



# **Cboe Europe Regulatory Transaction Reporting Service Description**

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# Contents

<b>1 Overview</b>	<b>3</b>
<b>2 Operational Details</b>	<b>3</b>
2.1 Day <i>T</i> . . . . .	3
2.2 Day <i>T</i> + 1 . . . . .	3
2.3 Disaster recovery . . . . .	4
<b>3 Security and Personally Identifiable Information</b>	<b>4</b>
<b>4 Technical details</b>	<b>4</b>
4.1 Connecting to the service . . . . .	4
4.2 SFTP directory structure . . . . .	4
4.3 Transaction Report Contents . . . . .	5
4.4 File submission . . . . .	5
4.5 Successful file submissions . . . . .	5
4.6 Error Scenarios . . . . .	5
4.7 Transaction Amendment . . . . .	6
4.8 Implementation guidance . . . . .	6
4.8.1 Clarifications . . . . .	6
4.8.2 Additional Details . . . . .	7
<b>5 Registration and testing</b>	<b>7</b>
<b>6 Contact Details</b>	<b>7</b>
<b>References</b>	<b>9</b>
<b>Revision History</b>	<b>10</b>

# 1 Overview

This document describes the Cboe Regulatory Transaction Reporting service. Article 26 of MiFID II's accompanying regulation, MiFIR[1], imposes an obligation on all investment firms to report details of transactions in relevant instruments, which includes all instruments that are traded on EEA regulated markets and MTFs to their home regulator - the Financial Conduct Authority (FCA). Paragraph 5 of that article goes on to say that operators of trading venues must report details of transactions that have taken place on their venues where the firm is not a MiFID Participant and is not therefore subject to a transaction reporting obligation in their own right. The contents of those transaction reports are set out in Regulatory Technical Standard (RTS) 22[4], a piece of secondary legislation.

In order for Cboe to meet its obligations, it has to gather the required information from Participants. Because of the level of detail and the nature of the information required, which will not always be known at the point of order submission, it is not possible to collect all information on orders. Cboe is also mindful that affected Participants will also be required to submit the same type of information to multiple other EEA venues. Accordingly, Cboe has adopted the format for reports that has been developed by ESMA for MiFID Participants[3].

## 2 Operational Details

Participants are required to submit transaction reports for activity on Day  $T$  by 6am London local time on Day  $T+1$ . Participants may upload files at any time, however please note that there may be planned maintenance windows during which the service is unavailable for up to 3 hours. Participants are advised to automatically retry file submission overnight in order to minimise disruption caused by any such downtime, however Trade Desk support will be unavailable outside of core trading hours as indicated in the Participant Manual[7].

### 2.1 Day $T$

- Participants submit transaction reports to the Regulatory Transaction Reporting SFTP site for trades on Day  $T$ .
- During the hours of operation for Regulatory Transaction Reporting:
  - Cboe carries out initial validation of the files, including extracting transactions for reconciliation.
  - Valid transaction reports are forwarded to the FCA's Market Data Processor (MDP) for validation on Day  $T + 1$  (once instrument reference data is published by ESMA).

### 2.2 Day $T + 1$

- All transaction reports must be uploaded by 6am (London local time).
- At 8am (London local time), the FCA validate the supplied transactions against the instrument reference data list published by ESMA.
- At 10am (London local time), Cboe check Participants' submission and reconciliation status. In the event that all transactions are accounted for, no further action is required.
- In the event that there are rejected submissions or volume / notional that is not reconciled with our records, we will inform Participants, providing details of the error. See Section 4.6 for more details.
- Participants submit Regulatory Transaction Reporting corrections which are processed intraday.
- All errors must be corrected by the end of Day  $T + 1$ .

## 2.3 Disaster recovery

In the event of site failover to our secondary data center, Participants will be automatically redirected to the secondary data center. In this situation, Participants may be asked to manually resubmit files that were uploaded prior to the failover but not successfully processed.

## 3 Security and Personally Identifiable Information

It is important to note that the submitted transaction reports, by their nature, contain Personally Identifiable Information (PII). Cboe takes the security of this information seriously and has adopted the following procedures to safeguard this information:

- File transfer between Participants and Cboe will be by SFTP, authenticated by private key;
- IP white-listing is used to control access to the SFTP host;
- All Participant submission files and files submitted to the MDP are encrypted after they are processed;
- The decryption key to gain access to Production data is stored in a separate system to our normal operational system and there is no programmatic access to this key.

Note that these measures apply to the Production environment only. Data submitted to the Certification environment will not be as stringently encrypted for ease of debugging during client testing. Accordingly Participants must submit dummy data that does not contain any PII to the Certification system.

## 4 Technical details

Cboe requires Participants to submit the required data to Cboe by the end of the day on which the transaction occurred (Day  $T$ ). This will allow Cboe to perform appropriate validation and comply with its own obligation to submit the reports to its regulator on Day  $T + 1$ .

The interface for Regulatory Transaction Reporting follows, where possible, the interface defined by ESMA for transaction reporting, taking into account the UK Financial Conduct Authority (FCA) implementation of the interface. In this context, it is important to note that the FCA has not delegated the validation of transaction reports to ESMA.

Details of the FCA's implementation of the interface are given in the Market Data Processor 'Market Interface Specification'[2]. Some additional guidance and clarifications specific to the Cboe implementation are given in Section 4.8.

In addition to forwarding the supplied reports on to the FCA, the Regulatory Transaction Reporting system carries out initial validation of the reports as well as reconciling the transaction reports with our own records of the executed volume and notional for the day. In order to meet the reporting requirements set out by ESMA, we require all records to have been reconciled by 10am on day  $T + 1$ . The error reporting and escalation procedure is described in Section 4.6.

### 4.1 Connecting to the service

Participant files must be supplied via SFTP. Authentication will be carried out via public key authentication only; no password based access will be possible. As part of the process of getting setup on the system, Participants will be supplied with instructions for generating a key to use when accessing the service.

### 4.2 SFTP directory structure

Upon logging in to the SFTP server, participants will be placed in their home directory which contains two folders:

- inbound/dattra: Transaction reports from Participants should be placed in this folder.
- outbound/fdbtra: Feedback files from Cboe will be placed in this folder.

### 4.3 Transaction Report Contents

The list of transaction report attributes is described in Chapter 7 of the Regulatory and Technical Implementing Standards[4]. Further information can be found in the ESMA guideline documentation on Transaction Reporting[3].

The ISO 20022 XML format for the reports is specified in the 'MiFIR - Transaction Data - Reporting' section of the Swift MyStandards Portal[5].

### 4.4 File submission

Analogously to the FCA and ESMA submission systems, Participants must submit their transaction report files by uploading them to the inbound/dattra directory on the SFTP site. Note that Participants will only have write access to the SFTP site so it will not be possible to overwrite or delete existing files on the SFTP site. The files are expected to obey a simplified version of the naming convention defined by the FCA[2]. In particular, the expected naming convention is:

I<Participant LEI>\_DATTRA\_TBCXE\_<sequence number>\_<submission year>.zip

where:

Field	Description
Participant LEI	LEI of the Participant submitting the transaction reports.
Sequence number	Sequence number of the submission, left padded with zeros to 6 figures.
Submission year	The two digit year (eg 17 for 2017) in which the submission file was generated.

Table 1: File naming convention

The key deviation from the ESMA specification is the removal of the version number and previous sequence number. Note that this naming convention is strictly enforced and that any files that deviate from it will be rejected and no further processing of the contents of that file will be carried out. Note that the associated message identifier to be used in identifying the files sent to Cboe and which will be populated in the feedback files we provide will be taken from the file name and consist of <sequence number>\_<submission year>.

### 4.5 Successful file submissions

Participants will be notified of successful file submissions by a feedback file placed in the outbound/fdbtra folder on the SFTP server. In the event of the successful submission of transaction reports, this file should be present within an hour of submission although the timings of this are dependent on the FCA's response time.

### 4.6 Error Scenarios

There are three possible types of error, detailed in Table 2.

<b>Error Type</b>	<b>Description</b>	<b>Handling</b>	<b>Action Required</b>
<b>File Errors</b>	High-level errors (including schema validation errors) that mean that a file can not be processed.	These will be caught by Cboe prior to submission to the FCA. In this case, Cboe will notify Participants via email.	Where the entire file is invalid (eg due to schema validation errors), the file should be resubmitted with an incremented sequence number.
<b>Content Errors</b>	Rejection of individual transactions from a report due to, for example, the currency being invalid.	Cboe will not carry out content validation. This will be carried out by the FCA and the Regulatory Transaction Reporting system will communicate these errors via feedback files placed in the outbound/fdbtra folder on the SFTP site	Submit a new transaction report with an incremented sequence number correcting the data.
<b>Reconciliation Errors</b>	When the volume and / or notional covered by Transaction Reports accepted by the FCA does not match Cboe records.	Cboe will notify Participants of these errors via email or phone.	Submit a new transaction report with an incremented sequence number to account for the discrepancy.

Table 2: Different Error Scenarios

## 4.7 Transaction Amendment

The correction of an erroneous transaction record is carried out by submitting a cancellation of the initial transaction and then submitting a new (amended) transaction record, which may have the same Transaction Reference Number as the cancelled transaction.

More details on the mechanism for doing this are available in the ESMA documentation[3].

There are two deviations from the ESMA specification for amendments submitted to Cboe:

- Cancellations (<Cx1> records) must be submitted in a separate file to the amended transactions (<New> records).
- All cancellations (<Cx1> records) in a file must be for transactions records from the same trading date.

Submissions that do not obey these requirements will result in a File Error, as described above.

## 4.8 Implementation guidance

This section provides clarification on the technical details of the requirements set out in the MDP specification[2] and some additional details specific to the implementation of the Regulatory Transaction Reporting system.

### 4.8.1 Clarifications

- **Transaction Reference Numbers** (contents of the TxId field in the XML schema): Must be unique across Participants and dates. It is required that this field be composed of the Market Participant Id and Date as well as the reference number for the transaction unique to that day.
- **Trading Venue Identifiers**: The Trading Venue Identifier for each transaction should be the corresponding Segment MIC for the venue of execution and should not be aggregated to the Operating MIC.

- **Feedback files:** Although the specification allows for one feedback file to contain references to multiple submission files, all feedback files produced by Cboe will contain information on a single submission file only.
- **outbound/fdbtra Folder:** Participants will not be able to delete feedback files from the `outbound/fdbtra` folders. Cboe will delete feedback files after 7 days.

#### 4.8.2 Additional Details

- **Amendments:** We will not accept amendments to transaction reports once we have successfully reconciled the volume and notional against our records.
- **Pending Transactions:** Any transactions that are marked as 'Pending' by the FCA in the feedback files placed in the `outbound/fdbtra` folder on the SFTP site should be considered accepted by Participants unless those transactions are specifically flagged by our reconciliation process.
- **Participants with multiple trading desks:** The responsibility to transaction report is applicable to the Participant. Participants with multiple trading desks will be issued with a single log in and must submit their transaction reports using this login; note that these transaction reports can be in multiple files divided by trading desk provided they obey the correct sequence numbering.

## 5 Registration and testing

In order to gain access to the service, Participants will need to contact Cboe Trade Desk. They will be asked to provide details including the IP from which they will be connecting to the system in order to allow this to be added to the IP whitelist. They will then be provided with the hostname of the SFTP server and a username. They will be provided with detailed instructions for Regulatory Transaction Reporting as well as a conformance test plan that they will need to complete in order to certify to connect to the production system. Please note that the UAT system forwards files to the FCA's MDP Industry Test Environment. This system does not have the same guaranteed level of service as the production system so the time taken for feedback files to be placed in the `outbound/fdbtra` folder on the sftp server are not guaranteed. For transaction reports submitted on day  $T$ , a missing feedback file should only be raised with Cboe tradedesk after 1pm on day  $T + 1$ .

Accepted transaction reports are then reconciled against trades in Certification, allowing Participants to test the whole service interface in Certification. It is important to reiterate that Certification test data should not contain any PII as it will not be protected using the same methodology as the Production system. Participants will only be granted access to the production system after they have successfully completed the conformance testing.

**Note:** The XML schema for the transaction reports has not yet been finalised. The FCA have issued the following guidance on schema versions[6]:

The draft versions of all schemas for MiFIR reporting will remain until after the 3 January 2018. We are not yet sighted on the ESMA release scheduled relating to this change but will communicate it as soon as we have greater clarity. In addition, we are expecting ESMA to make some minor changes to the transaction reporting schemas in the coming months but as yet have no clarity on the ESMA delivery schedule.

Until the the updated schema version is available, our validation will use this draft schema; however, once the updates are announced, we will upgrade the version of the schema in use. Any Participants using the certification system will be notified in advance of this change.

## 6 Contact Details

If you have any queries regarding the Regulatory Transaction Reporting, please contact Cboe Trade Desk. Other useful numbers are set out below.

**Sales Team**

SalesEurope@cboe.com

Phone: +44.207.012.8906

**Participant Services**

ParticipantServicesEurope@cboe.com

Phone: +44.207.012.8902

**Trade Desk**

TradeDeskEurope@cboe.com

Phone: +44.207.012.8901



## References

- [1] European Commission, *Markets in Financial Instruments (MiFIR) - Regulation (EU) No 600/2014* available from [https://ec.europa.eu/info/law/markets-financial-instruments-mifir-regulation-eu-no-600-2014\\_en](https://ec.europa.eu/info/law/markets-financial-instruments-mifir-regulation-eu-no-600-2014_en)
- [2] Sopra Steria, *Market Data Processor Market Interface Specification v2.0, May 2017*, available from the FCA after filling out their MIS Confidentiality agreement <https://www.fca.org.uk/markets/market-data-regimes/market-data-reporting-mdp>
- [3] European Securities and Markets Authority. *Technical Reporting Instructions: MiFIR Transaction Reporting, 26 October 2016* available from [https://www.esma.europa.eu/sites/default/files/library/2016-1521\\_mifir\\_transaction\\_reporting\\_technical\\_reporting\\_instructions.pdf](https://www.esma.europa.eu/sites/default/files/library/2016-1521_mifir_transaction_reporting_technical_reporting_instructions.pdf)
- [4] European Securities and Markets Authority, *Regulatory technical and implementing standards - Annex 1, 28 September 2015* available from [https://www.esma.europa.eu/sites/default/files/library/2015/11/2015-esma-1464\\_annex\\_i\\_-\\_draft\\_rts\\_and\\_its\\_on\\_mifid\\_ii\\_and\\_mifir.pdf](https://www.esma.europa.eu/sites/default/files/library/2015/11/2015-esma-1464_annex_i_-_draft_rts_and_its_on_mifid_ii_and_mifir.pdf)
- [5] Swift, *MyStandards Portal*, accessible after registration from <https://www.swift.com/our-solutions/compliance-and-shared-services/mystandards?AKredir=true>
- [6] FCA, *Additional Q&A, 18 July 2017*, only accessible from the MDP participants portal [https://portal.ite.mdp.fca.org.uk/mdpfca/files/live/sites/MDPUserPortal/files/on-boarding/MDP\\_180717\\_QA.pdf](https://portal.ite.mdp.fca.org.uk/mdpfca/files/live/sites/MDPUserPortal/files/on-boarding/MDP_180717_QA.pdf)
- [7] Cboe Europe Participant Manual [http://cdn.batstrading.com/resources/participant\\_resources/BATS\\_Chi-X\\_Europe\\_Participant\\_Manual.pdf](http://cdn.batstrading.com/resources/participant_resources/BATS_Chi-X_Europe_Participant_Manual.pdf)

## Revision History

20th July, 2017	Version 1.0 Publication Version.
3rd August, 2017	Version 1.1 Add additional information on schema versions.
15th September, 2017	Version 1.2 Clarification on filename format, certification setup, and transaction amendment.
27th September, 2017	Version 1.3 Clarify that zip files should be uploaded. Cancellation files must only contain transactions for a single trade date.
23rd November , 2017	Version 1.4 Extend file submission window to 6am.