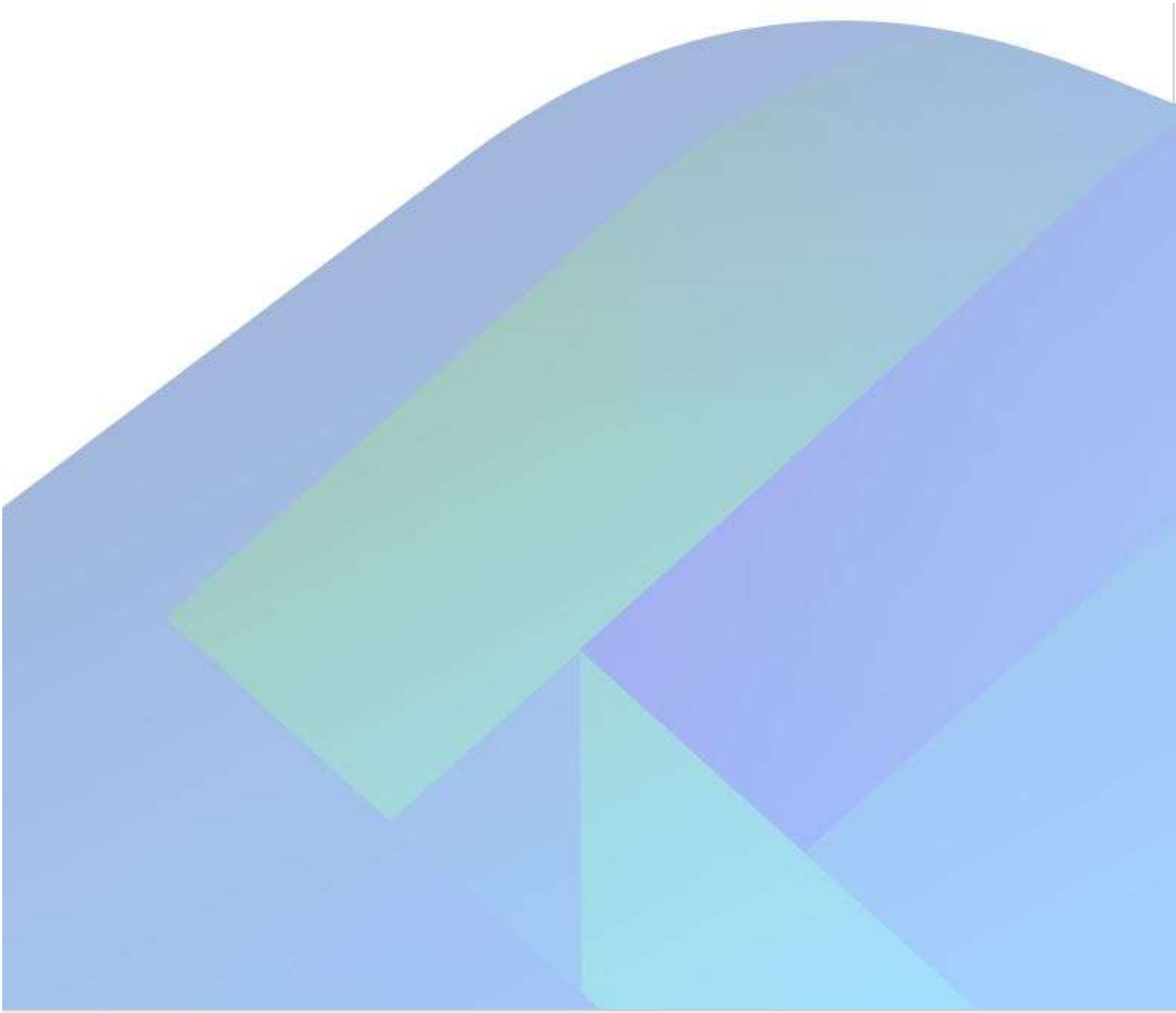
ESMA65-955014868-14991

Interface Specifications Document

Commodities Derivatives Weekly Position Reporting



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Reference Documents

Ref	Document Title	Version	Author	Date
1	MiFID II - Directive 2014/65/EU of the European Parliament and of the Council of 15 May 2014	2014/65/EU	European Parliament Council of Europe	15 May 2014
2	2014-BS-205 Annex 2e - Task Force for Commodity Derivatives - Technical Standards Package	ESMA/2014/BS/205	ESMA	8 December 2014
3	2015/1858 ITS 4 and Annex I – Final Report -Implementing Technical Standards	ESMA/2015/1858	ESMA	11 December 2015
4	2015-ESMA-1464 Annex I - draft RTS and ITS on MiFID II and MiFIR2016-SMSC_CDTF11		ESMA	2015-ESMA-1464 Annex I - draft RTS and ITS on MiFID II and MiFIR

5	ESMA-2016-SMSC_CDTF-11 BRD Position Reporting Art 58 v3.0	3.0	ED	24/03/25
6	ESMA-XXXX-XXXX-XX Functional Specifications CODER58 v4.0	5.0	ED	14/07/25

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1 Introduction

1.1 Purpose and audience of this document

The intended audience of this document are Market Operators or Investment Firms operating a trading venue on which commodity derivatives and derivates on emission allowance are being traded who are going to implement system interfaces for the uploading of position data for Commodity Reporting to fulfil their MiFID II obligation.

1.2 Context description

Article 58(1)(a) of MiFID II states:

Member States shall ensure that an investment firm or a market operator operating a trading venue which trades commodity derivatives or derivatives on emission allowances:

(a) make public a weekly report with the aggregate positions held by the different categories of persons for the different commodity derivatives or derivative on emission allowances traded on their trading venue, specifying the number of long and short positions by such categories, changes thereto since the previous report, the percentage of the total open interest represented by each category and the number of persons holding a position in each category in accordance with paragraph 4 and communicate that report to the competent authority and to ESMA; ESMA shall proceed to a centralised publication of the information included in those reports;

The obligation shall only apply when both the number of persons and their open positions exceed minimum thresholds.

1.3 Scope

1.3.1 In scope

This document aims to specify the exchange format for reporting weekly position data between Market Operators and Investment firms operating a trading venue on which commodity derivatives, and derivatives on emission allowance are being traded and ESMA.

The **Weekly Position Data Interface** specification defines the details that should be known by the submitting entity in order to be able to provide aggregated position data to ESMA.

As per MIFID II requirements,

Market Operators and Investment firms (from now on being referred to as Submitting entities) operating a trading venue on which commodity derivatives and derivatives on emission allowance are being traded shall provide aggregated position data to ESMA;

1. ESMA validates the information provided by the Trading Venues;

2. ESMA publishes that information on its website for public access and provides the validated data on its website to NCAs as downloadable files.

This document details the business functions and facilitates the technical design of the Weekly Position Data Interface. The functions detailed in this document are carried out by three types of entities:

- The submitting entities are responsible for providing ESMA with the aggregated position data on a weekly basis.
- ESMA is responsible for maintaining the ESMA Network, providing a copy of the successfully validated data to the NCAs and publishing the data on ESMA's website.
- The Competent Authorities are responsible for retrieving the validated data from ESMA's website.

This document covers the submission of position data covering the requirements of MiFID II Article 58.

1.4 Definitions

Term	Definition
BRD	Business Requirements Document (this document)
CA	Competent Authority
ESMA	European Securities and Markets Authority
EAMFT	ESMA Managed File Transfer System
FSD	Functional Specification Document
HUBEX	The existing ESMA HUB system used by NCAs
IF	Investment Firm
ITMG	IT Management and Governance group
ITS	Implementing Technical Standards
MIC	Market Identifier Code
MiFID	Markets in Financial Instrument Derivatives
NCA	National Competent Authority
RM	Regulated Market
RPO	Recovery Point Objective

RTO	Recovery Time Objective
RTS	Regulatory Technical Standards
TV	Trading Venue
XML	eXtensible Markup Language
Submitting entity	An Investment Firm or Market Operator operating a trading venue on which commodity derivatives or derivatives on emission allowances are being traded from which Weekly Reports are received
Person Type	(a) investment firms or credit institutions; (b) investment funds, either an undertaking for collective investments in transferable securities (UCITS) as defined in Directive 2009/65/EC, or an alternative investment fund manager as defined in Directive 2011/61/EC; (c) other financial institutions, including insurance undertakings and reinsurance undertakings as defined in Directive 2009/138/EC, and institutions for occupational retirement provision as defined in Directive 2003/41/EC; (d) commercial undertakings; (e) in the case of derivatives on emission allowances, operators with compliance obligations under Directive 2003/87/EC
Commodity Report	Data sent by one Investment Firm or Market Operator operating a trading venue for one commodity derivative or derivative on emission allowances traded on its trading venue
Report File	File sent by one Investment Firm or Market Operator operating a trading venue that may contain one or more commodity reports

2 Weekly Aggregated Position Data

2.1 Overview of the system

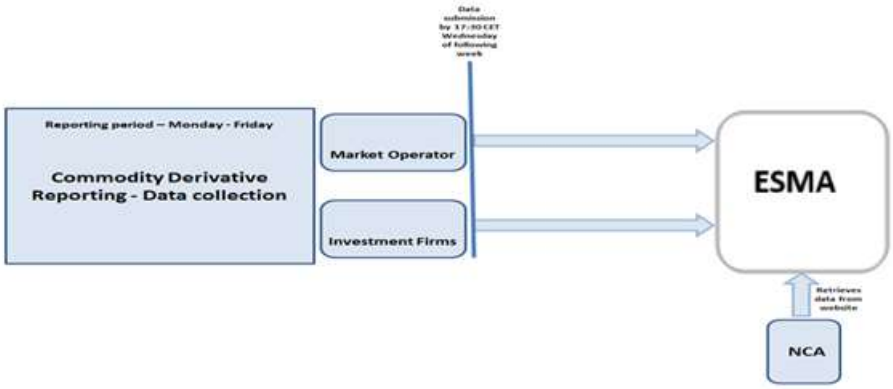


FIGURE 1– POSITION DATA PROCESSING FLOW

The first part of the application is the upload interface. The submitting entity has in its possession a set of aggregated position data for the reporting period (Monday – Friday). The submitting entity sends the data to ESMA through the EAMFT system by uploading files on HUBEX. Submitting entities will use HUBEX for data submission while NCAs will download (via the website) the data once it has been successfully validated and published on ESMA's website.

Submitting entities will report the data using the same standardised ISO 20022 XML format. The system processes the data, checks its quality, updates the central database and publishes the data on the website.

ESMA will generate two types of files:

- A copy of the validated aggregated position data file, containing the weekly aggregated position data as at the close of business of the previous Friday.
- Feedback files, which provide the submitting entities with feedback on the position data they sent to ESMA as well as reminders.

All files are made available to NCAs through ESMA's website. NCAs will have the option to download the files and load them into their local database.

On a weekly basis, the ESMA system will expect to receive data from submitting entities when both of the following two thresholds are met:

a) 20 open position holders exist in a given contract on a given trading venue; and

b) the absolute amount of the gross long or short volume of total open interest, expressed in the number of lots of the relevant commodity derivatives, exceeds a level of four times the deliverable supply in the same commodity derivative, expressed in number of lots.

Where the commodity derivatives do not have a physically deliverable underlying asset and for derivates on emission allowances, point (b) above shall not apply.

The threshold set out in point (a) above shall apply in aggregate on the basis of all the categories of persons regardless of the numbers of position holders in any single category of persons.

For contracts where there are less than five position holders active in a given category of persons, the number of position holders in that category shall not be published. In this case, the field shall be populated with '.' (full stop).

For contracts that meet the conditions set out in points (a) and (b) for the first time, submitting entities shall publish the contract's first weekly report as it is feasibly practical, and in any event no later than 3 weeks from the date on which the first thresholds are first triggered.

Where the conditions set out in points (a) and (b) are no longer met, trading venues shall continue to publish the weekly reports for a period of three months.

The obligation to publish the weekly report no longer applies where the conditions set out in threshold requirements points (a) and (b) above have not been met continuously upon expiry of that period.

2.2 File transfer flow

2.2.1 Overview

This chapter aims to specify the flow of files exchanged between the submitting entities and ESMA.

It defines not only how, but also when the files will be exchanged.

2.2.2 Users

Submitting entities – authorised users representing an Investment Firm or a Market Operator operating a trading venue which trades commodity derivatives or derivates on emission allowances. The authorised users will have access to the HUB to upload position data and download and process the feedback files.

NCAs Users – authorised users representing a National Competent Authority, having the possibility to view and/or download data provided on ESMA's public website.

Public Users: the general members of the public and investors interested in the published information. They connect to the system using the public web interface to view and/or download data provided on ESMA's public website.

2.2.3 Main principles

The focus of the proposed solution is based on compliance with industry standards, which ensure the reliability of the system that is to be built.

2.2.3.1 Upload interface – HUBEX

The upload interface should be used by the submitting entities.

The position data fields to be provided are shown in Annex I – Commitment of Trader Report Fields.

The data may be provided by the submitting entities in one or multiple files and a file must contain at least one report, one report for each commodity derivative or derivates on emission allowance. Within a given file, it may contain one or several commodity reports (one for each commodity derivative or derivative on emission allowance)

2.2.3.2 Position Data processing

The Position data sent by the submitting entities will be validated by ESMA and once the data has been successfully validated, the data will be loaded into the database.

The ESMA system will gather files continuously, the files received after the relevant cut-off time will also be processed as and when received. The system will control all files received and send a feedback file to the submitting entity. The position data may be rejected if there are errors. If there are no errors, a feedback file stating that it was fully accepted will be sent back to the submitting entity.

The ESMA system will process all new entries and updates and make changes accordingly in the central database.

Once the position data has been successfully validated, a copy of the file will be made available to NCAs for download on ESMA's website.

2.2.3.3 Download interface – ESMA website

Once the position data file provided by the submitting entity has been successfully validated and published, the respective NCA should download a copy of the file from the website.

If a national competent authority has a problem downloading/retrieving a file, then it should contact ESMA support desk.

2.2.3.4 Upload Interface

This chapter specifies the file content, the structure and the process that must be executed by submitting entities to submit data to ESMA.

The position data provided by submitting entities will cover the requirements for MiFID II Article 58.

2.2.4 Collection of Position Data

The following checks will be performed on the submitted data:

- Check that a report with the same attributes of “Venue product code” (with “report status” of NEWT and ‘’date to which the weekly report refers’’) has not been reported already.
- “Date to which the Weekly Report refers” must be less than the current system processing date and be in a sensible range (not prior than 31-12-2017).
- “Date and time of Publication” must be a valid date and time and not prior than 31-12-1899.
- Report status must be NEWT, AMND or CANC.
- Long and short fields must be numeric.
- Sum of “Risk reducing directly related to commercial activities’ and “Other” must be equal to “Total” field

2.2.5 Business fields

2.2.5.1 Overview

This chapter defines the initial set of characteristics which will be sent to ESMA. The reference data files transmitted by submitting entities will use the same standardised ISO 20022 XML format.

On a weekly basis before the agreed cut-off time, each submitting entity will provide the aggregated positon data of the previous Monday – Friday reporting period to ESMA.

2.2.5.2 Description of business fields

The list of position data fields to be received by the system is described in Table 3 of the Annex I of the Implementing Technical Standard on MiFID II Article 58.

Further to the below specified validation rules for each field, validations will be performed, based on the validations in Annex IV – File and Content Errors~~Annex IV – File and Content Errors~~. This set of validations checks some of the data items for correctness or completeness.

The field descriptions below contain several sections:

- Format: Field format according to definitions of Table 2
- XPath: Location on XSD schema to report this element
- Definition: Explain what the field should contain

- Standard: The standard to use in order to populate the field (if applicable)
- Validation: Specific validation rules to be applied to this field (if applicable)
- Note: If additional clarification is needed, it is included in this field

For all business fields, XPath is relative to the following prepended text “Document/ FinInstrmRptgCmmdtiesDerivsWklyRpt”.

2.2.5.2.1 Name of Trading Venue

- Format: {ALPHANUM-350}
- XPath: “FinInstrmRptgCmmdtiesDerivsWklyRpt/TradgVn/Nm”
- Definition: Field populated with the full name of the trading venue
- Validation: Field must be populated with alphanumeric values
- Note:

2.2.5.2.2 Trading Venue Identifier

- Format: {MIC}
- XPath: “FinInstrmRptgCmmdtiesDerivsWklyRpt/TradgVn/Id”
- Definition: Segment MIC for the submitting entity, where available, otherwise operating MIC
- Standard: MIC code (ISO 10383 standard)
- Validation: Validation of submitted value latest MIC reference list provided by the Registers system
- Note:

2.2.5.2.3 Date to which the Weekly Report refers

- Format: {DATEFORMAT}
- XPath: “FinInstrmRptgCmmdtiesDerivsWklyRpt/WklyRptRefDt”
- Definition: Date corresponding to the Friday of the calendar week on which the position is held
- Standard: The format of this date should follow the ISO 8601 Date Format standard YYYY-MM-DD
- Validation: The ‘’Date to which the Weekly Report refers’’ should not be later than the current system processing date
- Note:

2.2.5.2.4 Date and time of Publication

- Format: {DATE_TIME_FORMAT}
- RTS Field number: 4
- XPath: “FinInstrmRptgCmmdtiesDerivsWklyRpt/PblctnDtAndTm”
- Definition: The date and time on which the report is published on the trading venue’s website

- Standard: The date should be sent in the ISO 8601 date format standard YYYY-MM-DDThh:mm:ss.ddddddZ. Dates and times must be reported in UTC.
- Validation: Dates and times should be valid (e.g. 29 February 2015 is not an acceptable date)
- Note:

2.2.5.2.5 Name of Commodity Derivative Contract, Derivative on Emission Allowance

- Format: {ALPHANUM-350}
- XPath: “FinInstrmRptgCmmdtiesDerivsWklyRpt/Pdct/DerivNm”
- Definition: The name of the commodity derivative contract and derivative on emission allowance identified by the venue product code
- Standard: The character set used should be UTF-8
- Validation: Field must be populated with alphanumeric values
- Note:

2.2.5.2.6 Venue Product Code

- Format: {ALPHANUM-12}
- XPath: “FinInstrmRptgCmmdtiesDerivsWklyRpt/Pdct/Id”
- Definition: Field to be populated with a unique and unambiguous alphanumeric identifier utilised by the trading venue grouping together contracts with different maturities and strike prices in the same product
- Standard: The character set used should be UTF-8
- Validation: Field must be populated with alphanumeric values
- Note:

2.2.5.2.7 Notation of the position quantity

- Format: ‘LOTS’. ‘MWHO’, ‘MBTU’, ‘THMS’
- XPath: “FinInstrmRptgCmmdtiesDerivsWklyRpt /PosQty/PosInLots”
- Definition: This field shall be populated with the units used to report the number of positions
- Standard:
- Validation: Field must be populated with one of the four values mentioned above
- Note:

2.2.5.2.8 Report type

- Format: ‘COMB’, ‘FUTR’
- XPath: “FinInstrmRptgCmmdtiesDerivsWklyRpt/RptTp”
- Definition: Indication as to whether the report is the one combining positions on options and futures positions, or the one excluding options positions.
- Standard:

- Validation: Field must be populated with one of the two values mentioned above
- Note:

2.2.5.2.9 Report Status

- Format: 'NEWT', 'AMND', 'CANC'
- XPath: "FinInstrmRptgCmmdtiesDerivsWklyRpt/RptSts"
- Definition: Indication as to whether a report is new, a previous report is amended or cancelled from the system
- Standard:
- Validation: Field must be populated with one of the three values mentioned above
- Note:

2.2.5.2.10 Number of positions

- Format: {DECIMAL-15/2}
- XPath: "FinInstrmRptgCmmdtiesDerivsWklyRpt/NbOfPos"
- Definition: Field to be populated with the quantity held on Friday at the end of the trading day. The quantity should be expressed either in number of lots (when the position limits are expressed in lots) or units of the underlying. Option contracts shall be included in the aggregation and reported on a delta-equivalent basis
- Standard:
- Validation: Numeric number validation
- Note:

2.2.5.2.11 Changes since the previous report (+/-)

- Format: {DECIMAL-15/2}
- XPath: "FinInstrmRptgCmmdtiesDerivsWklyRpt/InvstmtFnds/…/…/ChngsSncLastRpt''
- Definition: Field to be populated with the position quantity reflecting the increase or decrease in the position with respect to the previous Friday
- Standard:
- Validation:
- Note: In the case of a decrease in the position, the number shall be expressed as negative number prefixed with '-' (minus)

2.2.5.2.12 Percentage of the total open interest

- Format: {DECIMAL-5/2}
- XPath: "FinInstrmRptgCmmdtiesDerivsWklyRpt/…/…/…/OpnIntrst"
- Definition: Field to be populated with the percentage of the total open interest represented by the position
- Standard:
- Validation:

- Note: Expressed as a percentage (e.g. 7.0 means 7% and 0.3 means 0.3%).

2.2.5.2.13 Number of persons holding a position in each category

- Format: {INTEGER-7} or {ALPHANUM-1}
- XPath: "FinInstrmRptgCmmdtiesDerivsWklyRpt/……/…/Ttl/NbOfPrsns"
- Definition: Field to be populated with the number of persons holding a position in the category
- Standard:
- Validation:
- Note: If the number of persons holding a position in the category is below the threshold, the field shall be populated with '.' (full stop)

2.2.6 Definitions and codes used on Description of Business Fields

SYMBOL	DATA TYPE	DEFINITION
{ALPHANUM-n}	Up to n alphanumerical characters	Free text field.
{DATEFORMAT}	ISO 8601 date format	Dates shall be formatted by the following format: YYYY-MM-DD.
{DATE_TIME_FORMAT}	ISO 8601 date and time format	- Date and time in the following format: YYYY-MM-DDThh:mm:ss.dddddd Z. - 'YYYY' is the year; - 'MM' is the month; - 'DD' is the day; - 'T' – means that the letter 'T' shall be used - 'hh' is the hour; - 'mm' is the minute; - 'ss.dddddd' is the second and its fraction of a second; - Z is UTC time. Dates and times shall be reported in UTC.
{DECIMAL-n/m}	Decimal number of up to n digits in total of which up to m digits can be fraction digits	Numerical field for both positive and negative values. - decimal separator is '.' (full stop); - negative numbers are prefixed with '-' (minus);

		values are rounded and not truncated.
{INTEGER-n}	Integer number of up to n digits in total	Numerical field for both positive and negative integer values.
{MIC}	4 alphanumerical characters	Market identifier as defined in ISO 10383

TABLE 1 - DEFINITIONS AND CODES OF BUSINESS FIELDS

2.2.7 File information

In addition to the business information described above, the sender will have to provide file information which contains characteristics describing the file itself. This information should be included on the Business Application Header and on the Message Header.

The field descriptions below contain several sections:

- **Format:** Field format according to definitions of table 2
- **XPath:** Location on XSD schema to report this element
- **Definition:** Explain what the field should contain
- **Standard:** The standard to use in order to populate the field (if applicable)
- **Validation:** Specific validation rules to be applied to this field (if exists)
- **Note:** If additional clarification is needed, it is included in this field

For the Business Application Header fields, the identified Xpath is the absolute value.

For the message header fields, Xpath is relative to the following prepended text “Document/ CmmdtsDrvtvsWklyRptg /RptHdr/RptgNtty/”.

3 Business Application Header

3.1 File information

3.1.1 Business Application Header (BAH)

The information which needs to be filled on the BAH is:

3.1.1.1 From: Organisation Identification: Identification: Organisation Identification: Other

- Format: {ALPHANUM-35}

- XPath: “AppHdr/Fr/OrgId/Id/OrgId/Othr/Id”
- Definition: This field contains the MIC code of the submitting entity which sends the information.
- Standard: The submitting entity should be identified by the ISO 10383 four-character MIC code. All the data should be submitted before the cut-off time of 5:30 PM CET for the reporting period of the previous week, Monday – Friday.
- Validation: If the sender is a submitting entity, a valid MIC Code should be populated according to the latest MIC reference list published by the Register system. If Trading Venue field is not populated with the MIC code of the submitting entity (or of its segment) which reports the data, the data shall be rejected.
- Note:

3.1.1.2 To: Organisation Identification: Country of Residence

- Format: {COUNTRYCODE_2}
- XPath: “AppHdr/To/OrgId/CtryOfRes”
- Definition: This field contains the country code of the receiving entity.
- Standard: The alpha 2 character 3166 ISO country code.
- Validation: It should be filled in with ‘EU’ as this corresponds to ESMA.

3.1.1.3 From: Organisation Identification: Country of Residence

- Format: {COUNTRYCODE_2}
- XPath:
- Definition:
- Standard:
- Validation:
- Note: N/A - This field to be left blank.

3.1.1.4 Business Message Identifier

- Format: {ALPHANUM-35}
- XPath: “AppHdr/BizMsgIdr”
- Definition: Unambiguously identifies the Business Message to the MessagingEndpoint that has created the Business Message.
- Note: It should be filled in with the “<Key1 >-<Key2>” part of the name of the file to be sent.

3.1.1.5 Message Definition Identifier

- Format: {ALPHANUM-35}
- XPath: “AppHdr/MsgDefIdr”
- Definition: Contains the Message Identifier that defines the Business Message.
- Validation: It must contain a Message Identifier published on the ISO 20022 website.
- Note: It should be filled in with the message name as approved by ISO.

3.1.1.6 Creation Date

- Format: {DATE_TIME_FORMAT}
- XPath: “CreDt”
- Definition: Date and time when this message was created.
- Standard: The date should be sent in the ISO 8601 date format standard YYYY-MM-DDThh:mm:ss.ddddddZ. Dates and times must be reported in UTC.

3.1.1.7 Message Header

The information contained on the Message Header is:

3.1.1.7.1 Reporting Period: Date

- Format: {DATEFORMAT}
- XPath: “RptgPrd/Dt”
- Definition: The reporting date.
- Standard: The format of this date should follow the ISO 8601 Date Format standard YYYY-MM-DD.
- Note: This field is not used by the system as per current specifications.

3.1.1.7.2 Reporting Entity: National Competent Authorities

- Format: {COUNTRYCODE_2}
- XPath:
- Definition:
- Standard:
- Validation: For position data reporting, this field will not be populated.

3.1.1.7.3 Reporting Entity: Market Identification Code: Id

- Format: {MIC}
- XPath: “MktIdCd/Id”

- Definition: This field contains the MIC identifier of the submitting entity which reports the information.
- Standard: ISO 10383 MIC code
- Validation: A valid MIC Code should be submitted according to the latest MIC reference list published by the Register system.
- Note: When the submitting entity is reporting information related to one of the Trading Venues operated by them, this field should be filled with the segment MIC of that Trading Venue.

3.1.1.7.4 Submission Date Time

- Format: {DATE_TIME_FORMAT}
- XPath: “SubmissnDtTm”
- Definition: This field contains the Date and time when the report was originally received at the submission destination.
- Standard: The date should be sent in the ISO 8601 date format standard YYYY-MM-DDThh:mm:ss.ddddddZ. Dates and times shall be reported in UTC.
- Validation: The Submission Date Time should be no later than the Reporting Period
- Note: On the absence of information on this field ESMA will simply take into account the reception Date and time of the file at ESMA systems.

3.1.2 Business data submission file

The business data submission file is the file which encapsulates the Business Application Header (BAH), Message Header (MHD) and Business Fields (BF).

In this file the following Xpaths are prepended to the previously defined XPaths:

- Business Application Header – “BizData/Hdr”
- Message Header – “BizData/Pyld”
- Business Fields - “BizData/Pyld”

3.1.3 Naming Convention, compression and EAMFT

3.1.3.1 Principles

It has been decided that exchanged files will not be encrypted, nor signed, but just compressed. File level encryption is not required as the communication layer uses an encrypted protocol e.g. SFTP, FTPS, HTTPS. On top of this, the information in itself is not classified as confidential.

3.1.3.2 Naming convention

All files containing the position data list must use the following naming convention:

<Sender>_<CountryCode>_<FileType>_ <Recipient>_<Key1>_<Key2 >.xml

1. <Sender> is a 5-character identifier of the sender of the data. Depending on the type of the entity sending the data, the identifier must be the following:
    a. TXXXX where XXXX is a MIC code corresponding to the submitting Trading Venue (e.g. XEUR, XLON …).
2. <Filetype> is a 6-character field identifying the type of data contained in the file.
3. <Recipient> is a 5-character field that identifies the receiver of the file. If the recipient is the ESMA system, the attribute shall be set to COD58.
4. <Key1> is a 5-letter character code which is reused by the system when generating a feedback file related to this file.
5. Key1 can be used as needed by the Submitting Entity. For the submitting entity may want to populate it with T<MIC code of a TV> referring to the TV which submitted the file; this way, the name of the ESMA feedback file will contain the identification of the TV which submitted the file and will receive the back file.
6. If not needed by the submitting entity, any 5-letter character code can be used.
7. <Key 2> A 2-digit attribute. It is the year when the file has been generated. This allows for easy archiving of the files.the file.

This naming convention is checked by the EAMFT.

Examples:

1- Trading Venue, London Metal Exchange sends a position data file and their Competent Authority has requested to receive a copy of the feedback file (stored on the extranet). The file should be named as:

TXLME_DATPOS_COD58_XXXXX_17.xml

2- Euronext Paris sends a position data file and their Competent Authority has not requested to receive a copy of the feedback file. The file should be named as:

TXPAR_DATPOS_COD58_XXXXX_17.xml

3.1.3.3 Compression

All files exchanged through the system have to be compressed using a ZIP algorithm. The extension of the files would then become .zip before being exchanged through the EAMFT. The zip file contains only one compressed xml file. The zip file has the same filename as the xml file.

3.1.3.4 ESMA Managed File Transfer System (HUBEX

Submitting entities would need to establish a connection to ESMA's production HUB, HUBEX in order to be able to send the files to ESMA. To do so, they will simply upload their position

data files (DATPOS) in the ‘outgoing’ directory of their area. The file will be then routed via HUBEX.

3.1.4 Upload Error Handling

3.1.4.1 Overview

This chapter defines the error handling system between the Trading Venues and ESMA IT system as well as the transmission errors.

3.1.4.2 Feedback files

A feedback is produced by the position date system for each file received. The feedback file is made available through HUBEX to be retrieved by the submitting entity which has sent the position data file, or in case of transmission errors detected by HUBEX a protocol level error is reported and no feedback file is generated.

A feedback file facilitates controlling that the respective file has been received and provides information on errors if any. In the scheme above, feedback files can be generated either by the position data system or the EAMFT (HUBEX) and sent back to the submitting entity.

Two cases can be observed when a submitting entity sends a position data file:

- File sent is correct (without any errors)
    - A feedback file is sent back by the position data system to confirm that the file has been received and there are no errors.
- File sent has errors
    - A feedback file is sent back by the position data system to inform that the file has been received and errors have been discovered.
    - The submitting entity shall send corrections to the errors noticed previously.

Generated feedback messages could contain three types of information:

- Transmission errors: every error which could be detected by HUBEX as for example naming convention errors. A “permission denied” message error is generated in this instance.
- File errors: errors detected by the weekly position data processing system which prevents it reading files received. For example, compression, XML format etc. These will be provided by a position data feedback file.
- Content errors: errors concerning records on the file/report submitted- as an example that may be a duplicate record or an incorrect MIC code. These will be provided by a position data system feedback file.

3.1.4.3 Error correction

There are three types of errors:

1. Transmission errors
2. File errors
3. Record content errors

From the point of view of the position data system:

- When transmission errors are detected, it generates a message and does not load any records of the file into the database.
- When file errors are detected, it generates a feedback file and does not load any records of the file into the database.
- When content errors are detected, it generates a feedback file and does not load any records of the file into the database.
- It is the responsibility of the submitting entity to ensure that all message errors/feedback files are analysed and all rejected records are corrected:
- If a feedback regarding transmission errors is received, these must be corrected and the entire file resent.
- If a feedback containing file errors is received, these must be corrected and the entire file resent.
- If a feedback containing content errors is received, corrections should be made on the records. These records will then be resent within a regular file.

3.1.4.4 Transmission errors

First element of the chain is the EAMFT system. When a submitting entity submits/uploads a file, EAMFT will perform preliminary checks listed below:

- Checks that the SenderCode matches the sender account
- Checks that the file naming convention is respected
- Checks that the sender is allowed to send files to the receiver (optional rule)
- Checks that the file size is lower than the remaining disk quota space

If any of these checks fails, the sender will not be able to upload the file. EAMFT will return a ‘permission denied’ error. In this case, the file is not forwarded for processing.

3.1.4.5 File errors

This part deals with errors corresponding to the file and any other kind of error which implies that the file is unreadable or unreliable. These controls will be run by the weekly position data system and the corresponding feedback file generated by the system, and sent back to the

sending authority or trading venue. In addition, once a file error has been discovered, even if the file is readable, the whole file is rejected and the system does not process any record.

Control executed by ESMA system	Error Reference	Error Message	Corrective Action
The ISO 20022 Message Identifier in the BAH (*.xsd) is not valid.	FIL-007	The ISO 20022 Message Identifier in the BAH must refer to the latest schema approved	Correct the Message Identifier according to the latest XSD schema
Validate that the file sent fits to the corresponding XML schema. For information purposes, if there is an error in the validation, the error message produced by the XML parser is displayed in place of [result of XML validation].	FIL-008	The file structure does not correspond to the XML schema : [result of XML validation]	Check the result of the validation; they should correspond to formats defined in this document see *XML chapter*.

TABLE 2-FILE ERRORS

The control associated with error code FIL-008 is really important as it checks the whole XML structure and format of all fields. If one field is not in the right format, the whole file is rejected. It is simple, but really strong. In order to avoid too many difficulties, it is strongly advised to use the XML schemas to generate files, validate the content, compress them and send them out after going through these steps.

The outcome of these errors is an unreliable file. If during the processing of the position data the system discovers one of these errors, it will not load the file. It will send a feedback file including the error details (see above). The submitting entity must process this feedback file, correct the problem and send a correct file.

3.1.4.6 Content errors on position data

Even when all previous controls have been executed, errors may still be detected at this later stage. In which case, you should follow the same error handling procedure. These errors could be business or technical. The errors are simple semantic errors but not complex semantic errors.

Control executed by Weekly Position system	Error Reference	Error Message	Action

"Date to which the Weekly report refers" must be less than the current system processing date and be in a sensible range (not prior than 31-12-2017)	POS-003	The "Date to which the Weekly Report refers" refers to a date that is in the future	Check the 'Date to which the Weekly Report refers' and correct it.
"*Date and time of Publication*" must be a valid date and time and not prior than 31-12-1899.	POS-004	The "Date of Publication" is before '31-12-2017'	Check 'Date of Publication' and correct it.
The report status of the record is not consistent with the previous record in the database.	POS-005	The report status of the submitted record is inconsistent with the status of record in the database	Check Report Status of the record reported and correct it.
Long and short fields must be numeric	POS-006	The values in the Long/Short fields are not numeric	Check the field in error and correct it.
Sum of "*Risk reducing directly related to commercial activities'* and "*Other*" must be equal to "*Total"* field	POS-007	The sum of the fields "Risk reducing directly related to commercial activities' and "Other" is not equal to the value in the ''Total'' field	Check the field in error and correct it.
Validate that the MIC code provided in the TradingVenueIdentification1.Nm element of the XML exists in the relevant COD58 DB table	POS-009	The MIC code (Id) provided in the TradingVenueIdentification1.Nm element of the XML does not exist in the relevant COD58 DB table	Check the field in error and correct it.

TABLE 3 - CONTENT ERRORS

3.1.4.7 HUBEX Error Message

When a transmission error is detected by HUBEX during the file upload process, a 'Permission denied' error message is displayed.

3.1.4.8 Content and file errors feedback files

Content and file errors feedback files are generated by the position data system to check that the file has been received, and provide information on acceptance or errors. There is one feedback file per data file received.

Feedback files contain different type of data:

- Information on the original file
- Errors in the file

3.1.4.8.1 Naming convention

A position feedback file will follow the naming convention detailed described in 2.2.8.2 with the different component filled as:

- <Sender> will be COD58 as the file comes from Weekly position system
- <Filetype>will be FDBPOS
- <Recipient> will be Txxxx, xxxx being the MIC of the submitting entity which has sent the original file
- <Key1> would be filled according to the type of Submitting Entity. T<MIC code of submitting entity> which originally submitted the file
- <Key 2> will be the current year

3.1.4.8.2 File information

In addition to the information on position data records with errors described below, ESMA will provide file information which contains characteristics describing the file itself and references to the original file. This information should be included on the Business Application Header and on the Message Header.

3.1.5 Business Application Header (BAH)

The information contained on the BAH refers mainly to the original file, and identifies the sender and date of creation of the file. The fields to be used are same as described on **Error! Reference source not found.** with additional information being filled about the related message. They should be populated as follows:

- “From: Organisation Identification: Country of Residence” - should be populated with ‘EU’ as the sender of the feedback file is ESMA.
- “To: Organisation Identification: Identification: Organisation Identification: Other” - should be populated with the ISO 10383 four-character MIC code, of the TV that submitted the file to which this feedback is related to.
- “Business Message Identifier” - should be populated with the “<Originator>-<SequenceNumber>” part of the name of the feedback file.
- “Message Definition Identifier” – should be populated with the approved Message Identifier for the Status Advice Message as published on the ISO 20022 website.
- “Creation Date” - should be populated with the date and time when this feedback message was created.
- “Related” – This field is a complex structure similar to the BAH and should be populated with a copy of the BAH from the message to which this feedback is related to.

3.1.5.1 Message Header

On the description of the message header fields, Xpath is relative to the following prepended text “Document/FinInstrmRptgStsAdvc/MsgRptHdr/StsRptHdr/”.

The information contained on the Message Header is:

3.1.5.1.1 Report Status

- Format: ‘ACPT’, ‘CRPT’, ‘RJCT’
- XPath: “RptSts”
- Definition: Identifies the status of the received report.
- Note: The following table describes the cases when a certain code will be used:

Report Status code	Use cases
ACPT	File was accepted with no content errors
CRPT	File is corrupted
RJCT	File was rejected due to file errors

TABLE 4 - MESSAGE HEADER REPORT STATUS CODES

3.1.5.2 Validation Rule: Identification

- Format: {ALPHANUM-35}
- XPath: “VldtnRule/Id”
- Definition: Unique and unambiguous identification of a validation rule.
- Note: This field would be filled when a file is corrupted (Report status = ‘CRPT’) or in case of an error that originates a rejection of the file (Report status = ‘RJCT’).

3.1.5.3 Validation Rule: Description

- Format: {ALPHANUM-350}
- XPath: “VldtnRule/Desc”
- Definition: Further information on the validation rule as identified in the Identification.
- Note: This field would be filled when a file is corrupted (Report status = ‘CRPT’) or in case of an error that originates a rejection of the file (Report status = ‘RJCT’). The possible values for the Validation Rule fields are included on the following table:

Report status	Validation Rule Identification	Validation Rule Description
CRPT	FIL-001	The file cannot be decompressed.
RJCT	FIL-007	The XML schema name is incorrect. The XML schema name and version must refer to the latest schema approved by ITMG.
RJCT	FIL-008	Validate that the file sent fits to the corresponding XML schema. For information purposes, if there is an error in the validation, the error message produced by the XML parser is displayed in place of [result of XML validation].

TABLE 5 - VALIDATION RULES REPORT STATUS CODES

3.1.5.4 Position data feedback records

On the description of the record error fields, Xpath is relative to the following prepended text “Document/FinInstrmRptgStsAdvc/MsgRptHdr/RcrdSts /”.

Information related to content errors is supported by the following fields:

3.1.5.4.1 Original Technical Record Identification

- Format: {ALPHANUM-35}
- XPath: “OrgnlRcrdId”
- Definition: A unique identifier of the record to be used by ESMA error management routine to identify any error related to it.
- Notes: This field will be populated by a value corresponding to the one provided by the reporting entity which should clearly identify the record where the error was spotted.

3.1.5.4.2 Status

- Format: ‘RJCT’

- XPath: “Sts”
- Definition: Identifies the status advice for the current record.
- Note: The following table describes the cases when a certain code will be used:

Report Status code	Use cases
RJCT	The record was rejected because errors were found

TABLE 6 - FEEDBACK REPORT STATUS CODES

3.1.5.4.3 Validation Rule Identification

- Format: {ALPHANUM-35}
- XPath: “VldtnRule/Id”
- Definition: Unique and unambiguous identification of a validation rule.

3.1.5.4.4 Validation Rule Description

- Format: {ALPHANUM-350}
- XPath: “VldtnRule/Desc”
- Definition: Further information on the validation rule as identified in the Identification.
- Note: The possible values for the Validation Rule Identification and Description fields are included on the following table:

Validation Rule Identification	Validation Rule Description
POS-003	“*Date to which the Weekly Report refers*” must be less than the current system processing date and be in a sensible range (not prior than 31-12-2017)
POS-004	“*Date and time of Publication*” must be a valid date and time and not prior than 31-12-1899.
POS-005	The report status of the record is not consistent with the previous record in the database.
POS-006	Long and short fields must be numeric
POS-007	Sum of “*Risk reducing directly related to commercial activities’* and “*Other*” must be equal to “*Total”* field
POS-009	Validate that the MIC code provided in the TradingVenueIdentification1.Nm element of the XML exists in the relevant COD58 DB table

TABLE 7 - VALIDATION RULE DESCRIPTION

3.1.5.4.5 Position data feedback record format

The XML description and schema of the file can be found in the XSD schema for feedback file.

3.1.5.4.6 Receiving position data feedback files

Position data feedback files are received by the submitting entity using exactly the same process as a regular file. It is sent by ESMA and received in the incoming directory of the authority or trading venue:

- The naming convention is the same and the file type field is populated in with the value FDBPOS for position data feedback
- Files are compressed,
- Files are downloaded from the EAMFT in the incoming directory in the usual way.

If there is a problem with the feedback file, the submitting entity should contact ESMA.

3.1.5.5 Responsibilities of the submitting entity (trading venue)

The submitting entity is responsible for the reliability and availability of its data. With respect to this statement, the submitting entity venue must:

1. Ensure that the file has been received,
2. Ensure that all records are sent in a correct manner.

ESMA uses the feedback files to ensure that everything has been received. The submitting authority or trading venue should check that they have received a feedback file for every file they sent. After one business day, the submitting authority or trading venue should contact the ESMA administrator to ensure that the file has been received if no feedback file was provided.

The submitting entity must read all feedback files and correct the records. The correction of the incorrect records should be done as soon as possible.

Corrected records are resent in a regular position data file, which is not distinguishable from a regular record.

3.1.5.6 Error correction process by the Submitting Entity

It might happen that a submitting entity discovers an error within its system and would like to cancel previously sent position data and send new corrected information.

The files that are sent to the EAMFT are picked up by the ESMA system throughout the day, so as a submitting entity you will receive feedback information throughout the day enabling you to correct erroneous information on the same day.

Since the information will be treated according to First in First out principle the position data in the database will contain only the last information sent to ESMA.

3.1.6 Notifications

3.1.6.1 Overview

This chapter deals with the notification process for missing or incomplete reports, to be sent by the system to submitting entities.

3.1.6.2 Overall dynamics

When the system has completed processing on all files submitted before the applicable cut-off time, it will verify for all submitting entities whether a file was submitted for any of its reporting entities before the applicable submission cut-off time, and generates an email reminder for each missing file to the submitting entity and ESMA Business Officer.

3.1.6.3 Missing reports reminders

The table below presents the controls run by the system in order to detect missing and the reminder message generated for such a scenario:

Control executed by system	Reminder Reference	Reminder description	Action to be taken by submitting entity
For each TV which was supposed to report information the system checks whether any data has been submitted by the TV	Email generation	No file has been submitted to ESMA on the day <<current reporting date>> or was submitted after the cut-off time.	In case of no data submission the missing report should be sent as soon as possible

TABLE 8 - MISSING REPORT ERROR MESSAGE

3.2 XML Format

3.2.1 Overview

This chapter contains all the XML schema's that are needed to exchange position data files with ESMA. It also describes all schema's ESMA uses to communicate with all the NCAs.

3.2.2 Upload

3.2.2.1 XSD schema for position report data file

As defined by XML standards, XML files are described using XML schemas. The XML schema corresponding to position report data files is below. The schema should be used in submitting entities' local systems to generate and validate exchanged files.

This XML schema is also the IT tool to validate data received and sent between reporting entities and ESMA. All reporting entities will use the same XML schema to generate and validate their files.

The main XML schema is "auth.051.001.01". *See attached document auth.051.001.01.xsd.*

3.2.2.2 XML schema structure

Below are the graphical representations at the top level of the position data file XML schema and details of Long and Short positions components. These graphical representations incorporate the fields that were outlined in chapter 2.2.5.

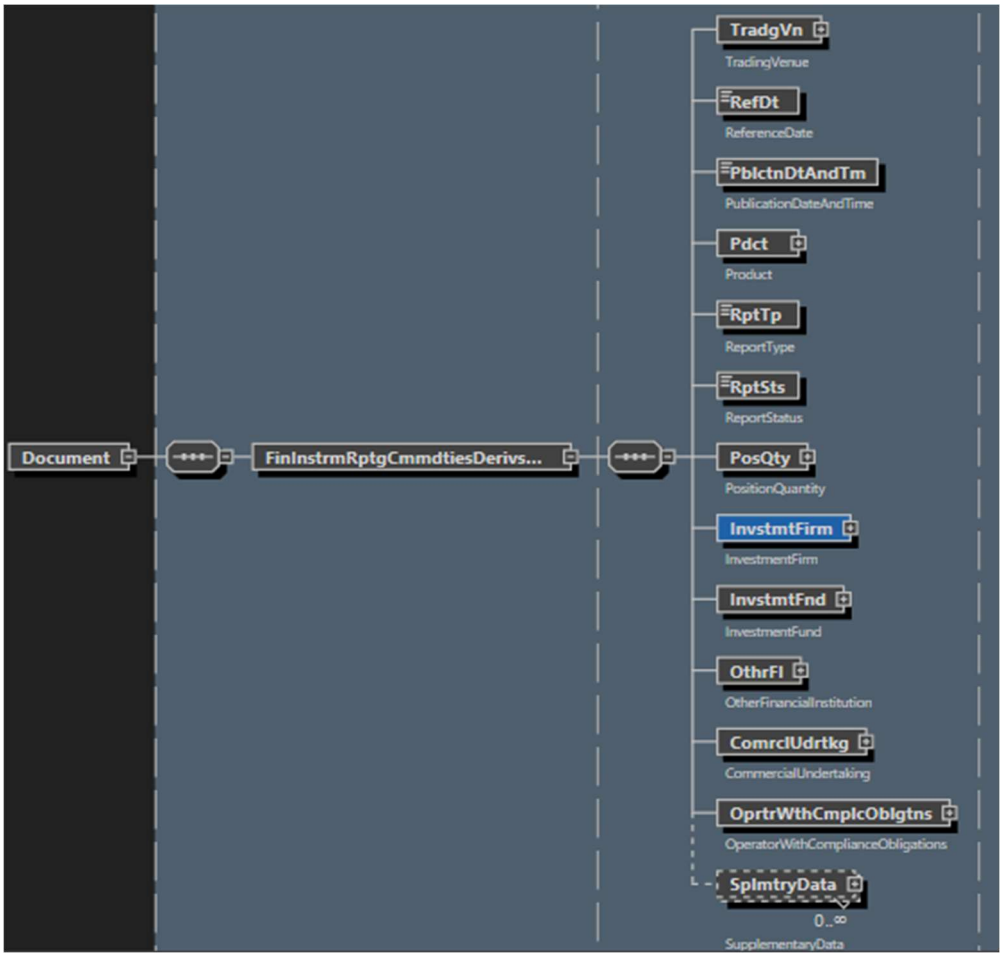
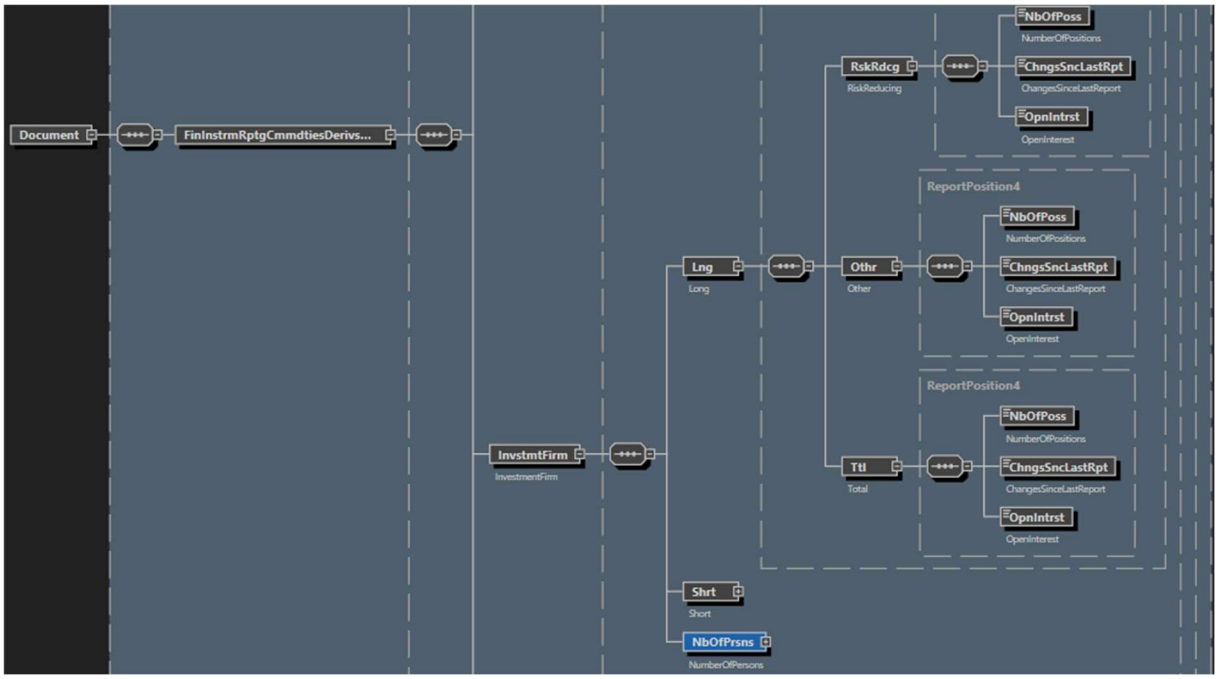


FIGURE 2 - XSD MESSAGE SCHEMA STRUCTURE

The above image illustrates at top level the structure of the position data file that should be sent to ESMA.



The above image shows the fields corresponding to the Long Position attributes.

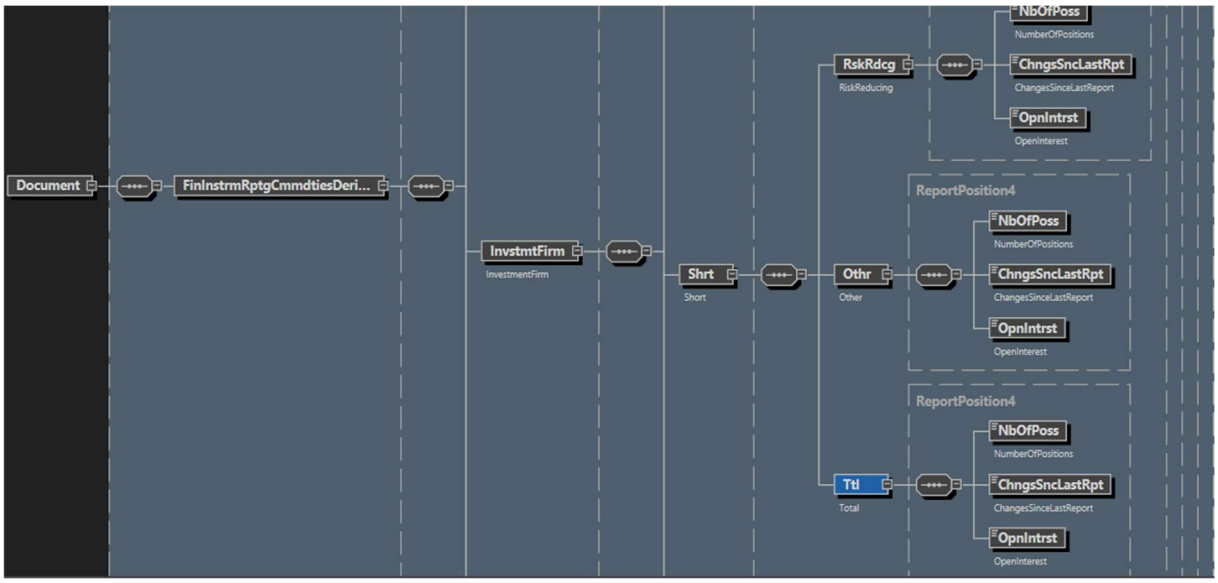


FIGURE 3 - XSD SCHEMA STRUCTURE – LONG/ SHORT POSITION

The above image shows the fields corresponding to the Short Position attributes.

3.2.3 Feedback

3.2.3.1 XSD schema for feedback file

As defined by XML standards, XML files are described using XML schemas. The XML schema corresponding to feedback files is below.

The main XML schema is “auth.031.001.01”.

3.2.3.2 XML schema structure

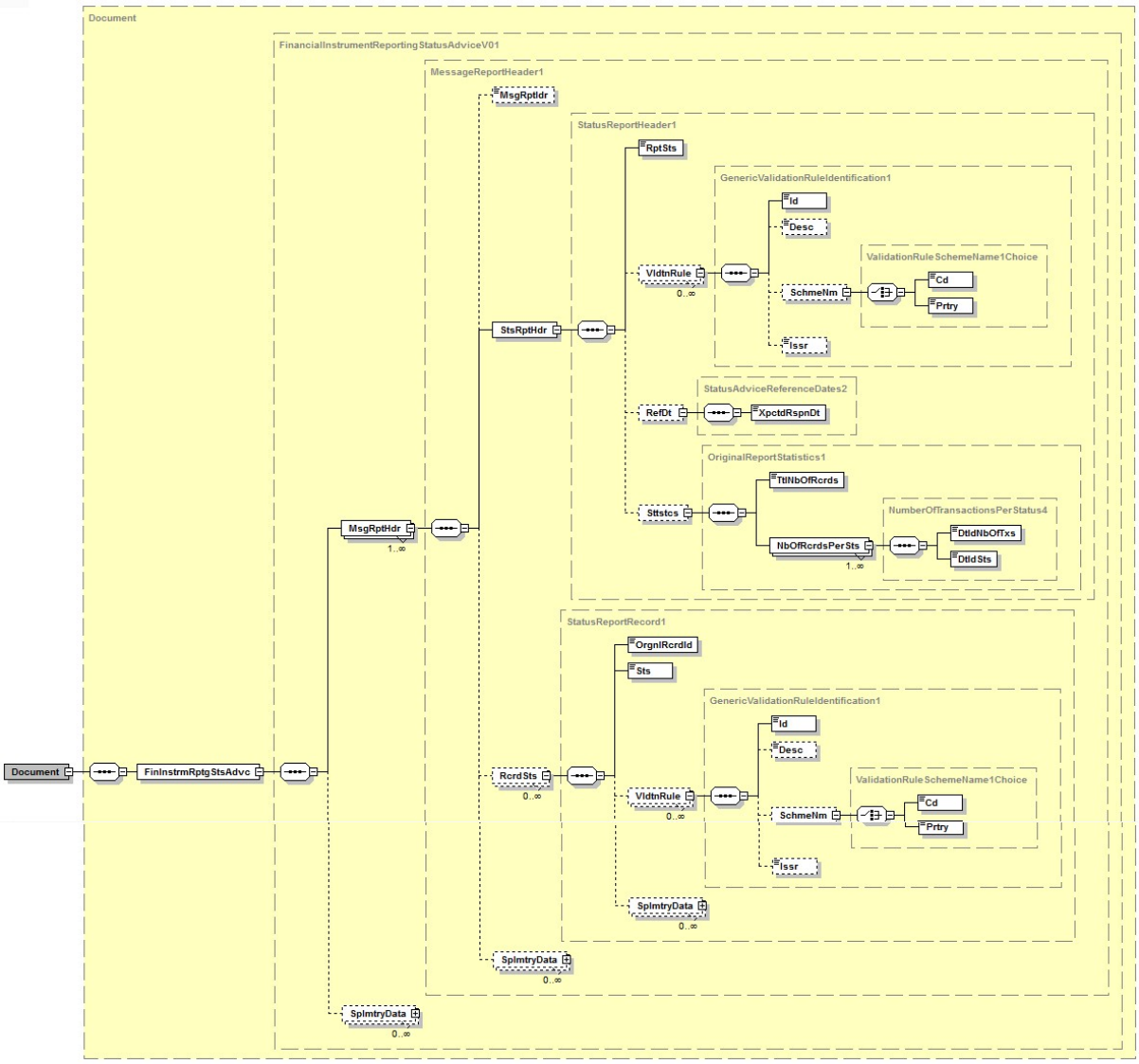


FIGURE 4 - FEEDBACK MESSAGE SCHEMA STRUCTURE

The above image illustrates the structure of the feedback file that should be sent by ESMA.

4 Annexes

4.1 Annex I – Commitment of Trader Report Fields

{Name of Trading Venue}
{Trading Venue Identifier}
{Date to which the Weekly Report refers}
{Date of Publication}
{Name of Commodity Derivative Contract or Derivative on Emission Allowances }
{Venue product code}
{Report status}
{Report type}

	Notion of the position quantity unit		Investment Firms or credit institutions		Investment Funds		Other Financial Institutions		Commercial Undertakings		Operators with compliance obligations under Directive 2003/87/ECs	
			Long	Short	Long	Short	Long	Short	Long	Short	Long	Short
Number of positions		Risk Reducing directly related to commercial activities										
		Other										
		Total										
Changes since the previous report (+/-)		Risk Reducing directly related to commercial activities										
		Other										
		Total										
Percentage of the total open interest		Risk Reducing directly related to commercial activities										
		Other										
		Total										
Number of Persons holding a position in each category			Combined		Combined		Combined		Combined		Combined	
		Total										

4.2 Annex II –Scope of the position data to be submitted

Below is the list of data fields to be submitted by the submitting entities. All the fields are mandatory:

- Name of Trading Venue
- Trading Venue Identifier
- Date to which the Weekly Report Refers
- Date and time of Publication
- Name of Commodity Derivative Contract, Derivative on Emission Allowance
- Venue product code
- Report status
- Report type
- Number of positions
- Notation of the position quantity
- Changes since the previous report (+/-)
- Percentage of the total open interest
- Number of persons holding a position in each category

4.3 Annex III – File naming convention

File Type code	Data	Category	HUBEX folder
DATPOS	File that contains weekly position data to be submitted to the ESMA System.	Incoming file	Incoming
FDBHUB	Feedback files generated by HUBEX on every file submitted to HUBEX.	Feedback file	Outgoing

4.4 Annex IV – File and Content Errors

File Errors

Error Reference	Error Message
FIL-007	The ISO 20022 Message Identifier in the BAH must refer to the latest schema approved
FIL-008	The file structure does not correspond to the XML schema : [result of XML validation]
FIL-001	The file cannot be decompressed.

Content Errors

Error Reference	Error Message

POS-003	The “Date to which the Weekly Report refers” refers to a date that is in the future
POS-004	The “Date of Publication” is before ’31-12-2017’
POS-005	The report status of the submitted record is inconsistent with the status of record in the database
POS-006	The values in the Long/Short fields are not numeric
POS-007	The sum of the fields “Risk reducing directly related to commercial activities’ and “Other” is not equal to the value in the ‘’Total’’ field
POS-009	The MIC code (Id) provided in the TradingVenueIdentification1.Nm element of the XML does not exist in the relevant COD58 DB table