Cboe Europe
Reference Data Specification

Version 1.47
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Contents

1 Overview

This document describes the file formats of the Cboe reference data files. These files describe the symbols tradable on Cboe, including ISIN, currency, tick sizes, and more. The files are formatted in simple comma-separated value (CSV) format, making them easy to parse or view in a spreadsheet program such as Microsoft Excel.

1.1 Availability

A set of reference data files is published for each Cboe certification and production environment. Symbol Reference Data can be retrieved at any time and will contain the most up-to-date symbol data that we hold for the day in question. The day may start without symbols. The majority of scheduled changes are made by 6am London time on trading days, however further changes are regularly made until 7am London time. We recommend retrieving data at 7am London time to ensure it is correct and complete. Any significant updates after 7am London time will be accompanied by a Trade Desk Notice.

1.2 Location

Files are available on the Cboe public website via HTTP. There are different URLs for the CXE, BXE and LIS books, for the Trade Reporting Facility (TRF), and for production and certification (UAT).

There are two variants of each symbol file which are accessed using different URLs. The standard version is publically available using the HTTP protocol. The enhanced version is available only using the HTTPS protocol and requires authentication using a Cboe web site account. The enhanced version of the file has the same structure as the standard version but contains data not available in the standard version.

1.3 Filenames

Symbol and Tick file downloads, by default, use filenames that identify both the platform and production/certification nature of the data, according to the following scheme:

Platform	Symbol file download	Tick file download
BXE	BXESymbols-PROD	BXETicks-PROD
CXE	CXESymbols-PROD	CXETicks-PROD
LIS	LISSymbols-PROD	LISTicks-PROD
TRF	TRFSymbols-PROD	TRFTicks-PROD
SIS	SISSymbols-PROD	SISTicks-PROD

Downloads from certification environments are suffixed with `-CERT` instead of `-PROD`.

Downloads of the 'enhanced' Symbol file share the same name as the standard symbol file.

1.4 Historical Variants

Historical versions of each file variant is available through the provision of a `selectedDate` query string argument, with the date supplied in ISO date format. As an example, consider a URL similar to the following:

```
http://www.bats.com/europe/equities/market_statistics/symbols_traded/csv/?mkt=cxe&selectedDate=YYYY-MM-DD
```

Please note that the file will be supplied in the current format and where certain concepts may not have been relevant at the time, may not be populated in these historical files.

When a non-trading date is requested (eg. a weekend), data for the previous trading date will be returned instead.

1.5 Public Website URLs

1.5.1 CXE Production:

Symbol data:
https://www.batstrading.co.uk/cxe/market_data/symbol_listing/csv/
Symbol data (enhanced):
https://www.batstrading.co.uk/cxe/market_data/symbol_listing/enhanced_csv/
Tick sizes:
https://www.batstrading.co.uk/cxe/market_data/symbol_listing/tickcsv/

1.5.2 BXE Production:

Symbol data:
https://www.batstrading.co.uk/bxe/market_data/symbol_listing/csv/
Symbol data (enhanced):
https://www.batstrading.co.uk/bxe/market_data/symbol_listing/enhanced_csv/
Tick sizes:
https://www.batstrading.co.uk/bxe/market_data/symbol_listing/tickcsv/

1.5.3 LIS Production:

Symbol data :
https://www.batstrading.co.uk/lis_market_data/symbol_listing/csv/
Symbol data (enhanced) :
https://www.batstrading.co.uk/lis_market_data/symbol_listing/enhanced_csv/
Tick sizes :
https://www.batstrading.co.uk/lis_market_data/symbol_listing/tickcsv/

1.5.4 TRF Production:

Symbol data :
https://www.batstrading.co.uk/trf/market_data/symbol_listing/csv/
Symbol data (enhanced) :
https://www.batstrading.co.uk/trf/market_data/symbol_listing/enhanced_csv/
Tick sizes :
https://www.batstrading.co.uk/trf/market_data/symbol_listing/tickcsv/

1.5.5 SIS Production:

Symbol data :
https://www.batstrading.co.uk/sis/market_data/symbol_listing/csv/
Symbol data (enhanced) :
https://www.batstrading.co.uk/sis/market_data/symbol_listing/enhanced_csv/
Tick sizes :
https://www.batstrading.co.uk/sis/market_data/symbol_listing/tickcsv/

1.6 Certification Environment URLs

1.6.1 CXE Certification:

Symbol data :
https://certification.batstrading.co.uk/cxe/market_data/symbol_listing/csv/
Symbol data (enhanced) :
https://certification.batstrading.co.uk/cxe/market_data/symbol_listing/enhanced_csv/
Tick sizes :
https://certification.batstrading.co.uk/cxe/market_data/symbol_listing/tickcsv/

1.6.2 BXE Certification:

Symbol data :
https://certification.batstrading.co.uk/bxe/market_data/symbol_listing/csv/
Symbol data (enhanced) :
https://certification.batstrading.co.uk/bxe/market_data/symbol_listing/enhanced_csv/
Tick sizes :
https://certification.batstrading.co.uk/bxe/market_data/symbol_listing/tickcsv/

1.6.3 LIS Certification:

Symbol data :
https://certification.batstrading.co.uk/lis_market_data/symbol_listing/csv/
Symbol data (enhanced) :
https://certification.batstrading.co.uk/lis_market_data/symbol_listing/enhanced_csv/
Tick sizes :
https://certification.batstrading.co.uk/lis_market_data/symbol_listing/tickcsv/

1.6.4 TRF Certification:

Symbol data :
https://certification.batstrading.co.uk/trf/market_data/symbol_listing/csv/
Symbol data (enhanced) :
https://certification.batstrading.co.uk/trf/market_data/symbol_listing/enhanced_csv/
Tick sizes :
https://certification.batstrading.co.uk/trf/market_data/symbol_listing/tickcsv/

1.6.5 SIS Certification:

Symbol data :
https://certification.batstrading.co.uk/sis/market_data/symbol_listing/csv/
Symbol data (enhanced) :
https://certification.batstrading.co.uk/sis/market_data/symbol_listing/enhanced_csv/
Tick sizes :
https://certification.batstrading.co.uk/sis/market_data/symbol_listing/tickcsv/

1.7 Access Over Private Connections

Cboe customers who prefer to access production reference data over their private connections may do so by using a different host address. Only production reference data is available - certification reference data is not accessible.

1.7.1 CXE Production:

Symbol data :

`https://int.batstrading.co.uk/cxe/market_data/symbol_listing/csv/`

Symbol data (enhanced) :

`https://int.batstrading.co.uk/cxe/market_data/symbol_listing/enhanced_csv/`

Tick sizes :

`https://int.batstrading.co.uk/cxe/market_data/symbol_listing/tickcsv/`

1.7.2 BXE Production:

Symbol data :

`https://int.batstrading.co.uk/bxe/market_data/symbol_listing/csv/`

Symbol data (enhanced) :

`https://int.batstrading.co.uk/bxe/market_data/symbol_listing/enhanced_csv/`

Tick sizes :

`https://int.batstrading.co.uk/bxe/market_data/symbol_listing/tickcsv/`

1.7.3 LIS Production:

Symbol data :

`https://int.batstrading.co.uk/lis_market_data/symbol_listing/csv/`

Symbol data (enhanced) :

`https://int.batstrading.co.uk/lis_market_data/symbol_listing/enhanced_csv/`

Tick sizes :

`https://int.batstrading.co.uk/lis_market_data/symbol_listing/tickcsv/`

1.7.4 TRF Production:

Symbol data :

`https://int.batstrading.co.uk/trf/market_data/symbol_listing/csv/`

Symbol data (enhanced) :

`https://int.batstrading.co.uk/trf/market_data/symbol_listing/enhanced_csv/`

Tick sizes :

`https://int.batstrading.co.uk/trf/market_data/symbol_listing/tickcsv/`

1.7.5 SIS Production:

Symbol data :

`https://int.batstrading.co.uk/sis/market_data/symbol_listing/csv/`

Symbol data (enhanced) :

`https://int.batstrading.co.uk/sis/market_data/symbol_listing/enhanced_csv/`

Tick sizes :

`https://int.batstrading.co.uk/sis/market_data/symbol_listing/tickcsv/`

1.8 Back-Up URLs

Should the Public Website URLs become inaccessible, a set of back-up URLs is available for Symbol data and Tick sizes.

1.8.1 CXE Production:

Symbol data :

`http://www.bats.com/europe/equities/market_statistics/symbols_traded/csv/?mkt=cxe`

Tick sizes :

`http://www.bats.com/europe/equities/market_statistics/symbols_traded/tickcsv/?mkt=cxe`

1.8.2 BXE Production:

Symbol data :

`http://www.bats.com/europe/equities/market_statistics/symbols_traded/csv/?mkt=bxe`

Tick sizes :

`http://www.bats.com/europe/equities/market_statistics/symbols_traded/tickcsv/?mkt=bxe`

1.8.3 LIS Production:

Symbol data :

`http://www.bats.com/europe/equities/market_statistics/symbols_traded/csv/?mkt=cxe&lis=t`

Tick sizes :

`http://www.bats.com/europe/equities/market_statistics/symbols_traded/tickcsv/?mkt=cxe&lis=t`

1.8.4 TRF Production:

Symbol data :

`http://www.bats.com/europe/equities/market_statistics/symbols_traded/csv/?mkt=trf`

Tick sizes :

`http://www.bats.com/europe/equities/market_statistics/symbols_traded/tickcsv/?mkt=trf`

1.8.5 SIS Production:

Symbol data :

`http://www.bats.com/europe/equities/market_statistics/symbols_traded/csv/?mkt=sis`

Tick sizes :

`http://www.bats.com/europe/equities/market_statistics/symbols_traded/tickcsv/?mkt=sis`

2 Symbol File

The symbol file consists of a *descriptor*, a *heading*, and many *data* rows.

2.1 Descriptor

The descriptor line gives information about the file, such as the environment (CERT or PROD) for which it was created and the date and time when it was created. This line is represented with comma-separated key/value pairs.

Key	Type	Value Interpretation
`environment`	String	The environment for which the file was generated. Allowed values are `CERT` or `PROD`.
`created`	Date	The date on which the file was created. Expressed in `YYYY-MM-DD` format.
`time`	Time	The time at which the file was created. Expressed in `HH:MMZ` format; "Z" indicates the time is in UTC.
`warning`	Warning	Any warning that might be relevant, semi-colon seperated (if more than one is relevant). Warnings contain a warning code and a warning text, colon separated. Valid codes are: "T": Time warning (eg. downloaded prior to 7am, so subject to change)

An example descriptor for a certification file created on 1 October 2008 at 5:25am UTC:

```
environment=CERT,created=2008-10-01,time=05:25Z,warning=T:Downloaded prior to 7am Europe\London
```

It is recommended that parsers ignore new keys or warning codes added over time.

2.2 Heading and Data

The heading line describes the format of the data rows which will follow. It is *highly* recommended that parsers be able to ignore new columns which are added over time. New columns may be added at any time. However, to aid in backward compatibility, columns will not be removed or reordered without an adequate notice period.

Column Name	Type	Value Interpretation
`company_name`	String	Name of the company. Human-readable.
`bats_name`	String	Uniform Symbology symbol for the instrument. May contain digits and lower case letters.
`isin`	String	ISIN
`currency`	String	Traded currency. Instruments traded in pence will be denoted `GBX`.
`mic`	String	Market identification code of the symbol's primary listing market. For example, `CHIX` for symbols **uniquely** listed on the Cboe Europe Regulated Market. Where Cboe has **secondary** listings on its Regulated Market, or symbols trading on its MTF segments, then the primary market MIC code will be used. For example, `XLON` for London Stock Exchange primary listed instruments.
`reuters_exchange_code`	String	The Reuters exchange code of the symbol's primary listing market. Cboe Europe (Regulated Market) **secondary** listed instruments display the Reuters exchange code of their primary listing market, e.g. `PA` for Paris. Cboe Europe (Regulated Market) **uniquely** listed instruments display the Reuters exchange code `CHI`. Secondary listed instruments are defined as those already listed on another Regulated Market.

Column Name	Type	Value Interpretation
lis_local	Notional Value	The MiFID large in scale value. Orders with a notional value less than this value must be displayed (i.e., cannot be hidden). Trade reports less than this value are not regarded as LIS. Expressed in traded currency. For example, for GBX, this value is in pence.
live	Boolean	Either t or f. Symbol is only allowed for trading if marked t.
tick_type	String	Name of the tick size banding used for this symbol. Refers to a tick table definition in the related Cboe Ticks file.
reference_price	Numeric	The last price of the instrument on the relevant Cboe market for the previous trading day (including routed executions). If the instrument was not traded on the Cboe market on the previous day, a suitable last price from an external venue will be used. This column is always blank for the SIS platform.
bats_prev_close	Numeric	The last price of the instrument on the relevant Cboe market for the previous trading day (included routed executions). If the instrument was not traded on the Cboe market during the previous day, the close from the last day the instrument was traded on that Cboe market will be used. The Cboe reference price will be used if the instrument has never been traded on Cboe. This column is always blank for the SIS platform.
live_date	Date	The date the instrument went live or will go live on Cboe in YYYY-MM-DD format. This may be empty if an instrument is not live on Cboe and a live date has not yet been planned.
bloomberg_primary	String	The Bloomberg ticker for this instrument on the primary listing exchange.
bloomberg_bats	String	The Bloomberg ticker for this instrument trading on Cboe. For BXE this will be ticker with the "EB" market code. For CXE this will be a ticker with the "IX" market code.
mifid_share	Boolean	Either t or f. If t then this instrument is a share admitted to trading on an EU Regulated Market under MiFID.
asset_class	String	One of ETF, ETC, ETN, DR or EQTY. Indicates whether this instrument is an Exchange Traded Fund, Exchange Traded Commodity, Exchange Traded Note, Depositary Receipt or some other equity.
matching_unit	Numeric	The matching unit for this instrument. Matching units are used to divide instruments into multicast groups for transmission in Multicast PITCH.
euroccp_enabled	Boolean	Either t or f. If t then this instrument is enabled for clearing with EuroCCP NV.
xclr_enabled	Boolean	Either t or f. If t then this instrument is enabled for clearing with SIX x-clear.
lchl_enabled	Boolean	Either t or f. If t then this instrument is enabled for clearing with LCH.Clearnet.
reuters_ric_primary	String	The Reuters Instrument Code (RIC) for this instrument on the primary listing market. Example: "VOD.L". Although this column will always be present, it will only be populated in the enhanced version of the symbol file. This column will be blank in the standard version of the file. See section 1.2 for information on accessing the enhanced symbol files.

Column Name	Type	Value Interpretation
reuters_ric_bats	String	The Reuters Instrument Code (RIC) for this instrument trading on the Cboe market related to the reference data file being processed. Examples: "VODl.BS", "VODl.CHI". Although this column will always be present, it will only be populated in the enhanced version of the symbol file. This column will be blank in the standard version of the file. See section 1.2 for information on accessing the enhanced symbol files.
reference_adt_eur	Numeric	The Reference Average Daily Turnover (ADT) expressed in Euros. The values represent that which will be considered for any applicable delayed reporting regime.
csd	String	Central Securities Depository. The place of settlement for CXE listed instruments (i.e. those with REGM in the trading_segment column) If not CXE listed instrument, field is blank. Populated with a SWIFT BIC code E.g. "CRSTGB22" to indicate Euroclear UK and Ireland. Field populated with the SWIFT BIC code settlement location for all instruments (including domestic and non-standard CSD). E.g. "CRSTGB22" to indicate Euroclear UK. See section § 2.4, p. 13 for more details about CSD reference data.
corporate_action_status	String	Any special corporate action status. Valid values are: "C" for symbols trading in a 'when issued' or 'conditional status'. "E" for CXE listed instruments (i.e. those with REGM in the trading_segment column.), in their cash or stock dividend EX-DIV period, i.e. from the ex-div date until the record date, inclusive. Otherwise blank. Other valid characters may be added at any time.
supported_services	String	Available services for which the instrument is eligible. Valid values are: "A" for opening and closing auctions "O" for order entry "E" for exchange trade reports "M" for external MTF trade reporting "P" for periodic auctions "R" for smart order routing "T" for OTC trade reporting and SI quoting Multiple characters may be used, sorted lexicographically, e.g. "EOR". Other valid characters may be added at any time. Note that ETRs in instruments which are classed as ETCs or ETNs (as denoted by the asset_class column) are only permitted if they are Large in Scale, otherwise they will be rejected.
trading_segment	String	Any of MTF, REGM, TDM, or SIS. All Cboe Europe (Regulated Market) listed securities will be populated with the REGM value. Instruments traded on the MTF segment will be populated with MTF. All instruments on the TRF platform will be populated with TDM. All instruments on the SIS platform will be populated with SIS.
printed_name	String	Uniform Symbology symbol that will appear on our market data feeds for this instrument in most scenarios. May contain digits and lower case letters. Trade reports for MTF Reporting customers utilise the bats_name.
periodic_auction_max_duration	Numeric	Maximum periodic auction duration (in milliseconds). Applicable if indicated in the supported_services column. This column is always blank for the TRF and SIS platforms.

Column Name	Type	Value Interpretation
periodic_auction_min_order_entry_size	Numeric	Periodic auction minimum order entry size (in shares). Applicable if indicated in the supported_services column. Updated on a daily basis. This column is always blank for the TRF and SIS platforms.
periodic_auction_min_order_entry_notional	Numeric	Periodic auction minimum order entry notional (in traded currency). Applicable if indicated in the supported_services column. This is a derived value for reference only, calculated by multiplying the reference_price by the periodic_auction_min_order_entry_size. Validation for minimum size acceptance is defined by the number of shares in periodic_auction_min_order_entry_size. This column is always blank for the TRF and SIS platforms.
max_otr_count	Numeric	Maximum unexecuted order to trade ratio count. This column is always blank for the TRF and SIS platforms.
max_otr_volume	Numeric	Maximum unexecuted order to trade ratio volume. This column is always blank for the TRF and SIS platforms.
capped	Numeric	Indicates whether a double volume cap is in place. This may be regulatory driven or voluntarily entered into. Valid values are: Valid values from 2018-09-28 (PROD) and 2018-08-27 (CERT) are: 0 = No cap in place. 1 = Capped voluntarily by Cboe for dark book trading only (Negotiated Trades still accepted). 2 = Capped as per instructions from the FCA.
venue_cap_percentage	Numeric	This column is deprecated and the value will be blank.
venue_uncap_date	Date	The estimated date the cap indicated by the capped column will be removed. If no cap is in place this column will be blank.
regulated_entity	String	The jurisdiction of the regulated entity that the symbol is traded on. Valid values are: "UK" "EU" "Not Applicable" This column will always contain the value "Not Applicable" in the TRF and SIS symbol files.

2.3 Sample

Example record for an MTF equity, Vodafone Group (line broken for readability):

```
Vodafone Group PLC,VODl,GB00B16GWD56,GBX,XLON,L,39721800,t,fese1,
141.8,140.5,2008-10-31,VOD LN Equity,VOD EB Equity,t,EQTY,3,
t,t,t,VOD.L,VODl.BS,20012345.0000,CRSTGB22,,MT,MTF,VODl,600,2509,352514.5,10,3000,1,5,31-07-2018
```

Example record for a uniquely listed Regulated Market instrument (line broken for readability):

```
CHIX TEST SYMBOL,TESTx,BXTEST000001,GBX,CHIX,CHI,100000,t,table1,
56.0000,56.0000,2013-08-12,,,t,EQTY,10,t,f,f,,,CRSTGB22,,AOR,REGM,
TESTx,600,6293,352408.0,10,3000,0,0,
```

Example record for a secondary listed Regulated Market instrument (line broken for readability):

```
XLON TEST SYMBOL,TESTl,GBTEST000005,GBX,XLON,L,,t,tck_0010,
,106.0010,2009-07-20,,,f,EQTY,3,t,t,t,,,CRSTGB22,,AOR,REGM,TESTl,600,
3325,352453.33,10,3000,0,0,
```

2.4 Central Securities Depository Reference

Country	CSD Name	SWIFT BIC
Austria	OeKB	OCSDATWW
Belgium	Euroclear Brussels	CIKBBEBB
Denmark	VP	VPDKDKKK
Finland	Euroclear Finland	APKEFIHH
France	Euroclear France	ESESFRPP
Germany	Clearstream	DAKVDEFF
Holland	Euroclear Nederland	NECINL2A
International	Euroclear Bank	MGTCBEBE
Ireland	Euroclear UK and I	CRSTGB22XXX
Italy	Monti Titoli	MOTIITMM
Norway	VPS	VPSNNOKK
Portugal	Interbolsa	IBLSPTPP
Spain	Iberclear	IBRCESMM
Sweden	Euroclear Sweden	VPCSSESS
Switzerland	SIX SIS AG	INSECHZZ
United Kingdom	Euroclear UK and I	CRSTGB22

Irish settled symbols are distinguished from other Euroclear UK and Ireland symbols due to the potential for Participants to utilise different clearing relationships for such symbols.

3 Ticks File

The ticks file describes the allowed minimum price increments in different price bands for each symbol. Much like a Symbol File, a Ticks File also begins with a descriptor and a heading, followed by rows which define the tick sizes.

3.1 Descriptor

The descriptor line gives information about the file, such as the environment (CERT or PROD) for which it was created and the date and time when it was created. This line is represented with comma-separated key/value pairs.

Key	Type	Value Interpretation
`environment`	String	The environment for which the file was generated. Allowed values are `CERT` or `PROD`.
`created`	Date	The date on which the file was created. Expressed in `YYYY-MM-DD` format.
`time`	Time	The time at which the file was created. Expressed in `HH:MMZ` format; "Z" indicates the time is in UTC.
`warning`	Warning	Any warning that might be relevant, semi-colon seperated (if more than one is relevant. Warnings contain a warning code and a warning text, colon separated. There are no valid codes at present.

An example descriptor for a certification file created on 1 October 2008 at 6:25am UTC:

```
environment=CERT,created=2008-10-01,time=06:25Z,warning=
```

It is recommended that parsers ignore new keys or warning codes added over time.

3.2 Heading and Data

The heading line describes the format of the data rows which will follow. It is recommended that parsers be able to ignore new columns which are added over time. New columns may be added at any time. However, to aid in backward compatibility, columns will not be removed or reordered without an adequate notice period.

Column Name	Type	Value Interpretation
`tick_type`	String	Name of the tick size. One row will be present per tick band per tick type. `tick_type` column values in the Symbol File will match these values.
`min_price`	Numeric	The minimum price, inclusive, for this tick band. Prices at or greater than this value (up to, but not including the `min_price` of the next row), have the given `tick_size`.
`tick_size`	Numeric	The minimum price increment for this tick band. If this value is null, the price in `min_price` represents the *maximum* allowed price for order entry for this tick type.

The interpretation is best understood with an example. Here are the rows which, at the time of writing, defined the `eurozone` tick type:

```
eurozone,0.0010,0.0010
eurozone,10.0000,0.0050
eurozone,999999.9950,
```

The interpretation of these rows is as follows:

- The minimum price allowed for order entry would be 0.001.
- For prices greater than or equal to 0.001 but less than 10.0000, the allowed minimum price increment is 0.001.
- Prices greater than 10.00 have a minimum price increment of 0.005.
- The maximum allowed price for order entry is 999999.995.

Some tick types define a uniform minimum price increment regardless of price. For example, at the time of writing, the `tck_0010` tick type is defined as:

```
tck_0010,0.0010,0.0010
tck_0010,999999.9990,
```

This tick type allows a minimum price increment of 0.001 for all prices, with the minimum order price being 0.001 and the maximum order price being 999999.999.

4 Support

Please email questions or comments regarding this specification to `tradedeskeurope@cboe.com`.

5 Revision History

1 October 2008	Initial draft version.
11 November 2008	Version 1.0. Updated text to note FSA authorisation.
28 January 2009	Version 1.1. Defined `time` field on the descriptor line of the symbol and tick files. Defined the `reference_price` field for symbols.
2 March 2010	Version 1.2. Cosmetic changes only. Added table of contents.
5 March 2010	Version 1.3. Defined the `bats_prev_close` field for symbols.
14 May 2010	Version 1.4. Defined the `live_date`, `bloomberg_primary`, `bloomberg_bats` and `mifid_share` fields for symbols.
11 Nov 2010	Version 1.5. Defined the `asset_class` field for symbols.
19 January 2011	Version 1.6. Defined the `matching_unit` field for symbols.
18 March 2011	Version 1.7. Updated the URLs for the symbol and tick files.
24 January 2012	Version 1.8. Added new CCP enabled columns for symbols.
22 February 2012	Version 1.9. Documented new CXE/BXE URLs.
9 May 2012	Version 1.10. Added the reuters_ric_primary and reuters_ric_bats columns.
28 June 2012	Version 1.11. Documented the enhanced versions of the symbol files.
17 October 2012	Version 1.12. Documented access via private connectivity.
19 June 2013	Version 1.13. Added the reference_adt_eur column and detailed URLs for the TRF.
30 Aug 2013	Version 1.14. Added csd, corporate_action_status and supported_services columns to symbol file.
2 Sep 2013	Version 1.15. Modify corporate_action_status and supported_services columns to contain zero or more single characters, rather than space-separated words. This is backwards incompatible with v1.14, which was never announced.
2 Sep 2013	Version 1.16. Clarify descriptions for mic, csd, and corporate_action_status columns of the symbol data.
13 Sep 2013	Version 1.17. Add new field, trading_segment. Clarify descriptions for mic, reuters_exchange_code, to be explicit about primary listed and secondary listed symbols.
7 Nov 2013	Version 1.18. Symbol data trading_segment now has TDM value in TRF environments. Improve symbol data examples (supported_services cannot have all of M, O, R, & T.) Clarify corp_action_status ex-div flag applies for date range until record date. Clarify csd and corp_action_status are only populated when trading_segment=REGM.
22 Jan 2014	Version 1.19. Add support for an explict value for Exchange Trade Reports in the supported_services column (E).

28 Mar 2014	Version 1.20 Removed 'effective from' labels.
12 Jun 2014	Version 1.21 Removed eccp_enabled column. Renamed emcf_enabled column to euroccp_enabled. Added printed_name column.
29 Jul 2014	Version 1.22 Updated change policy for symbol and tick file formats.
7 Oct 2014	Version 1.23 Removed 'effective from' labels.
9 Mar 2015	Version 1.24 Added support for when issues / conditional trading status
22 May 2015	Version 1.25 Primary to Unique in some cases
8 June 2015	Version 1.26 Added support for an explicit value for Opening and Closing Auctions in the supported_services column (A) as well as another for Periodic Auctions (P). Added the periodic_auction_min_duration column.
30 Nov 2015	Version 1.27 Added min_order_entry_size and min_order_entry_notional columns.
23 Dec 2015	Version 1.28 Renamed `min_order_entry_size` and `min_order_entry_notional` columns to `periodic_auction_min_order_entry_size` and `periodic_auction_min_order_entry_notional`.
7 Jan 2016	Version 1.29 Adding maximum unexecuted order to trade ratio count and maximum unexecuted order to trade ratio volume as `max_otr_count` and `max_otr_volume`. Also, adding capped and `lis_min_val_notional` columns to reference file. Added support for a warning within the descriptor. Clarified availability.
19 Feb 2016	Version 1.30 Updated for new branding.
4 Mar 2016	Version 1.31 Removed proposed `lis_min_val_notional` column.
26 Apr 2016	Version 1.32 Updated definition of `bats_prev_close` column.
29 Apr 2016	Version 1.33 Removed 'Effective' content related to Q2 2016 Release. Clarified time references with regards to availability.
17 May 2016	Version 1.34 Added support for historical variants.
15 Jun 2016	Version 1.35 Further clarified time references with regards to availability.
25 Aug 2016	Version 1.36 Document the repurpose of the 'csd' column to include a CSD for all symbols.
2 Nov 2016	Version 1.37 Adding LIS URLS
24 Jan 2017	Version 1.38 Updated URLs to reflect new bats.com paths. Added details on default download filenames. Minor formatting changes.
17 June 2017	Version 1.39 Renamed `periodic_auction_min_duration` column to `periodic_auction_max_duration`.
19 July 2017	Version 1.40 Added `venue_cap_percentage` column.
1 September 2017	Version 1.41 Added `SIS` platform and information about blank columns. Updated csv links to point to batstrading.co.uk. Clarified where `venue_cap_percentage` column data comes from.

1 October 2017	Version 1.42 Correct some Tick Size URL typos.
26 October 2017	Version 1.43 Added ETC and ETN as values to the `asset_class` column. Redefined values in the `capped` colum and added `venue_uncap_date` column.
19 March 2018	Version 1.44 Clarified ETRs in ETCs and ETNs are only permitted if they are Large in Scale.
20 August 2018	Version 1.45 Added `regulated_entity` column, deprecated `venue_cap_percentage`, updated meaning of allowed values in the `capped` column.
7 September 2018	Version 1.46 Correct typo in Certification Environment tick size URL for BXE.
15 October 2018	Version 1.47 Added Back-up URLs for Symbol data and Tick size file downloads.