



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

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# 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. 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 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[3], 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[2].

## 1.1 Brexit

Cboe Europe's team is in the process of executing its Brexit strategy that includes establishing itself as a EU27 Market Operator in Amsterdam in order to mitigate possible constraints to cross-border trading following the UK's departure from the EU in 2019. Cboe is taking this step to ensure that in the absence of an agreed exit deal between the UK and the EU27, it can continue to serve its customers. However, we will continue to monitor the negotiations and will react as quickly as possible to any developments that would cause us to alter our strategy.

On the assumption that the UK will have a similar transaction reporting requirement on non-UK based firms post-Brexit, Cboe will require entities not based in the UK jurisdiction to submit additional information in order for Cboe to meet its Transaction Reporting obligation derived from Participant trading activity.

Thus, the transaction reporting gateway will provide a mechanism for Participants to transaction report through either of the two Cboe Europe venues to their respective NCA.

In particular, the following three scenarios may arise:

- A UK based firm needing to transaction report to the AFM for trades on Cboe Europe BV.
- An EU-27 based firm needing to transaction report to the FCA for trade on Cboe Europe Limited.
- A non-UK, non EU-27 based firm (Swiss/Cayman/Australian etc) needing to transaction report trades executed on Cboe Europe Limited to the FCA and trades executed on Cboe Europe BV to the AFM.

In the latter case, the Participant will need to upload two separate files to the reporting gateway, one to report transactions to the FCA and the other to report transactions to the AFM.

## 2 Operational Details

Participants are required to submit transaction reports for activity on Day T by 11am 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[6].

### 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.
  - Transaction reports are forwarded to the relevant NCA 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 11am (London local time).
- During the morning of day  $T + 1$  the NCA validates the supplied transactions against the instrument reference data list published by ESMA.
- 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 forwarded by Cboe to the relevant NCA 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 11am on Day  $T + 1$  for transactions which occurred on 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. Details of this are given in the guidance published by ESMA [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 relevant NCA, 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 noon 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 has the following structure:

- uk/ top-level directory – for transaction reporting to the FCA:
  - /uk/inbound/dattra: Transaction reports from Participants to be forwarded to the FCA should be placed in this directory.
  - /uk/outbound/fdbtra: Feedback files from the FCA will be placed in this directory.
- eu/ top-level directory – for transaction reporting to the AFM:
  - /eu/inbound/dattra: Transaction reports from Participants to be forwarded to the AFM should be placed in this directory.
  - /eu/outbound/fdbtra: Feedback files from the AFM will be placed in this directory

It is the responsibility of the firm uploading files to place them in the appropriate directory for the regulator the transaction reports should be submitted to, as well as naming them appropriately. The correct jurisdiction for a given set of transaction reports can be ascertained by the looking at the `regulated_entity` column for the associated symbol in the Cboe Europe Symbol Reference Data File[5]. Note that this means that transaction reports involving the same ISIN, but different symbols, may be need to be transaction reported to different regulators.

## 4.3 Transaction Report Contents

The list of transaction report attributes is described in Chapter 7 of the Regulatory and Technical Implementing Standards[3]. Further information can be found in the ESMA guideline documentation on Transaction Reporting[2].

### 4.3.1 Schema versions

The XML schema for the transaction reports is available from ESMA [4]. Note that the schema version in use by the reporting gateway will change in line with the systems of the relevant NCA's and details of these schema changes will be communicated by Cboe. It is not guaranteed that the two regulators will implement schema changes at the same time, so Participants should be mindful that it may be necessary to upload transaction reports using different versions of the schemas to the different regulators.

## 4.4 File submission

Participants must submit their transaction report files by uploading them to the `inbound/dattra` directory for the appropriate venue on the SFTP site. Note that Participants will only have write access to the `inbound` directories so it will not be possible to overwrite or delete existing files. The expected naming convention for the files is:

`I<Participant LEI>_DATTRA_T<venue>_<sequence number>_<submission year>.zip`

where:

Field	Description
Participant LEI	LEI of the Participant submitting the transaction reports.
Venue	Venue transaction reports are being submitted to (BCXE for the UK venue, CCXE for the EU venue)
Sequence number	Sequence number of the submission, left padded with zeros to 6 figures.
Submission year	The two digit year (eg 19 for 2019) in which the submission file was generated.

Table 1: File naming convention

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 Business 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 corresponding `outbound/fdbtra` directory 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 response time of the NCA.

## 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 NCA. 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 relevant NCA and the Regulatory Transaction Reporting system will communicate these errors via feedback files placed in the relevant outbound/fdbtra directory 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 NCA 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[2].

The ESMA specification advises against the submission of <Cx1> and <New> records in the same file due to the potential ambiguity in processing the response file. Cboe enforce this:

- Cancellations (<Cx1> records) must be submitted in a separate file to the amended transactions (<New> records).

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 by ESMA in [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 directories:** Participants may delete feedback files from the outbound/fdbtra directories once they have been processed. Cboe will automatically delete feedback files after 7 days.

#### 4.8.2 Additional Details

- **Pending Transactions:** Any transactions that are marked as 'Pending' by the relevant NCA in the feedback files placed in the outbound/fdbtra directories 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 relevant NCA's test systems. These systems do 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 directories on the sftp server are not guaranteed.

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.

## 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] 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)
- [3] 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)
- [4] MiFIR Reporting Instructions available from <https://www.esma.europa.eu/policy-rules/mifid-ii-and-mifir/mifir-reporting-instructions>
- [5] Cboe Europe Reference Data file available from [https://markets.cboe.com/europe/equities/support/reference\\_data/](https://markets.cboe.com/europe/equities/support/reference_data/)
- [6] 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.
20th December , 2018	Version 1.5 Account for submission to multiple regulators as a result of Brexit. Remove references to draft XML schema versions. Update links.
22nd February , 2019	Version 1.6 Relax restrictions on cancellations. Extend file submission window to 11am