8. TypOrig
This field indicates in which trading type (on-book or off-book) the Algo ID was used.
- 0 - T7 on-book trading.
- 1 - TES off-book trading type (TES, Xetra EnLight and Eurex EnLight).

This field is empty for upload related errors.

9. AlgoIdSrc
This field contains the identifier field of the order / quote field in which the missing Algo ID was submitted.
- E – executionIdentifier – ExecutionID
- I – investmentIdentifier – InvestmentID

This field is empty for upload related errors.

10. UploadFile
This field contains the name of the upload file in which the error appeared.
This field is empty for trading related errors.

11. TsField
This field contains the name of the field in the upload file in which the error occurred.
This field is empty for trading related errors.

12. RowNumber
This field contains the row number of the upload file in which the error occurred.
This field is empty for trading related errors.

13. ProcessingTime
This field contains the processing time of the data record.

4.5.4.2 TR163 – Algo ID – Valid Registrations Report

Report fields

1. AlgoId
This field contains the numeric Algo ID.

2. AlgoIdValidityDef
This field contains the legal status of an Algo ID registration.
- 0 - Preliminary (intraday)
- 1 - Legally binding (eod)

3. ValidFrom
This field contains the date provided in field ValidFromDate of the Algo ID registration.

4. ResponsibleId
This field contains the email address of the responsible person of the algorithm testing and certification.

5. DateUploaded
This field contains the date of the upload.

6. ProcessingTime
This field contains the processing time of the data record.

5 Direct Market Access

FWB and Eurex offer Direct Market Access (DMA). Sponsored access is not permitted in Germany, hence not provided. DMA requirements[50] are pursuant to the European and national regulatory requirements and embedded in the exchange rules of the trading venues, § 38 FWB exchange rules and § 57 Eurex exchange rules.

Trading Participants must register as a DMA provider. After successful registration the Trading Participant is enabled for DMA trading in the T7 trading system, i.e. the DMA flag 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

5.1 Registration

Trading Participants offering DMA to their clients need to register as a 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 must be submitted via email to “deaanzeige@bafin.de”.
BaFin: DEA notification form of the Federal Financial Supervisory Authority (BaFin)

3. Exchange Supervisory Authority, State of Hesse
The Exchange Supervisory Authority, State of Hesse requires a notification, the form is available on the Hesse webpage and must be submitted via email to “reporting@wirtschaft.hessen.de”.
State of Hesse: DEA notification form of the Exchange Supervisory Authority Hesse

5.2 Technical submission

The DMA flag is available in order requests in the trading interfaces FIX and ETI. The DMA flag “Order Origination” value “5” marks an order as DMA order. The DMA flag is not available in the GUI.

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.

Please note: The DMA flag can only be set to ‘true’ if the order request is sent via trading capacity “Agency” (ESMA trading capacity AOTC) or trading capacity “Riskless-Principal” (ESMA trading capacity MTCH) and the Trading Participant is registered. Otherwise, an order with the DMA flag set ‘true’ will be rejected.

[50] 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

5.3 DMA flagging

Trading Participants shall apply the ESMA stipulated flagging of DMA order flow (Please refer to chapter 3.2.2 for the flagging scenarios):

- Execution ID: Short Code for the Long Code “NORE”
- Execution ID qualifier: 24 for human
- Investment ID: empty
- Investment ID qualifier: empty
- ClientID: Short Code for the Long Code of the client (LEI or National ID)

In addition:

- Registered via form and approved by FWB or Eurex
- Orders sent via trading capacity “Agency” (ESMA trading capacity AOTC) or trading capacity “Riskless-Principal” (ESMA trading capacity MTCH)
- Order Origination = 5 (DMA flag: ‘true’)

6 Other MiFID II / MIFIR reporting

6.1 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 must be calculated for each financial instrument traded on a business day.
Format: XML and TXT
Data source: FWB report TR101; Eurex reports TR100, TR103

The report provides Trading Participants with their daily values of both OTR measures per financial instrument (ISIN/currency combination). In addition, the calculation details for each OTR measure are provided. The OTR values are provided per OTR instrument group and ISIN accumulated on investment firm level for one trading day.

For more information, please refer to:
- FWB: Xetra.com > Newsroom > Current regulatory topics > MiFID II and MiFIR > Order-to-Trade Ratio; and the report structure under: xetra.com > Technology > T7 trading architecture > System documentation > Release XY[51] > Reports > XML Report Reference Manual
- Eurex: eurex.com > Rules & Regs > Regulations > Order-to-Trade Ratio; and the report structure under: Eurex.com > Support > Initiatives & Releases > T7 Release XY[52] > Reports > XML Report Reference Manual

6.2 HFT 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 Commission Delegated Regulation 2017/565 defines 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 accumulated on an investment firm level.
Format: XML and TXT
Data source: FSE report TR901; Eurex TR902
For more information, please refer to:
- FWB: xetra.com > Technology > T7 trading architecture > System documentation > Release XY[53] > Reports > XML Report Reference Manual
- Eurex: eurex.com > Support > Initiatives & Releases > T7 Release XY[54] > Reports > XML Report Reference Manual

[51] Please refer to the latest T7 release
[52] See footnote above
[53] See footnote above
[54] See footnote above

7 Annex: ESMA requirements of the identification of natural and legal persons

The regulatory requirement for the identification of relevant parties is defined in article 2 and Annex table 1 and 2 of Commission Delegated Regulation (EU) 2017/580 and article 6 and Annex 2 of Commission Delegated Regulation (EU) 2017/590. Please refer to chapter 3.1 for details.

Legal persons shall be identified with the “legal entity identifier” (LEI) and natural persons with the “National ID”, which is the identifier as set out in Art. 6 and Annex II to Commission Delegated Regulation (EU) 2017/590.

7.1 Legal entity identifier (LEI)

Legal persons must be identified with the LEI. 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. LEIs must be renewed by LOUs annually. For more information, please visit https://www.gleif.org/en.

Trading Participants shall ensure that the LEI of their clients, which are submitted to the trading venues as Long Code, have a valid GLEIF registration status. For more information on the Long Code validations please refer to chapter 3.4.3.3.

7.2 National ID

Natural persons must be identified by the “National ID” of the respective country and related priorities. Information related to the format of the identifier is not provided in the case of CONCAT, since the procedure for generating such identifier is defined in Art. 6(1) and 6(4) of the Commission Delegated Regulation (EU) 2017/590.

The highest priority identifier available to the Trading Participant 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 instance, for the identification of natural persons from Finland, Trading Participants must submit the Finnish “personal identity code” (first priority) to the trading venue. If it is not available, the CONCAT (second priority) can be submitted.

7.2.1 ESMA list of national client identifiers for natural persons acc. to CDR (EU) 2017/590

ESMA table according to Annex II to Commission Delegated Regulation (EU) 2017/590:

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		

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

7.2.2 ESMA list of national client identifiers for natural persons acc. to CDR (EU) 2017/590 and ESMA Q&A on MiFIR data reporting

ESMA specifications for the national client identifiers according to Annex II to Commission Delegated Regulation (EU) 2017/590 and ESMA Q&A on MiFIR data reporting:[55]

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		

[55] ESMA 70-1861941480-56 MiFIR data reporting Q&A, Q&A 24.2, ESMA_QA_1510

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		
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

Country code	Country name	National client identifier	Format of the identifier	Potential source of the information
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		
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		

Country code	Country name	National client identifier	Format of the identifier	Potential source of the information
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, ID02214358	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		
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	National ID

Country code	Country name	National client identifier	Format of the identifier	Potential source of the information
			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 Passport Number	For passports issued before 15 November 2019: 7 numerical digits For passports issued on and after 15 November 2019: 2 letters and 6 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
		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.

Country code	Country name	National client identifier	Format of the identifier	Potential source of the information
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; 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	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,	The CNP is a unique identifying number, assigned to each person at

Country code	Country name	National client identifier	Format of the identifier	Potential source of the information
		Number (Cod Numeric Personal)	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 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	birth and is inscribed on Birth Certificate, Identity Card and Driving License.
		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		

Country code	Country name	National client identifier	Format of the identifier	Potential source of the information
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) • 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).	Slovenian Personal Identity Card Slovenian National Passport
		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		

7.2.3 Country Codes ISO 3166-1 alpha 2 as of July 2024

Country codes which might occur in the category “all other countries” of ESMA table according to Annex II to Commission Delegated Regulation (EU) 2017/590:

Country code	Country name
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
CK	Cook Islands (the)
CL	Chile

Country code	Country name
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
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

Country code	Country name
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
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

Country code	Country name
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)
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

Country code	Country name
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
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