

# TRANSACTION REPORTING SERVICE DESCRIPTION

Issue 2.4  
26 August 2024

For Third Country Member Firms of:

- London Stock Exchange
- Turquoise Global Holdings Limited (TGHL)
- Turquoise Global Holdings Europe B.V. (TGHE)



**LONDON  
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# 1 Introduction

## 1.1 Purpose

The purpose of this document is to provide Third Country Member Firms (“TC Member Firms”) with information on how to submit their Transaction Reports (TRs) under:

- UK MiFIR for trades executed on London Stock Exchange (LSE) and Turquoise Global Holdings Limited (Turquoise UK) (collectively referred to in this document as “the UK Trading Venues” or “UK TVs”)
- EU MiFIR for trades executed on Turquoise Global Holdings Europe B.V (Turquoise Europe) (referred to in this document as “EU TV”)

TC Member Firms should submit TRs for all on-book and off-book trades executed on the TVs. The UK and EU trading venues will be collectively referred to as “the Trading Venues” or “TVs.”

## 1.2 Readership

This document is relevant to trading, operations, compliance and technical staff within TC Member Firms.

This document is applicable for all TC Member Firms irrespective of whether the firm is already registered on and using LSEG Regulatory Reporting MiFIR ARM.

## 1.3 Documentation

- [1] [The Markets in Financial Instruments \(Amendment\) \(EU Exit\) Regulations 2018](#)
- [2] [MiFIR Detailed Requirements in Delegated Regulation 2017/590 \(formerly known as RTS 22\)](#)
- [3] [ESMA Guidelines on Transaction Reporting](#)
- [4] [ESMA MiFIR ISO20022 Message Specification](#)
- [5] [LSEG Regulatory Reporting MiFIR ARM Documentation](#)
- [6] [The Financial Regulators’ Powers \(Technical Standards etc.\) \(Amendment etc.\) \(EU Exit\) Regulations 2018](#)
- [7] [FCA webpage on Transaction Reporting](#)

## 1.4 Abbreviations

Abbreviation	Description
ARM	Approved Reporting Mechanism
ESMA	European Securities and Markets Authority
EU MiFIR	Markets in Financial Instruments (MiFIR) – Regulation (EU) No 600/2014
FCA	Financial Conduct Authority
LEI	Legal Entity Identifier
NCA	National Competent Authority
TC	Third Country
TR	Transaction Report
TV	Trading Venue
UK MiFIR	Markets in Financial Instruments (Amendment) (EU Exit) Regulations 2018

## 1.5 Document History

Version	Date	Description
1.9	17 December 2020	Added additional guidance in section 4.2 and 4.2.9 around national identifier codes
2.0	15 February 2022	Removal of CurveGlobal, update to Transaction Reporting contact details. Added guidance on INTC reporting
2.1	7 April 2022	Enhancement to fields in the reconciliation process in section 4.3
2.2	20 January 2023	Added recent enhancements implemented in the reconciliation process in section 4.3.1, 4.4.3, 4.4.3.2, 4.3
2.3	03 April 2024	Added section 4.2 Key fields for consideration & 4.2.10 description for Transmission Fields
2.4	26 August 2024	Replaced “Unavista” to reflect as LSEG Regulatory Reporting  Replaced “UV Members” to refer as “ARM Members” and “Non-UV Members” to refer as “Non-ARM Members”  Added the maximum file size limit for file submission under section 4.1

## 2 Operational Process

### 2.1 Overview

TC Member Firms must supply their transaction reports to the Trading Venues for submission to the National Competent Authority (NCA).

UK TVs have partnered with LSEG Regulatory Reporting ARM to expedite and automate the transaction reporting process for trades executed through its systems.

TC Member Firms who have signed up with LSEG Regulatory Reporting for venue reporting to UK TVs will submit their transaction reports using LSEG Regulatory Reporting's MiFIR ARM configuration for TV reporting, subject to the provisions laid out in this guide. These firms will be further referred to as "ARM Members" in this document.

TC Member Firms that do not wish to use the LSEG Regulatory Reporting venue reporting service will be required to submit their transaction reports to the Trading Venues via SFTP and will be subject to the same provisions. These firms will be further referred to as "non-ARM Members" in this document.

TC Member Firms files are collected by LSEG Regulatory Reporting Approved Reporting Mechanism (ARM) and validated against ESMA's Transaction Reporting Validation Rules before automatic onward submission to the relevant NCA. TC Member Firms will be notified of ESMA validation errors or NCA rejection errors via response files generated by the ARM. Any ARM validation errors must be corrected by 9am UTC, one working day after Trade Day (T+1).

Trading Venues will, in addition, reconcile TC Member Firms' report submissions in the ARM against their own internal records and provide feedback to the Member if discrepancies exist.

TC Member Firms are required to provide any corrections indicated by the Trading Venue by 5pm UTC, on (T+2).

### 2.2 Operational Steps

#### 2.2.2 London Stock Exchange, Turquoise and TRADEcho

The following table outlines the timeline for the TR process:

Step	Description	London time specified
#1	TC Member Firm submits transaction reports to the Trading Venue for all trades executed under its member codes on Day T.	From anytime on T, by 9:00am (T+1)
#2	Validation of transaction reports submitted by the TC Member Firm. Transaction reports that pass validation are submitted directly to the NCA.	On receipt from the TC Member
#3	TV reconciles Member activities from the last 24 hours.	10:00 T+1
#4	TC Member Firm submits corrections for ARM validation errors	By 17:00 (T+1)
#5	TC Member Firm is notified via <b>SFTP</b> if reconciliation errors have occurred and <b>response files</b> in the Member's SFTP folder. Applicable to both ARM and non-ARM Members.  TC Member Firm contacts the Regulatory Operations team for any assistance.	From 6:00 (T+2)
#6	TC Member Firm submits corrections for reconciliation errors.	By 17:00 (T+2)

#### Note

If the ARM TC Member does not have SFTP access, the Member must contact the TV to register for access. The Member will NOT be able to receive response files if they do not have SFTP access.

## 3 File Transfer Service

### 3.1 Non-ARM TC Members

File transfer between TVs and the TC Member Firm for all submission and response files will be via the TVs SFTP portal.

TC Members should contact the Technical Customer Relationship Management team and supply the necessary details to set up their SFTP connection.

Non-ARM TC Members will be required to supply the following information to set up SFTP:

- First name
- Last name
- Organisation
- LEI
- Email address
- Phone number
- Source IP address (Separate multiple IP's with ;)
- Public Key (Optional. Name the key Username\_key)

The non-ARM TC Member will be provided with an SFTP login and their public IP's will be configured on their accounts. When created, an automated email will be sent to the email address registered to the account with the username and password. The default password needs to be changed on HTTPS first before connecting via SFTP. The UK TV will supply Member with details of:

- SFTP address
- Port
- Member login ID
- Member SFTP folder

#### Notes

The Member login ID will contain the Member LEI.

The non-ARM TC Member Firm will receive one SFTP for Production and one for UAT.

**The Member must only submit transaction report files to this SFTP login where the Executing Entity ID in the transaction reports matches the Member LEI used in this SFTP login ID. In the case of a member trading as a different Legal Entity on different venues, an SFTP login must be created for each Legal Entity the Member trades as, and the Member must submit their transaction reports for the Executing Entity ID using the matching SFTP login for that LEI.**

### 3.2 ARM Third Country Members

ARM TC Members will be able to use their existing LSEG Regulatory Reporting SFTP portal to receive response files from the TV. If the ARM TC Member does not have SFTP access, the Member must contact the Technical Customer Relationship Management team to register for access in order to receive their TV response files.

### 3.3 SFTP Folder Structure

SFTP Folder	Non-ARM TC Members	ARM TC Members
Incoming/To_LSEG	Submission Files	N/A
Outgoing/From_LSEG	LSEG Regulatory Reporting ARM response files	LSEG Regulatory Reporting NCA response files
	LSEG Regulatory Reporting NCA response files	TV Summary Report
	TV Summary Report	TV Exceptions Report
	TV Exceptions Report	

## 4 Transaction Reporting Guidelines

### 4.1 Submission Files (Non-ARM Members)

1. All submission files must be compliant with the XML ISO20022 schema supplied by the LSEG Regulatory Reporting UK/EU ARM and schemas defined within the XSD files included in the LSEG Regulatory Reporting MiFIR ARM documentation pack. Or in CSV format. The file structure and format are described within the MiFIR ARM Technical Specification [5]. Sample files are also provided.
2. A maximum limit of **100,000** transaction reports will be accepted in a single file. If the number of reports for the day is more than the limit, multiple files must be submitted, populated up to the maximum row count for each file.
3. The maximum file size is **100 MB**. If, based on the number of Transaction Reports for the day, a single file would exceed this limitation, then multiple files must be submitted, and each file should not exceed 100 MB in size otherwise the file will not be processed by the ARM, that may result to delay on submission or breach.
4. Separate files are required for each **operating MIC** traded on:
  - LSEG plc file            operating MIC XLON
  - Turquoise UK file      operating MIC TRQX
  - Turquoise EU file      operating MIC TQEX
5. The order in which files are loaded by the MiFIR ARM is determined by the order in which the TC Member uploads their files into the SFTP folder. **Therefore, it is important that if multiple files are being submitted, to upload them in the required order of processing.**
6. Filename must be **unique**.
7. Filename length including the file extension must not exceed **40 characters**.
8. A Member mnemonic (usually four characters long) must be used in the filename as specified below.
9. The file naming convention and contents the Member must supply are as follows:

#### XML Files

Venue	File name format	File contents
<b>LSE plc</b>	XLON_<Member mnemonic>_yyyyMMddHHmmss.xml Example: XLON_ABCD_20190401223000.xml XLON_ABCD_20190402010599.xml XLON_ABCD_20190402010600.xml	Transaction reports for all segment MICs: XLON, XLOM, AIMX
<b>Turquoise UK</b>	TRQX_<Member mnemonic>_yyyyMMddHHmmss.xml Example: TRQX_ABCD_20190401230000.xml	Transaction reports for all segment MICs: TRQX, TRQA, TRQM, TRQB, TRQS, TRQC
<b>Turquoise EU</b>	TQEX_<Member mnemonic>_yyyyMMddHHmmss.xml Example: TQEX_ABCD_20190401201555.xml	Transaction reports for all segment MICs: TQEX, TQEM, TQEA, TQEB, TQES, TQEC

## CSV Files

Venue	File name format	File contents
<b>LSEG plc</b>	XLON_<Member mnemonic>_yyyyMMddHHmmss.csv Example: XLON_ABCD_20190401223000.csv XLON_ABCD_20190402010599.csv XLON_ABCD_20190402010600.csv	Transaction reports for all segment MICs: XLON, XLOM, AIMX
<b>Turquoise UK</b>	TRQX_<Member mnemonic>_yyyyMMddHHmmss.csv Example: TRQX_ABCD_20190401230000.csv	Transaction reports for all segment MICs: TRQX, TRQA, TRQM, TRQB, TRQS, TRQC
<b>Turquoise EU</b>	TQEX_<Member mnemonic>_yyyyMMddHHmmss.csv Example: TQEX_ABCD_20190401201555.csv	Transaction reports for all segment MICs: TQEX, TQEM, TQEA, TQEB, TQES, TQEC

### Notes:

The timestamp in the filename is the current system date and time for when the file was created. As indicated previously, each submitted filename must be unique.

The Member mnemonic in the filename must be the Member identifier, **usually four characters** long (maximum 16 characters to comply with the 40-character limitation on the filename). The Member mnemonic will **not be used for reconciliation** purposes.

The Member must only submit transaction report files to this SFTP login where the Executing Entity ID in the transaction reports match the Member LEI used in this SFTP login ID. In the case of a member trading as a different Legal Entity on different venues, an SFTP login must be created for each Legal Entity the Member trades as, and the Member must submit their transaction reports for the Executing Entity ID using the matching SFTP login for that LEI.

## 4.2 Key Fields for Consideration

In addition to complying the ESMA Validation rules and ESMA Guidelines on transaction reporting, Member Firms must populate the fields below as outlined:

Field Definition	ISO20022 Field Name	CSV Field Name
Investment Firm	MiFIDInvestmentParty <MiFIDInvstmtPty>	Investment Firm Indicator
Submitting Entity ID	SubmittingParty <SubmitgPty>	Submitting Entity ID
Executing Entity ID	ExecutingParty <ExctgPty>	Executing Entity ID
Trading Venue Transaction Identification Code (TVTIC)	TradePlaceMatchingIdentification <TradPlcMtchgID>	Venue Transaction ID
Transaction Reference Number	TransactionIdentification <TxId>	Transaction Reference Number
Trading Date Time	TradeDate <TradDt>	Trading Date Time
Price	Price <Pric>	Price
Buyer Identification Code	Buyer <Buyr>	Buyer ID
Buyer decision maker code	DecisionMaker <DcsnMkr>	Buyer DOB
Seller identification code	Seller <Sellr>	Seller ID
Seller decision maker code	DecisionMaker <DcsnMkr>	Seller DOB

Field Definition	ISO20022 Field Name	CSV Field Name
Investment decision within firm	InvestmentDecisionPerson <InvstmtDcsnPrsn>	Investment Decision ID
Execution within firm	ExecutingPerson <ExctgPrsn>	Firm Execution ID
Transmission of order indicator	OrderTransmissionIndicator<OrdTrnsmssnInd>	Order Transmission Indicator
Transmitting firm identification code for the buyer	OrderTransmittingBuyer<OrdTrnsmmtgBuyr>	Buyer Transmitter ID
Transmitting identification code for the seller	OrderTransmittingSeller<OrdTrnsmmtgSellr>	Seller Transmitter ID

#### 4.2.1 Investment Firm

Set to 'false.'

#### 4.2.2 Submitting Entity ID

Populate this field with the LEI of the ARM: 213800D1EI4B9WTWWD28

#### 4.2.3 Executing Entity Identification Code

Members must fill this field with the TC Member Firm's LEI code.

#### 4.2.4 Trading Venue Transaction Identification Code (TVTIC)

Members must use the transaction identifier supplied by the venue:

The TVTIC field must be populated in every transaction report submitted by the Third Country Member Firm, except for XOFF Transaction Reports, submitted as part of INTC trades (aggregated or grouped client orders).

The TVTIC is a critical field used by the trading venue to reconcile the transaction reports submitted by the Third Country Member Firm. In the event this field does not reconcile with the trading venue's records, the Member Firm will be required to cancel and resubmit the report(s) according to TVTIC requirements stipulated by the trading venue.

Third Country Member Firms must use the transaction identifier supplied by the venue in the transaction report for specific trade. **The TVTIC submitted in the transaction report must be in Base 10 numbering system – i.e., the universe of permitted characters is 0123456789.**

Depending on the Member Firms type of connection to the venue (FIX or Native), the transaction identifier may be received in alphanumeric or numeric form. In all cases, the transaction identifier must be supplied to the TV in Base 10 numeric form and the necessary conversion performed as follows:

##### 4.2.4.1 London Stock Exchange

Exchange Protocol	Field	Format Received	Conversion
<b>Native</b>	"TradeMatchID"	Native numeric Base 10	No conversion required
<b>FIX</b>	Tag 27020 (DecimalTVTIC)	Base 10	No conversion required
	Tag 880 (TradeMatchID) <sup>1</sup>	Base 36	Convert to Base 10
	Tag 1003 (TradeID) <sup>2</sup>	Base 36	Convert to Base 10

<sup>1</sup> FIX Trading and Drop Copy protocol in Execution Report Message. Only needed if not using Tag 27020 (DecimalTVTIC)

<sup>2</sup> FIX Post Trade protocol in Trade Capture Report Message. Only needed if not using Tag 27020 (DecimalTVTIC)

#### 4.2.4.2 TRADEcho

Exchange Protocol	Field	Format Received	Conversion
FIX	Tag 27020 (DecimalTVTIC)	Base 10	No conversion required
	Tag 1003 (TradeReportID) <sup>3</sup>	Base 64	Convert to Base 10
	Tag 25008 (APATradeID) <sup>4</sup>	Base 64	Convert to Base 10

#### 4.2.4.3 Turquoise and Turquoise Europe

Exchange Protocol	Field	Format Received	Conversion
Native	"TradeMatchID"	Native numeric Base 10	No conversion required
FIX	Tag 27020 (DecimalTVTIC)	Base 10	No conversion required
	Tag 880 (TradeMatchID) <sup>5</sup>	Base 36	Convert to Base 10
	Tag 1003 (TradeID) <sup>6</sup>	Base 36	Convert to Base 10

Refer to the [Appendix A](#) for Base 36 and Base 64 decoding alphabets.

#### 4.2.5 Transaction Reference Number (TRN)

Members may choose to enter the TRN in their own existing format OR the Member may use the format of the TV as follows:

*[YYYYMMDDHHMMSSxxxx][Segment MIC][TVTIC][B or S for buy or sell]*

##### Notes:

The TVTIC conversion must have occurred before generating the TRN with the TVTIC.

#### 4.2.6 Trading Date Time

Members must enter the exact time sent in the execution notice from the TV. This time is sent in UTC and must be kept as is.

#### 4.2.7 Price

Where price is reported in monetary terms, it shall be provided in the major currency unit. Members must convert the price from pence to pounds for instruments denominated in Sterling.

#### 4.2.8 Venue

Members must enter the segment MIC and not the operating MIC of the TV.

#### 4.2.9 Reporting National Identifier Fields

In line with Article 6 of Commission Delegated Regulation (EU) 2017/590, a natural person should be identified within a transaction report using the designation resulting from the concatenation of the ISO 3166-1 alpha-2 (two-letter country code) of the nationality of the person, followed by the national client identifier listed in Annex II based on the nationality of the person.

The national client identifier should be assigned in accordance with the priority levels provided in Annex II, using the highest priority identifier available to the participant. Other identifiers can be assigned strictly in accordance with the priority levels provided in the table.

Effective 4 January 2021, Turquoise Europe trading participants should identify all UK natural persons using the "all other countries" taxonomy which requires the "National Passport Number" to be used or, where that is not available, the "CONCAT". Accordingly, this change should be reflected in the associated short code and long code mappings submitted via the Member Portal.

<sup>3</sup> Available in TRADEcho APA protocol

<sup>4</sup> Available in TRADEcho SRR protocol

<sup>5</sup> FIX trading and Drop Copy protocols in the Execution Report message

<sup>6</sup> Post Trade protocol in the Trade Capture Report message

Consider the below identifiers for UK nationals as applicable for respective markets:

#### LSEG and Turquoise UK markets

ISO 3166 – 1 alpha 2	Country name	1 <sup>st</sup> priority identifier	2 <sup>nd</sup> priority identifier	3 <sup>rd</sup> priority identifier
GB	United Kingdom	UK National Insurance number	CONCAT	

#### Turquoise Europe market

ISO 3166 – 1 alpha 2	Country name	1 <sup>st</sup> priority identifier	2 <sup>nd</sup> priority identifier	3 <sup>rd</sup> priority identifier
All other countries		National Passport Number	CONCAT	

### 4.2.10 Transmission Fields

Field 25: Transmission of order indicator – Third country member firms will not be transmitting orders hence always populate this with 'False'.

Field 26 & 27: Buyer Transmitter ID & Seller Transmitter ID – For third country member firms, these should be blank for not meeting conditions set in [Article 4 of Commission Delegated Regulation \(EU\) 2017/590](#) (Transmission of an order).

\*Fields 26 and 27 Shall only be populated for transaction reports by a receiving firm where all the conditions for transmission in Article 4 have been met.

\*\*Where a firm acts both as a receiving firm and a transmitting firm, it shall populate field 25 (Transmission of order indicator) to indicate that it is a transmitting firm and shall populate fields 26 (Buyer Transmitter ID) and 27 (Seller Transmitter ID) from its perspective as a receiving firm.

For non-MiFID firms, the following is relevant to third country firms if reporting as receiving firms within transmission activity where transmissions conditions have not been met.

- Fields 7(Buyer identification code) and 16(Seller identification code) with the transmitting firm as the buyer or seller. (Depending on which side)
- Field 57 (Investment decision ID) does not get populated if firm is acting in MTCH or AOTC capacity. If acting in DEAL, the person making the decision within 3<sup>rd</sup> country firm should be populated in the report.
- Field 59 (Execution within firm ID) would be populated with the national ID of trader or algo identifier used to execute the order in our venue.

## 4.3 Data Quality & Reconciliation Fields

TVs will reconcile Members transactions reports. The total number of transactions reported to the ARM corresponding to on-venue executions must match the total number of trades recorded in the TV's records for the trading date. Values submitted in the trade reports must match the values on the trades. Reports will be matched on the following:

Field	Description
TVTIC	Base 10 Trading Venue Identification Code

Field	Description
Executing Entity Identification Code	Members must fill this field with the TC Member Firm's LEI code
Quantity	Total quantity of the instrument being acquired or disposed
Price	Trade price of the transaction
Instrument Identification Code	ISIN
Trading Date Time	Members must enter the exact time sent in the execution notice from the TV. This time is sent in UTC and must be kept as is.
Execution Venue	Segment TVTIC
Buyer Identification Code*	Code used to identify the buyer of the financial instrument (LEI, National_ID, MIC, 'INTC')
Seller Identification Code*	Code used to identify the seller of the financial instrument (LEI, National_ID, MIC, 'INTC')
Trading Capacity	DEAL – Dealing on own account MTCH – Matched principal AOTC – Any other capacity
Price Currency	ISO Currency value
Investment Firm Indicator	Set to 'false'.
Instrument Classification	CFI Code
Investment Decision within Firm*	Code used to identify the person or algorithm within the investment firm who is responsible for the investment decision
Execution Decision within Firm*	Code used to identify the person or algorithm within the firm responsible for the execution
Waiver Indicator	Indication as to whether the transaction was executed under a pre-trade waiver: RFPT – Reference Price NLIQ – Negotiated (Liquid) OLIQ – Negotiated (Illiquid) PRIC – Negotiated (conditions) SIZE – Above specified Size ILQD – Illiquid Instrument

\*Codes entered should be the long code value corresponding to the short code entered on the order. Long Code and Short code mappings must be present in Member Portal prior to submitting trade reports.

Exceptions on these fields could be incorrect for multiple reasons. List is below along with corrective actions.

1. The value is incorrect on the Transaction Report submitted to LSEG Regulatory Reporting – *cancel and rebook the TR(s)*
2. The short code is incorrect on the order/trade on the trading system – *correct the short code(s)*
3. The short-long code mapping is incorrect in Member Portal – *amend the mapping(s) in Member Portal*

Any errors or missing reports will be sent back to the TC Member and should be rectified by 17:00 UTC on T+2.

#### 4.3.1 INTC (Grouped Orders) Reports

As per the "Guidelines" (ESMA Guidelines of Transaction Reporting under MIFID II section 5.23) and according to fields 7 (Buyer identification code) and 16 (Seller identification code) of RTS22, INTC should be used for executions that have taken place from aggregated or grouped client orders.

The Guidelines dictate that INTC should not be used for reporting an order for one client executed in a single execution, or for an order for one client executed in multiple executions.

Where there is a transfer into an INTC, there should be a comparable transfer out of the aggregate client account within the same business day, so that the aggregated client account is flat.

The convention is used to provide a link between the market side and the client side of transactions and does not indicate that a client account exists or that the ownership of the investment passes through an investment firm's books. There can be one or more reports for the transaction with the trading venue (market leg). There should always be more than one client leg reported, so that the sum volume on market leg(s) and client legs is equal.

Below key fields should be considered when reporting 'INTC' transactions:

1. Quantity – Sum quantity in market side reports should match the sum quantity in client-side reports.
2. Price – Price should be the same on both sides of the report, or an average price of the market side executions where multiple market fills are concerned.

3. Trading date and time – Time should be the same on both sides of the report, or the earliest executed time in market side where multiple market fills are concerned.
4. Trading capacity – Capacity should be the same on both sides. Only 'AOTC' or 'MTCH' values would be allowed. 'DEAL' should not be used.

Example of an INTC report below:

#### Dealing on any other capacity (AOTC)

Two clients of Investment Firm X – Client A and Client B – place orders for 50 and 50 shares respectively.

Investment Firm X aggregates the orders and executes them on 1 July 2021 at 09:20:15.37777 on Trading Venue M in one transaction of 100 at Euro 1.1.

#### Market Leg

Venue	Transaction Reference Number	TVTIC	Trading Capacity	Report Status	Buyer ID	Seller ID	Trade Date	Price	Quantity
XLON	XLON46800053108756S	485054	AOTC	NEWT	XLON	INTC	01/07/2021 09:20:15.37777	1.1	100

#### Client Legs

Venue	Transaction Reference Number	TVTIC	Trading Capacity	Report Status	Buyer ID	Seller ID	Trade Date	Price	Quantity
XOFF	XLON806251542357		AOTC	NEWT	INTC	LEI/ National ID of client A	01/07/2021 09:20:15.37777	1.1	50

Venue	Transaction Reference Number	TVTIC	Trading Capacity	Report Status	Buyer ID	Seller ID	Trade Date	Price	Quantity
XOFF	XLON806251542359		AOTC	NEWT	INTC	LEI/ National ID of client B	01/07/2021 09:20:15.37777	1.1	50

If investment firm were to deal in matched principal capacity, the reports would be identical, except that the trading capacity field would be populated with 'MTCH'.

#### Executions achieved across multiple venues

Where client orders are executed across multiple venues, only the business executed on any of the LSEG venues should be reported. For example, 1000 shares executed as 600 on London Stock Exchange, and 400 on another venue, should result only in the 600 being reported to London Stock Exchange, both on the market side as well as the client side.

As of 9th July 2022, an enhancement has been implemented in the existing reconciliation process (Transaction Reports versus Trading Venue data) to omit TRs with INTC and Venue of XOFF from flagging as a reconciliation error so genuine XOFF errors can be identified.

Currently summary reconciliation report is flagging the "Reconciliation Status" of all TRs with a Segment MIC of XOFF as "ERROR".

There is no requirement for member firms to submit TRs for off book off exchange trades (XOFF), however there is a requirement for firms to submit XOFF TRs for INTC client's allocation (Market Legs)

Therefore, those TRs that are marked as "Buyer ID/Seller ID = INTC" and "Venue = XOFF" will not be flagging as an "ERROR". Only TRs that are submitted as "XOFF without INTC" will be firing as "ERROR" in the report.

## 4.4 Feedback Files

Exceptions may be generated from file errors, content validation by the MiFIR ARM, reconciliation by the TV, or from NCA processing. The following table describes the management of each type:

Error Type	Description	Handling	Action Required
<b>File Errors</b>	High-level errors, including file naming errors and schema validation.	Members will be notified via the <b>File Error Response Files</b>	The whole file must be re-submitted.
<b>Content Errors (ARM validation)</b>	Validation errors reported by the MiFIR ARM – for example, required fields not populated or content of field does not pass ESMA validation.	The Member will be notified of validation errors via the <b>MiFIR ARM Response File</b>	The Member must generate a corrections file to replace the rejected Transaction Reports and submit via the SFTP portal, or follow their usual corrections procedure in the case of ARM Members. Please note that submitting a “CANC” is not needed in case of ARM reject – it is enough to resubmit the “NEWT” correcting the wrong field(s).
<b>Reconciliation Errors</b>	TV will reconcile transaction reports sent to the MiFIR ARM post submission. Errors will be reported if the number of submitted transaction reports does not match UK/EU TV trades and if there are discrepancies in reconciling key transaction fields.	The reconciliation is performed every trading day on a T+2 basis, and both ARM and non-ARM Members will be notified daily via the <b>TV Reconciliation Response File Exceptions Report</b>	The Member must generate a corrections file and submit it via the SFTP portal for non-ARM Members and/or via the ARM Member’s current process. In case of fields error, the Member should perform an amendment (“CANC” + “NEWT”).
<b>NCA Response files</b>	NCA feedback on Transaction Reports previously submitted. The NCA feedback files are produced in all cases (TRs accepted or rejected by the NCA). They can include rejects reported by the NCA – for example, an invalid instrument in the reference data for a particular transaction date.	These will be detected post submission and may occur on any day after T. Both ARM and non-ARM Members will be notified via the <b>NCA Response File</b> .	In case of NCA rejects, the Member must generate a resubmission – only the “NEWT” is needed. The LSEG Regulatory Operations team will liaise with the Member for any corrections required.

### 4.4.1 File errors

In the event of a submission file rejection due to a filename format error, the original file will be moved to the non-ARM TC Member’s outgoing folder and renamed with the following filename format:

VTR\_INVALID\_FILENAME\_<original file name>

The Member will be required to re-submit the file with the correct naming format.

In the event of a submission file rejection from the MiFIR ARM due to file format errors, the ARM Member will be notified by the MiFIR ARM process.

Please refer to the LSEG Regulatory Reporting MiFIR Technical specification for more details [5].

### 4.4.2 Content errors (ARM validation)

In the case of transactions loaded by the ARM failing validation within the ARM, a response file from the ARM containing any failed transaction reports will be generated.

Non-ARM TC Members will receive ARM response files in their SFTP folder in **csv** format. The filename will be the original file name, **excluding** the original file extension in the name, with **\_UVRes** appended to it as described in the LSEG Regulatory Reporting Technical Specification [5], section *LSEG Regulatory Reporting MiFIR ARM Validation Response Files*.

Example:

TQEX\_ABCD\_20190401201555\_UVRes.csv

ARM TC Members will receive ARM responses via their LSEG Regulatory Reporting process.

#### 4.4.3 TV Reconciliation Response Files

ARM and non-ARM Members will receive reconciliation feedback files from the TV in their SFTP folder.

On a daily basis, the TV will generate one or two files for every operating MIC the Member has traded on:

- Summary Report           Generated every day
- Exceptions Report       Only generated if reconciliation errors have been identified

All TV Reconciliation response files will be sent to the Member, unzipped and in **CSV format**.

#### Notes:

A new error description column called 'Duplicate TR' will be added to the summary report to identify exceptions generated with the following logic:

- Trading Venue Transaction Identification Code (TVTIC) has been reported in an already existing NEWT transaction report that has passed ARM validation. The existing NEWT report should be the latest report submitted when sorted using the Transaction Reference Number of that TR. (this allows the TR to go through if the latest is a CANC record i.e. a correction report) AND
- Executing entity ID (LEI) is not participating on both buy and sell sides of the underlying trade.

##### 4.4.3.1 Summary Report

A single file will be generated per operating MIC the Member has traded on in CSV format, with a header row of column names followed by rows of summary details for transaction reports received from the Member for each segment MIC traded on, on **T**. The Member may also receive entries for previous trading dates up to **T-30** in the file summary, if reconciliation breaks exist for those previous trading dates.

##### 4.4.3.2 Exceptions Report

For each operating MIC the TC Member has traded on, in the event the TC Member submissions on that operating MIC could not be reconciled successfully or if reconciliation breaks still exist for historical trading dates up to **T-30**, a single file will be generated for that operating MIC. The Member will receive an exception list for all transaction reports with errors. A file will NOT be generated if reconciliation was completely successful for all dates up to T-30.

The exceptions file will contain a header row of column names followed by:

- A list of exceptions for each reconciliation error encountered for the submitted transaction reports, including unrecognised transaction reports, transaction reports that failed key field content validation and transaction reports that have an ARM validation exception reported in the LSEG Regulatory Reporting MiFIR ARM. The list may be empty if there were no reconciliation errors for the reports received.
- A list of execution notices for which transaction reports are missing. The list may be empty if there were no transaction reports missing.

#### Notes:

- There may be multiple rows per transaction report if more than one reconciliation check failed on the report.
- Transaction reports that reconciled successfully will not be listed in the file.
- If a TR is rejected by the Regulator, they are not included in the reconciliation process.

Please see [Appendix B](#) for naming conventions, file formats and error codes for Summary Reports and Exception Reports

#### 4.4.4 NCA response files

NCA feedback on Transaction Reports previously submitted. The ARM/non-ARM Member will be supplied with a response file in their respective SFTP folders. A NCA response file will be produced for every TR file submitted by the Member, if at least 1 of the TR has passed ARM validations and has therefore been accepted or rejected by the NCA.

The filename will be the original file name, **excluding** the file extension in the name, with **\_NCARes** appended to it as described in the LSEG Regulatory Reporting Technical Specification [5], section *LSEG Regulatory Reporting MiFIR NCA Validation Response*.

Example:

TQEX\_ABCD\_20190401201555\_NCAREs\_GB\_20190408103000999.csv

## 4.5 Back Reporting

If the TC Member firm needs to back report or provide corrections for historical transaction reports, the Member can submit these details as part of their daily submission process, and notify the Transaction Reporting team by email so that their reconciliation status for previous trading dates can be updated.

Members must keep track of missing reports and work to eliminate any outstanding reports as quickly as possible.

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## 4.6 Transaction Amendments

All amendment files from Members must be supplied in ISO20022 or CSV format. Members are expected to submit two files in the event of amendments:

**XML Format:**

- CXL file for cancellations to original submitted transaction reports
- NEW file for the amended transaction report

**CSV Format:**

- CANC file for cancellations to original submitted transaction reports
- NEWT file for the amended transaction report

**Notes**

1. Trades that are cancelled on the same day must not be reported.
2. In case of T+n cancellations without amendments, only one file (CANC/CXL) must be generated for the cancellations.
3. CANC/CXL files for cancellations to transaction reports must be loaded into the ARM before NEWT/NEW files for subsequent amendments to the cancelled transaction reports. In case of amendment, it is advised to submit the CANC/CXL file and wait for the UV response file, before submitting the NEWT/NEW file.
4. In the event an amendment of a trade occurs on T, only the most recent amendment should be reported.
5. The TRN for CANC/CXL reports must match the TRN of the original NEWT/NEW exactly.

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## 5 Registration and Testing

Members who will be classified as Third Country firms in relation to their trading activity on either LSE PLC, Turquoise UK and/or Turquoise EU are asked to complete certain registration and testing steps prior to go-live.

All Members are required to complete the Member Firm Declaration Form and return this to the Membership team at [membership@lseg.com](mailto:membership@lseg.com).

### **ARM Customers**

Members utilising the LSEG Regulatory Reporting Venue Reporting Service and therefore deemed ARM customers, kindly contact your LSEG Regulatory Reporting account manager to agree on-boarding/set up requirements.

Contact the Technical Customer Relationship Management team at [londontam@lseg.com](mailto:londontam@lseg.com) for access to the SFTP for response files.

### **Non-ARM Customers**

For non-ARM customers wishing to submit their transaction files via the SFTP process can contact the Technical Customer Relationship Management team at [londontam@lseg.com](mailto:londontam@lseg.com).

### **Testing**

Before go-live, customers will need to successfully test the full end to end process on the Customer Development Service (CDS) of the relevant venues. Testing requirements can be found in the LSEG Third Country Member Transaction Reporting Testing Guide at the following link:

<https://docs.londonstockexchange.com/sites/default/files/documents/lseg-third-country-member-transaction-reporting-testing-guide.pdf>

In order to perform the conformance testing, Members should contact the Regulatory Operations team at [transactionreporting@lseg.com](mailto:transactionreporting@lseg.com)

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## 6 Contact Details

### **Transaction Reporting Team**

*Functional Queries, Support Queries, Conformance Testing*

[transactionreporting@lseg.com](mailto:transactionreporting@lseg.com)

+44(0) 207 797 3547

### **Technical Customer Relationship Management**

*SFTP On-boarding*

[londontam@lseg.com](mailto:londontam@lseg.com)

+44 (0) 20 7797 3939

## Appendix A

### Base 36 and Base 64 Decoding Alphabets

#### Base 36 with G Offset

HEX	ASCII	HEX	ASCII
0	G	18	Y
1	H	19	Z
2	I	20	0
3	J	21	1
4	K	22	2
5	L	23	3
6	M	24	4
7	N	25	5
8	O	26	6
9	P	27	7
10	Q	28	8
11	R	29	9
12	S	30	A
13	T	31	B
14	U	32	C
15	V	33	D
16	W	34	E
17	X	35	F

**Base 64**

HEX	ASCII	HEX	ASCII	HEX	ASCII	HEX	ASCII
0	A	18	S	36	k	54	2
1	B	19	T	37	l	55	3
2	C	20	U	38	m	56	4
3	D	21	V	39	n	57	5
4	E	22	W	40	o	58	6
5	F	23	X	41	p	59	7
6	G	24	Y	42	q	60	8
7	H	25	Z	43	r	61	9
8	I	26	a	44	s	62	–
9	J	27	b	45	t	63	–
10	K	28	c	46	u		
11	L	29	d	47	v		
12	M	30	e	48	w		
13	N	31	f	49	x		
14	O	32	g	50	y		
15	P	33	h	51	z		
16	Q	34	i	52	0		
17	R	35	j	53	1		

## Appendix B

### Summary Report

#### File naming convention:

Venue	File name format	File contents
<b>LSEG plc</b>	VTR_RECON_XLON_SUMMARY_<trading date>_<TV import date yyyyMMdd>.csv Example: VTR_RECON_XLON_SUMMARY_20190401_20190402.csv	Reconciliation summary for trades executed on segment MICs: XLON, XLOM, AIMX
<b>Turquoise UK</b>	VTR_RECON_TRQX_SUMMARY_<trading date>_<TV import date yyyyMMdd>.csv Example: VTR_RECON_TRQX_SUMMARY_20190401_20190402.csv	Reconciliation summary for trades executed on segment MICs: TRQX, TRQA, TRQM, TRQB, TRQS, TRQC
<b>Turquoise EU</b>	VTR_RECON_TQEX_SUMMARY_<trading date>_<TV import date yyyyMMdd>.csv Example: VTR_RECON_TQEX_SUMMARY_20190401_20190402.csv	Reconciliation summary for trades executed on segment MICs: TQEX, TQEM, TQEA, TQEB, TQES, TQEC

#### Summary Report File Format:

Column name	Description	Comments
Segment MIC	The segment MIC traded on in the TV	
Report Date	Date reconciliation report generated Format: dd/MM/yyyy	
Trading Date	Trading date for which report has been generated Format: dd/MM/yyyy	
Member Firm ID	Firm ID of Member in TV	
Reconciliation Status	Overall status of reconciliation Values: 'SUCCESS' if no exceptions occurred 'ERROR' if exceptions occurred	Status will be ERROR if any errors occurred in matching transaction report totals or field validation
Total Expected	The total number of execution notices in the TV on the trading date and for the segment MIC for which transaction reports are expected	
Total Received	The total number of transaction reports received from the TC Member for trading date and segment MIC	
Total Missing	Total number of transaction reports that were found missing for the trading date and segment MIC	This is the difference between total expected and total received. Includes transaction reports that failed LSEG Regulatory Reporting ARM validation
Total Unknown	Total number of transaction reports that could not be matched to an execution notice in the TV for trading date and segment MIC	

Column name	Description	Comments
Total Field Errors	Total number of transaction reports that had one or more errors in reconciling core transaction fields with the execution notice on the TV for the trading date and segment MIC	
Total duplicate	Total number of Transaction Reports that have incorrectly been reported more than once	These Transaction Reports should be cancelled by the Member Firm

## Exceptions Report

### Naming Convention:

Venue	File name format	File contents
<b>LSEG plc</b>	VTR_RECON_XLON_EXCEPTIONS_<trading date>_<TV import date yyyyMMdd>.csv Example: VTR_RECON_XLON_EXCEPTIONS_20190401_20190402.csv	Reconciliation exceptions for executions on segment MICs: XLON, XLOM, AIMX
<b>Turquoise UK</b>	VTR_RECON_TRQX_EXCEPTIONS_<trading date>_<TV import date yyyyMMdd>.csv Example: VTR_RECON_TRQX_EXCEPTIONS_20190401_20190402.csv	Reconciliation exceptions for executions on segment MICs: TRQX, TRQA, TRQM, TRQB, TRQS, TRQC
<b>Turquoise EU</b>	VTR_RECON_TQEX_EXCEPTIONS_<trading date>_<TV import date yyyyMMdd>.csv Example: VTR_RECON_TQEX_EXCEPTIONS_20190401_20190402.csv	Reconciliation exceptions for executions on segment MICs: TQEX, TQEM, TQEA, TQEB, TQES, TQEC

### Exception Report File Format:

Column name	Description	Comments
Report Date	Date reconciliation report generated Format: dd/MM/yyyy	
Trading Date Time	Trading date for which report has been generated Format: yyyy-MM-dd hh:mm:ss.SSSSS	
Member Firm ID	Firm ID of Member in TV	
Import Date	Date transaction report was imported into LSEG Regulatory Reporting's MiFIR ARM Format: dd/MM/yyyy HH:mm:ss	Received by the TV from the MiFIR ARM OR Blank in case of missing transaction report
Transaction Status	Status of the transaction report in the LSEG Regulatory Reporting MiFIR ARM	Received by the TV from the MiFIR ARM Refer to LSEG Regulatory Reporting MiFIR User Guide for a full list of values OR Blank in case of missing transaction report
Report Status	Indication if the transaction report is new or a cancellation submitted by TC Member	Received by the TV from the MiFIR ARM OR Blank in case of missing transaction report

Column name	Description	Comments
Transaction Reference Number	Unique identifier for the transaction report submitted by TC Member	Received by the TV from the MiFIR ARM OR Blank in case of missing transaction report
TVTIC	Trading Venue Transaction Identification Code on the transaction report submitted by TC Member	Received by the TV from the MiFIR ARM OR TVTIC on execution notice in TV in case of missing transaction report
Venue	Segment MIC on the transaction report submitted by TC Member	Received by the TV from the MiFIR ARM OR Segment MIC on execution notice in TV in case of missing transaction report
Instrument ID	Instrument identifier on the transaction report submitted by TC Member	Received by the TV from the MiFIR ARM OR Instrument ID in case of missing transaction report
Error Code	TV Error code for the exception	Refer to the Error codes section for a description of values
Error Description	TV Error description for the exception	Refer to the Error codes section for a description of values
Error Field Name	Transaction report field name for which exception was raised	Refer to the Error codes section for a description of values
Received Value	Value received from TC Member for the field in which error occurred	
Expected Value	Value TV expects to see as given in execution notice on TV	In case of "Duplicate TR" error (error code "R007") this field will include the details of the original Transaction Report.

#### Exception Report Error Codes:

Code	Description	Example	Comments
R001	Unknown TR	TVTIC = 292938 and Venue = XLON combination does not exist in the execution notice list for XLON OR Venue = XABC is an unknown MIC	Will occur if execution notice cannot be found for the TVTIC and segment MIC combination on the TR or the segment MIC supplied is not recognised by the venue. On the exception report: <b>Error Field Name =</b> TVTIC/Venue' <b>OR</b> Venue' (unrecognised MIC) <b>Received Value =</b> TVTIC '/' Venue field values received in the TR <b>OR</b> Venue field value received in the TR (unrecognised MIC) <b>Expected Value =</b> blank
R002	Field error	Quantity = 345 when it should be 133	On the exception report:

Code	Description	Example	Comments
		OR Price = 43.5 when it should be 48.5 OR ISIN is 'DBABCDEFG' when it should be 'FRABCDEFG'	Error Field Name = Name of field: 'Quantity'/'Price'/'ISIN' Received Value = value received in corresponding TR field Expected Value = value received in corresponding TV execution notice field Note: the Expected Value column will not be populated for identifier fields due to data restrictions Note: if a Transaction Report is submitted with incorrect TVTIC or with incorrect MIC code, this would generate two exceptions: one "Missing TR" with correct TVTIC/MIC and one "Unknown TR" with the incorrect TVTIC/MIC.
R004	ARM error	ARM Valid field on TR is set to 'False' instead of 'True'	On the exception report: <b>Error Field Name</b> = blank <b>Received Value</b> = blank <b>Expected Value</b> = 'Check LSEG Regulatory Reporting ARM response file'
R005	Missing TR	Trade exists for which TR does not exist	On the exception report: <b>Error Field Name</b> = blank <b>Received Value</b> = blank <b>Expected Value</b> = blank
R007	Duplicate TR	The Member Firm submit two identical Transaction Reports for the same trade, using a different Transaction Reference number (if the TRN is the same, the second Transaction Report would be rejected by the ARM)	On the exception summary report: <b>Error field name</b> = <b>TVTIC</b> <b>Received value</b> = <b>&lt;TRN of duplicate TR&gt;/&lt;TVTIC&gt;</b> <b>Expected value</b> = <b>"Duplicate TR of existing TR &lt;TRN of existing/original TR&gt;"</b>

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