



CBOE EUROPE BREXIT TECHNICAL CHANGES GUIDANCE NOTE

VERSION 1.5

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Version History

Version Number	Publication Date	Description
1.0	2 nd November 2018	Initial Publication.
1.1	7 th November 2018	In addition to units 4 and 7, units 5 and 8 will also now be configured as part of EU venue in certification from 26 th November 2018. See section 10; changes highlighted in yellow .
1.2	16 th January 2019	Addition of Risk Management Secure Web API change where 'clearing' becomes a mandatory value. Amendment to the CXE UAT release date for Microseconds on TCP PITCH from 15 th February to 11 th February 2019.
1.3	30 th January 2019	Addition of new column to the Third Party Static file affecting Third Party Brokers.
1.4	5 th February 2019	Amendment to the Certification (UAT) & Production Availability timeline.
1.5	26 th February 2019	Addition of Cboe Europe RIC and Bloomberg code information for EU venue. Addition of multi-day ETR behavior over EU venue launch window. Addition of Jurisdiction column to Trade Data File.

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1. Introduction

This guidance note is intended to provide a description of the technical changes required for Brexit that apply to the On-Exchange Cboe Europe (Cboe) UK and EU venues, as well as the Off-Exchange Cboe APA and SI services. These changes will be rolled out in Certification and Production as outlined in **Section 0**.

Cboe's Brexit implementation milestones can be found [here](#). Participants are advised to check this resource regularly for upcoming updates regarding Brexit milestones.

1.1 Intended Audience

This guide is intended to be read by all Cboe Participants, ISVs and data vendors that interact with Cboe Europe Equities services. In particular those with responsibility for implementing and supporting interfaces to Cboe (typically software engineers, support staff, business analysts and systems administrators).

2. Summary of Changes

To allow Participants to continue to trade EU-listed symbols post-Brexit, Cboe Europe (Cboe) is establishing a new EU-regulated venue in the Netherlands, Cboe EU Equities (Cboe EU) for the trading of EU-listed symbols. Cboe will also continue to operate its existing UK-regulated trading venue, Cboe UK Equities (Cboe UK), for the trading of UK and Swiss-listed symbols.

This section provides a summary of the technical interface changes required to support separate UK and EU venues. All of the changes described below are mandatory. **These technical interface changes are in addition to the connectivity setup and order flow separation as previously notified [here](#).**

2.1 Market Data Changes

Redistribution of Symbols between Matching Units

Symbols are distributed across Matching Units by a market and alphabetical symbol distribution. In preparation for the creation of separate UK and EU venues, some markets will be migrated to a different Matching Unit in the BXE, CXE, SIS and APA environments. There will also be changes to how Cboe self-listed symbols are distributed across units.

This will result in changes in the subscription details for receiving Multicast PITCH market data for these markets. See **Section 3** for further details. In addition, on the effective date the `matching_unit` column in the symbol reference data files will be updated to reflect the new unit to which symbols from these markets will be allocated.

EU Venue MIC Codes

New MICs for the EU venue will be published in the *Execution Venue* field of the **Trade Message – Extended Form** message type on Multicast and TCP PITCH feeds in BXE and CXE environments. See **Section 4** for further details.

Trade Reporting to the UK and EU APAs

The existing *Cboe Trade Timing Indicator* field has been renamed to the *Cboe Trade Flags* field and it will now also convey the Cboe Regulated Entity (UK or EU) to which a trade report was submitted. This change will apply to the **Trade Message – Extended Form** and **Trade Message – Unknown Symbol** message types on Multicast and TCP PITCH feeds in the BXE, CXE and APA (TRF) environments. See **Section 5** for further details.

Note that the content change to the **Trade Message – Extended Form** will be made to both the legacy and new Multi-cast PITCH feeds (see below).

Trading Venue Segregation for Multicast PITCH

For the BXE and CXE environments, new UK and EU venue Multicast PITCH feed infrastructure will be established to which participants will need to migrate. As part of this migration, Cboe will be adding a new set of Multicast PITCH feeds for both trading venues which will replace the existing legacy feeds. These changes will impact all current consumers of BXE and CXE Multicast PITCH. Participants will be required to subscribe to a new set of multicast feeds as well as connect to new GRP and SPIN ports. The new feeds are expected to be available **15th February 2019** and for ease of migration, the legacy feeds will remain available until **27th September 2019**. Details of the changes and implementation guidance can be found in [Cboe Europe Connectivity Manual](#) (Appendix A) and the [Cboe Europe Multicast PITCH Spec](#)

Multicast PITCH Transaction Markers

Market Data Transaction Markers will be added to Multicast PITCH in BXE and CXE. This functionality adds a Transaction Begin message to the protocol to indicate that any subsequent messages up to the accompanying Transaction End message, are all part of the same transaction block. See **Section 6** for further details.

Microseconds on TCP PITCH

All messages currently sent on TCP PITCH contain a *Timestamp* field representing the number of milliseconds since midnight. These messages will be updated to begin sending the number of microseconds since midnight. In order to facilitate the structural change, all existing messages will be replaced with new messages types. The existing messages will cease to be sent. See **Section 9** for further details.

2.2 Order Entry, Trade Entry & DROP Changes

EU Venue MIC Codes

New segment MICs for the EU venue will be supplied in the *LastMkt* (FIX tag 30) field in the **Execution Report**, **Trade Cancel/Correct**, **Trade Capture Report** messages on FIX, BOE, ODROP & FIXDROP interfaces in BXE, CXE and Cboe LIS environments. See **Section 4** for further details.

Trade Reporting to the UK and EU APA

From **1st April 2019**, the regulatory jurisdiction (UK or EU) of the bank code used for trade reporting into the Cboe APA will be used to denote whether the trade report is targeting the UK or EU APA. Depending on the post Brexit plans of each firm using the APA, firms may need to request new EU and/or UK bank codes and then populate the relevant bank code in the *PartyID* (FIX tag 448) field of the **Trade Capture Report** message on FIX and BOE interfaces. The resulting Cboe APA will then be reflected on market data via the *Cboe Trade Flags* field - see **Section 5** for further details.

Smart Order Routing (SOR) Service Termination

Effective end of day **Friday 30th November 2018**, Cboe will be decommissioning the SOR service which will result in all SOR order types (Parallel-D, Parallel-2D and Cboe+Primary) on the BXE and CXE order books being rejected. See **Section 0** for further details.

UK and EU ODROP and FIXDROP Sessions

As part of the Brexit Migration process, Participants will be allocated new ports to interface with the EU venue. All existing ports will remain allocated to the UK venue.

It should be noted that effective immediately ODROP sessions will be configured to monitor ports and only replicate flow received through those ports. Further to this, from 1st April 2019 the ODROP sessions will only replicate flow for symbols on their respective venues as we enforce jurisdiction on order handler ports.

FIXDROP ports will also only provide flow relating to their respective venue from 1st April, but will provide trades on all symbols prior to that point. Participants should therefore cater for receiving trades for all symbols down both their existing and future EU venue FIXDROP port until 1st April. From 1st April the FIXDROP ports will only provide trades for symbols on their respective venues.

2.3 Reference File Changes

To denote the Cboe Regulated Entity (UK or EU) upon which an instrument can be traded, a new column ***regulated_entity*** has been added to the BXE, CXE, TRF, LIS and SIS symbol reference data files. Participants are advised to download these files every morning pre-open in order to retrieve the most up-to-date symbol data available. See **Section 8** for further details.

2.4 Transaction Reporting Obligations

Depending on a third country Trading Participant's unique situation related to Brexit, there may be additional Venue Transaction Reporting Obligations to consider. Trading venues under MiFID have an existing obligation to transaction report to their NCA on behalf of non-EU Trading Participants. On the assumption that the UK will have a similar 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. Similarly, UK firms trading on the EU venue will be considered non-EU and will also be required to Transaction Report. Further detail on participant regulatory transaction reporting requirements can be found [here](#).

3. Redistribution of Symbols between Units

In order to segregate the existing 12 units into 4 for the UK Venue and 8 for the EU Venue, the unit upon which a symbol is currently listed will be changed by Cboe. This will further mean that affected symbols will move to different Multicast Groups. The below table describes these changes (in **bold**). All symbol moves will be effective as of **15th February 2019**.

3.1 BXE, CXE and SIS

Currently, all Cboe self-listed symbols exist on unit 10. This special case handling will be removed. Self-listed symbols will be distributed across units according to their designated primary market designation, as for non-self-listed symbols. Symbols with a primary market designation of Cboe UK will be moved to unit 3, and those with a primary market designation of Cboe EU will remain on unit 10.

Some examples:

- IEEMI moves from unit 10 to unit 2.
- GHDGJx moves from unit 10 to unit 3.
- MSEp moves from unit 10 to unit 5.

Unit	Existing Symbol Unit Allocation	New Symbol Unit Allocation split by UK and EU Venue as of 15 th February 2019
	Symbol Range	Symbol Range
1	London, Great Britain (0-H)	No change to symbol distribution.
2	London, Great Britain (I-R)	No change to symbol distribution.
3	London, Great Britain (S-Z); Dublin, Ireland	Cboe UK self-listed symbols moved from Unit 10. Ireland symbols move to Unit 6.
4	Euronext Paris, France (0-F)	No change to symbol distribution. Unit designated as part of EU Venue from 1st April 2019.
5	Euronext Paris, France (G-Z)	No change to symbol distribution. Unit designated as part of EU Venue from 1st April 2019.
6	Euronext (Lisbon, Portugal; Brussels, Belgium; Amsterdam, Netherlands)	Ireland symbols moved from Unit 3. Unit designated as part of EU Venue from 1st April 2019.
7	XETRA, Germany (0-E)	No change to symbol distribution. Unit designated as part of EU Venue from 1st April 2019.
8	XETRA, Germany (F-Z); Vienna, Austria	No change to symbol distribution. Unit designated as part of EU Venue from 1st April 2019.
9	Milan, Italy; SIBE, Spain	No change to symbol distribution. Unit designated as part of EU Venue from 1st April 2019.
10	Cboe (self-listed) Warsaw, Poland; Prague, Czech Republic; Budapest, Hungary Athens, Greece; Bucharest, Romania; Bratislava, Slovakia Nicosia, Cyprus; Zagreb, Croatia; Ljubljana, Slovenia; Luxembourg Valletta, Malta; Riga, Latvia; Sofia, Bulgaria; Tallinn, Estonia Vilnius, Lithuania; Johannesburg; Ex-Europe, Ex-US	Cboe UK self-listed symbols moved to Unit 3. Cboe EU self-listed symbols remain on Unit 10. Unit designated as part of EU Venue from 1st April 2019.
11	SIX Swiss Exchange.	No change to symbol distribution.
12	Helsinki, Finland; Copenhagen, Denmark; Oslo, Norway; Stockholm, Sweden; Reykjavik, Iceland; US Securities Traded in Europe	No change to symbol distribution. Unit designated as part of EU Venue from 1st April 2019.

Please note that as of **1st April 2019**, Units 4-10 & 12 will represent the Cboe EU Venue. Units 1-3 & 11 will remain part of the Cboe UK Venue.

3.2 APA

For the APA (TRF) environment, as of **15th February 2019**, self-listed symbols with a primary market designation of Cboe UK will move from **Unit 3** to **Unit 1**. For example:

- IEEMI and GHDGJz move from unit 3 to unit 1.
- MSEp moves from unit 3 to unit 2.

There are no other changes to symbol distribution on the APA. For Participants who require specific knowledge of APA symbol-to-unit mappings, the downloadable [TRF reference data file](#) should be used.

4. UK and EU Venue MIC Codes

The table below shows the existing Cboe UK Venue MIC codes followed by the equivalent new Cboe EU Venue MIC codes (red).

	Venue	Operator MIC Code	Primary Sub-MIC	Dark Book Sub-MIC	Off-Book Sub-MIC	Cboe LIS Sub-MIC	Periodic Auction Sub-MIC	Off-Exchange Sub-MIC
BXE	UK	BCXE	BATE	BATD	BATF	-	BATP	-
	EU	CCXE	BEUE	BEUD	BEUF	-	BEUP	-
CXE	UK	BCXE	CHIX	CHID	CHIO	LISX	-	-
	EU	CCXE	CEUX	CEUD	CEUO	LISZ	-	-
Regulated Market	UK	BCRM	BART	BARK	BARO	-	-	-
	EU	CCRM	BEUT	BARU	BEUO	-	-	-
Off-Exchange	UK	BCXE	-	-	-	-	-	BOTC
	EU	CCXE	-	-	-	-	-	CAPA

The following section describes how the new EU Venue MIC codes will be presented on order entry and market data interfaces when a trade occurs on an EU Venue unit from **1st April 2019**:

- Currently, for the Cboe UK Venue, Primary Sub-MIC values (BATE, CHIX & BART), Dark Book Sub-MIC values (BATD, CHID & BARK), Off-Book Sub-MIC values (BATF, CHIO & BARO), the CboeLIS Sub-MIC value (LISX) and the Periodic Auction Sub-MIC value (BATP) are populated in **LastMkt** on executions in FIX and BOE back to Participants. From the Activation Date indicated in **Section 10**, Cboe EU Venue values will be populated in **LastMkt** as indicated above.
- Currently, for the Cboe UK Venue, only Off-Book Sub-MIC values (BATF & CHIO) and the Cboe LIS Sub-MIC value (LISX) are published in the **ExecVenue** field of messages on Multicast and TCP PITCH. From the Activation Date indicated in **Section 10**, Cboe EU Venue values will be published in **ExecVenue** (**BEUF**, **CEUO** and **LISZ** respectively).

These changes are illustrated in the table below using Y/N values in the relevant cells to indicate whether MICs appear in **LastMkt** and **ExecVenue** the BXE and CXE environments:

	Venue	Operator MIC Code	Primary Sub-MIC	Dark Book Sub-MIC	Off-Book Sub-MIC	Cboe LIS Sub-MIC	Periodic Auction Sub-MIC	Off-Exchange Sub-MIC
UK & EU Venue MIC Codes in Last Mkt on Executions	BXE	N	Y	Y	Y	N	Y	N/A
	CXE	N	Y	Y	Y	Y	N	N/A
UK & EU Venue MIC Values in Exec Venue on Market Data	BXE	N	N	N	Y	N	N	N/A
	CXE	N	N	N	Y	Y	N	N/A

5. Trading Venue Flagging for Trade Reports

The *Cboe Trade Timing Indicator* field will be renamed to *Cboe Trade Flags*, in order to convey the Cboe Regulated Entity to which the trade was reported. As such, the existing four possible values will be supplemented with a further four values to allow participants to distinguish between the UK and EU venues:

Regulated Entity		Description
UK	EU	
'-'	'4'	The trade was reported to Cboe on time and in the Main Session
'1'	'5'	The trade was reported to Cboe 'late'
'2'	'6'	The trade was reported to Cboe out of the Main Session
'3'	'7'	The trade was reported to Cboe late and out of the Main Session

The *Cboe Trade Flags* field will continue to publish the UK set of values through end of business on **29th March 2019**. After this date and once the EU Regulated Entity goes live, the field will reflect both UK and EU values depending on the Regulated Entity location of the trade.

This field will be present on the **Trade Message – Extended Form** and **Trade Message – Unknown Symbol** messages types on the Multicast and TCP PITCH feeds in the BXE, CXE and APA (TRF) environments.

6. Multicast PITCH Transaction Markers

Market Data Transaction Markers will be added to Multicast PITCH in BXE and CXE. This functionality adds a Transaction Begin message to the protocol to indicate that any subsequent messages up to the accompanying Transaction End message, are all part of the same transaction block. One example of where this might be used is when a single aggressive order executes against several resting orders. All Multicast PITCH messages corresponding to such an event would be included between a Transaction Begin and Transaction End. It is important to note that any Multicast PITCH Message Type may be included in a transaction block and there is no guarantee that the messages apply to the same price level or even the same Symbol. Transaction Begin messages do not alter the book and can be ignored if messages are being used solely to build a book.

Feed processors can use a transaction block as a trigger to postpone publishing a quote update until the end of the transaction block. In the prior example of a single aggressive order executing against multiple resting orders, a top of book feed would be able to publish a single quote update resulting from multiple Order Executed messages once it finished processing all of the messages within the transaction block.

Transaction Begin				
Field	Offset	Length	Data Type	Description
Length	0	1	Binary	Length of this message including this field
Message Type	1	1	0xBC	Transaction Begin Message
Time Offset	2	4	Binary	Nanosecond offset from last unit timestamp
Total Length = 6 bytes				

Transaction End				
Field	Offset	Length	Data Type	Description
Length	0	1	Binary	Length of this message including this field
Message Type	1	1	0xBD	Transaction End Message
Time Offset	2	4	Binary	Nanosecond offset from last unit timestamp
Total Length = 6 bytes				

7. Smart Order Routing (SOR) Service Termination

Effective end of day **Friday 30th November 2018**, Cboe will be decommissioning the SOR service which will result in all SOR order types (Parallel-D, Parallel-2D and Cboe+Primary) on the BXE and CXE order books being rejected.

All other order types including sweep orders (LitSweep, DarkSweep, and DarkLitSweep) remain unaffected.

8. Symbol Reference File

A new column **regulated_entity** which denotes the Cboe regulated entity (UK or EU) upon which the instrument is traded has been added to the symbol reference file for BXE, CXE, LIS, TRF and SIS. Valid values are:

- UK
- EU
- Not Applicable

This column will always contain the value “Not Applicable” in the TRF and SIS symbol files.

Note that this change has been live in Production since **Friday 28th September 2018**.

9. Microseconds on TCP PITCH

All TCP PITCH messages from the BXE, CXE and TRF environments will be updated to include microseconds in the timestamp component as below. This will be comprised of the following changes.

New Data Type:

Data Type	Length	Description
TimestampUs	11	A string of ASCII numbers (0-9) representing the whole number of microseconds past midnight London time, right justified and zero padded on the left, with no decimal point. This will replace the existing 8-byte Timestamp field on all messages.

New Message Types:

Message Name	Existing Message Type	New Message Type
Symbol Clear	s	h
Add Order	A	K
Add Order - Long	c	M
Order Executed	E	N
Order Executed - Long	e	g
Order Cancel	X	F
Order Cancel - Long	x	G
Trade	P	V
Trade - Long	q	W
Trade - Extended	O	v
Trade - Unknown Symbol	k	w
Trading Status	H	a
Statistics	Z	Y
Auction Update	l	b
Auction Summary	j	f

The new message types will be sent from **15th February 2019** and all existing message types will cease to be sent. Details of the changes are described in the existing [Cboe Europe TCP PITCH Specification](#). In addition, a new version of the specification is available [here](#) with all the new message types and field offsets which have all increased by three bytes to accommodate the increased size of timestamp field.

10. Risk Management Secure Web API Mandatory Change

Effective **Friday 1st March 2019** the 'clearing' parameter will become mandatory on [Risk Management Secure Web API](#) commands where previously this parameter was optional unless you had multiple bank codes enabled. Please ensure your API commands are updated to explicitly send the **clearing** parameter on commands.

Reason for change

As part of our [Recommended Migration Approach](#) to execute our Brexit strategy, Cboe is actively generating new bank codes and entities for Participants, and as a result of this, the 'clearing' parameter will become mandatory for all Participants utilizing the Risk Management Secure Web API.

11. New EU Venue Secondary RIC and Bloomberg codes & Reference Data changes

Effective **Monday 1st April 2019** (subject to EU venue launching) please be advised that new Cboe Europe Refinitiv (Reuters) RIC and Bloomberg Exchange codes are being introduced for the new EU venue represented as **reuters_ric_bats** and **bloomberg_bats** in the reference data file. As a consequence of this, Participants who are submitting Orders and/or TCRs to Cboe using Cboe Europe Refinitiv (Reuters) RIC values must use the correct venue suffix, otherwise the Order or TCR Will be rejected. Additionally, the Cboe Europe Refinitiv (Reuters) RIC will be blanked from the enhanced TRF and SIS reference data file. Details of both changes can be found below:

If using the Secondary RIC as the symbology for Order and TCR entry, the Secondary RIC suffix used must be for the venue it is being entered into i.e. .CHI for UK, CHE for EU, or .BS for UK, BSU for EU etc. Using the incorrect suffix will result in your Order or TCR being rejected. Please note that Bloomberg Exchange Codes are **not** supported for Order or TCR Entry.

This is effective in production from **Monday 1st April 2019** (subject to EU venue launching). The new EU venue suffixes will be supported in UAT for Brexit test days and during production dress rehearsals.

Reference Data File changes:

Name	Bloomberg Exchange Code (bloomberg_bats)		Refinitiv (Reuters) Exchange Code (reuters_ric_bats)	
	UK	EU	UK	EU
CXE	IX	I2	.CHI	.CHE
BXE	EB	E2	.BS	.BSU
TRF	Will remain blank in file	Will remain blank in file	To be blanked from file	To be blanked from file
LIS	IX	I2	.CHI	.CHE
SIS	Will remain blank in file	Will remain blank in file	To be blanked from file	To be blanked from file

BXE, CXE & LIS

- **reuters_ric_bats** column – Currently only populated in the enhanced version of the file. The RIC values in this column will be as per the changes above.
- **bloomberg_bats** column – The Bloomberg ticker values in this column will be as per the changes above.

TRF & SIS

The .BCO suffix is not, nor has ever been supported for trade report or quote entry and therefore will be removed (blank) from the enhanced TRF and SIS reference data files. Participants who require this reference data should contact the appropriate vendor. The Cboe BXE and CXE exchange suffix (i.e. .CHI, .CHE, .BS, .BSU)

is still supported for trade report and quote entry and can be found in the BXE and CXE symbol reference data files. Note that the APA Jurisdiction is determined by the submitting bank code and not symbol suffix.

reuters_ric_bats column – Currently only populated in the enhanced version of the file. The values in this column **will be removed (blank)**. The column will remain in the file.

12. Multi-Day ETR Behaviour over EU Venue launch window

The following guidance applies only to users of non-cleared Exchange Trade Reports (ETRs) and the T+1 release of cleared ETRs. Please note that there are some subtleties that Participants and vendors should be aware of to ensure they can correctly process multi-day ETRs that straddle the launch of the new EU venue, currently targeted to be effective **Monday 1st April**. Again this guidance does not apply to cancellation or amendment of cleared ETRs, as these cannot be amended or cancelled over more than one day, but does apply to the release of cleared ETRs, as they can be released T+1.

Release, cancellation and amendment of ETRs in BXE/CXE

Prior to Brexit the jurisdiction (UK or EU) and therefore the venue for which an order handler can be used will not be enforced, but will be post-Brexit. Participants who submit multi-day ETRs that straddle the launch of the EU venue should be mindful of this enforcement to avoid release, cancellation and amendment requests being rejected. For example, an ETR in an EU symbol submitted to BXE or CXE prior to Brexit via a UK jurisdiction order handler will be accepted, but cannot then be cancelled, amended or released post-Brexit using the same UK jurisdiction order handler due to the jurisdiction enforcement that will be in place from the point Brexit occurs. Neither will it be possible to cancel, amend or release this ETR using an EU jurisdiction order handler because the original UK jurisdiction order handler will have used a different bank code.

In this scenario, if the Participant does not have an order handler with the appropriate jurisdiction to cancel or amend the ETR, the Participant must contact [Trade Desk](#) who will be able to perform this action on their behalf. Any ETRs processed by [Trade Desk](#) in this manner will result in electronic acknowledgement being issued via the order handler used to originally submit the ETR, regardless of the order handler jurisdiction.

Cboe Trade Flagging and MIC Identification of ETRs in BXE/CXE

As documented in section 4 and 5 new values will be supplied for the EU venue in the following fields:

- **LastMkt** (FIX tag 30) field in the Execution Report, Trade Cancel/Correct, Trade Capture Report messages on FIX, BOE, ODROP & FIXDROP interfaces in BXE, CXE and Cboe LIS environments.
- **ExecVenue** field on Multicast and TCP PITCH.
- **CboeTradeFlags** field on Multicast and TCP PITCH.

All ETRs submitted pre-Brexit prior to the EU venue launching, but are deferred for publication post-Brexit once the new EU venue has launched will still receive the existing **UK venue values** when published, which are described in section 4 and 5. Similarly, any amendments or cancellations to such ETRs will receive the UK venue values. Participants and vendors should therefore be able to accommodate UK venue values over this transition window.

All ETRs submitted post-Brexit to the EU venue, even if the arrangement time occurred pre-Brexit will however receive the new EU venue values for the fields described above.

13. Jurisdiction column addition to Trade Data File

A column with the heading named “Jurisdiction” will be appended to the end of the Trade Data CSV file as described in the [Trade Data File Specification](#). The values supported in this column will be “UK” and “EU”.

In BXE and CXE this column and its populated value represent which Cboe Market Operator the transaction was executed on, and in the TRF environment the values represent the Cboe APA that the trade was reported to.

To aid in backward compatibility, existing columns will not be removed or reordered.

This change will be effective for the BXE, CXE and TRF trade data files in CERTIFICATION from **Monday 4th March 2019** and PRODUCTION from **Friday 15th March 2019**.

14. Certification (UAT) & Production Availability

Effective 5th February 2019, Cboe will fully configure the BXE, CXE and APA Certification (UAT) environments as UK and EU venues on Wednesday and Thursday of each week. This configuration will be reverted to a single UK venue in the Certification environments on Monday, Tuesday and Friday.

The below table describes functionality enabled in the Certification environments on Wednesday and Thursday of each week and their Production release dates.

Functionality	UAT Activation Date	Production Activation Date
<ul style="list-style-type: none"> • EU Venue MIC Codes, as described in Section 4: <ul style="list-style-type: none"> ○ All trades will be stamped with their relevant UK or EU Venue MICs in the LastMkt field on executions returned to Participants through their order handler, DROP sessions and in the ExecVenue field on TCP and Multicast PITCH. 	Available each Monday, Wednesday, Thursday and Friday	1st Apr 2019 *
<ul style="list-style-type: none"> • Trading Venue flagging for trade reports on market data, as described in Section 5: <ul style="list-style-type: none"> ○ The new values will be present on market data for all UK and EU units as described in Section 3 on the on Multicast and TCP PITCH feeds in the BXE, CXE and APA (TRF) environments. ○ In the APA environment, the <i>Cboe Trade Flags</i> field will reflect the jurisdiction of the APA to which the trade was reported. 		
<ul style="list-style-type: none"> • UK and EU FIXDROP session filtering as described in Section 2.2 		
<ul style="list-style-type: none"> • EU Venue Secondary RIC and Bloomberg Exchange codes supported as described in Section 11. 		

* *Production go-live is subject to confirmation from Cboe.*

In addition to the above changes which will be live in Production on 1st April 2019, the below table outlines further Brexit technical changes that will go-live beforehand.

Functionality	UAT Activation Date	Production Activation Date
<ul style="list-style-type: none"> • Smart Order Routing (SOR) Service Termination as described in Section 7. 	16th Nov 2018	30th Nov 2018
<ul style="list-style-type: none"> • Redistribution of Symbols between Units as described in Section 3. 	26th Nov 2018	15th Feb 2019

Functionality	UAT Activation Date	Production Activation Date
<ul style="list-style-type: none"> • Multicast PITCH Transaction Marker functionality as described in Section 6. 	26th Nov 2018	15th Feb 2019
<ul style="list-style-type: none"> • Microseconds on TCP PITCH as described in Section 9: <ul style="list-style-type: none"> ○ The new format messages will begin being published in UAT in the BXE and TRF environments. The changes in the CXE environment will follow. ○ From the Production activation date all environments will begin sending the new Microsecond format messages. 	BXE/TRF: 7th Dec 2018 CXE: 11th Feb 2019	15th Feb 2019
<ul style="list-style-type: none"> • Trading Venue Segregation on Multicast PITCH as described in Section 5: <ul style="list-style-type: none"> ○ The new Multicast PITCH UK and EU instances will be available in Production from 15th Feb 2019, which will run alongside the legacy feeds. From this point onwards, Participants are urged to begin migrating over to the new feeds. ○ On 27th September 2019 the legacy Multicast PITCH feeds will no longer be available. 	Not Applicable	15th Feb 2019 From this date New Multicast PITCH feeds will be available
<ul style="list-style-type: none"> • Introduction of a new column to the Third Party Static file which is used exclusively by Third Party ETR Brokers. The new column identifies the jurisdiction of a bank code, used to determine which Cboe venue (UK or EU) the bank code will be able to trade on. Third Party Static file Specification. 	30th Jan 2019	22nd Feb 2019
<ul style="list-style-type: none"> • Risk Management Secure Web API Change as described in Section 10: <ul style="list-style-type: none"> ○ The ‘clearing’ parameter will become mandatory on applicable Risk Management Secure Web API commands 	25th February 2019	1st March 2019
<ul style="list-style-type: none"> • Addition of “Jurisdiction” column to Trade Data File CSV as described in Section 13. 	4th March 2019	15th March 2019
<ul style="list-style-type: none"> • Multi-day ETR behavior over EU launch window as described in Section 12. 	N/A	1st April 2019 *

* Production go-live is subject to confirmation from Cboe.

15. Documentation

3.3 Brexit Microsite

- [Cboe Europe Brexit Microsite](#)
- [Cboe Europe Brexit Implementation Milestones](#)

3.4 Guidance Notes

- [Brexit Technical Changes Guidance Note](#)

3.5 Technical Specifications

- [BXE/CXE FIX](#)
- [BXE/CXE BOEv2](#)
- [Cboe LIS FIX](#)
- [TRF FIX](#)
- [TRF BOE v2](#)
- [TCP PITCH](#)
- [TCP PITCH \(with microsecond timestamps\)](#)
- [MC PITCH](#)
- [Connectivity Manual](#)
- [Risk Management Secure Web API](#)
- [Last Sale](#)
- [Symbol File](#)
- [Trade Data File](#)
- [Trade Detail File](#)
- [Regulatory Transaction Reporting Service Description](#)
- [Technical Change Calendar](#)

3.6 Participant Documentation

UK Venue

- [Participant Manual](#)
- [Rule Book](#)

EU Venue

- [Participant Manual](#)
- [Rule Book](#)

Please contact the [Trade Desk](#) or your [Account Manager](#) if you have any questions.