



# **Cboe Titanium Europe CEDX Reference Data Specification**

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# 1 Overview

This document describes the file formats of the Cboe Europe reference data files for CEDX. These files describe the products available for trading on CEDX, including the products on a full day holiday. 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 Content

CEDX supports use of a single symbol identifier for order and quote entry: the Cboe Symbol ID. The Cboe Symbol ID is a unique six character base 62 compressed ID which can map to either:

- A single contract (either option or future)
- A strategy involving multiple option or futures contracts (also known as a 'Complex' symbol)

Note that these symbol identifiers are unique and they will never be reused, and will always be distinct across options, futures and complex instruments.

Futures strategies are limited to calendar spreads and these will be predefined by Cboe. Any participant wishing to trade a futures strategy not currently defined by Cboe should contact the Cboe Europe Trade Desk.

Options strategies are defined on-the-fly using the Complex Instrument Creation (CIC) process via the CEDX FIX or BOE protocol. These strategies are assigned a unique Cboe Symbol ID on a daily basis as part of the CIC and do not appear in any reference data file. They are only available via market data feeds.

The following files are available:

File Type	Content	Relative Download URL
Symbol Reference	Details of all options and futures contracts currently available for trading on CEDX	<a href="#">symbol_listing/csv/</a>
Product Reference	Details of the Products for all futures and options contracts trading on CEDX	<a href="#">product_listing/csv/</a>
Complex Futures Reference	Details of all currently defined futures calendar spreads	<a href="#">complex_futures_listing/csv/</a>
Tick Sizes	Description of the tick thresholds for tables referenced in the other files	<a href="#">tick/csv/</a>
Daily Activity	End of day statistics and reference values	<a href="#">daily_activity/csv/</a>
Basket Component	Details of the components of all the active baskets for CEDX	<a href="#">basket_component/csv/</a>
Market Maker Groups	Details of active groups and it's constituent products for market making for CEDX	<a href="#">market_maker_groups/csv/</a>

## 1.2 Filename

All file names are consistent with the relative URL and include the day it was generated for. For example, the file retrieved from `symbol_listing` will have a file name given according to the following pattern:

`PROD_CEDX_symbol_listing_YYYY_MM_DD.csv`

The Certification files will all have the prefix `CERT`.

## 1.3 Availability

The Symbol Listing, Product Listing, Complex Futures and Tick files for day  $T$  will be made available from midnight on day  $T$  and should not, except in exceptional circumstance, change after this time.

The Daily Activity file is updated incrementally after trading hours. More information on when each column's data will become available can be found in the Daily Activity section of this document.

It is also possible to access the files for a different date by providing a `selectedDate` query string argument, with the date supplied in `YYYY-MM-DD` ISO date format. For example:

`https://www.batstrading.co.uk/cedx/market\_data/symbol\_listing/csv/?selectedDate=YYYY-MM-DD`

will return the file for `YYYY-MM-DD`. Note that files obtained for future dates using this method may be incomplete up until midnight on `YYYY-MM-DD`.

Separate files are available for Certification and Production.

## 1.4 Public Website URLs

### 1.4.1 CEDX Production:

Symbol Listing:

`https://www.batstrading.co.uk/cedx/market\_data/symbol\_listing/csv/`

Product Listing:

`https://www.batstrading.co.uk/cedx/market\_data/product\_listing/csv/`

Tick Sizes:

`https://www.batstrading.co.uk/cedx/market\_data/tick/csv/`

Complex Futures Listing:

`https://www.batstrading.co.uk/cedx/market\_data/complex\_futures\_listing/csv/`

Daily Activity:

`https://www.batstrading.co.uk/cedx/market\_data/daily\_activity/csv/`

Basket Component:

`https://www.batstrading.co.uk/cedx/market\_data/basket\_component/csv/`

Market Maker Groups:

`https://www.batstrading.co.uk/cedx/market\_data/market\_maker\_groups/csv/`

## 1.5 Certification Environment URLs

### 1.5.1 CEDX Certification:

Symbol Listing:

[https://certification.batstrading.co.uk/cedx/market\\_data/symbol\\_listing/csv/](https://certification.batstrading.co.uk/cedx/market_data/symbol_listing/csv/)

Product Listing:

[https://certification.batstrading.co.uk/cedx/market\\_data/product\\_listing/csv/](https://certification.batstrading.co.uk/cedx/market_data/product_listing/csv/)

Tick Sizes:

[https://certification.batstrading.co.uk/cedx/market\\_data/tick/csv/](https://certification.batstrading.co.uk/cedx/market_data/tick/csv/)

Complex Futures Listing:

[https://certification.batstrading.co.uk/cedx/market\\_data/complex\\_futures\\_listing/csv/](https://certification.batstrading.co.uk/cedx/market_data/complex_futures_listing/csv/)

Daily Activity:

[https://certification.batstrading.co.uk/cedx/market\\_data/daily\\_activity/csv/](https://certification.batstrading.co.uk/cedx/market_data/daily_activity/csv/)

Basket Component:

[https://certification.batstrading.co.uk/cedx/market\\_data/basket\\_component/csv/](https://certification.batstrading.co.uk/cedx/market_data/basket_component/csv/)

Market Maker Groups:

[https://certification.batstrading.co.uk/cedx/market\\_data/market\\_maker\\_groups/csv/](https://certification.batstrading.co.uk/cedx/market_data/market_maker_groups/csv/)

## 1.6 Back-up URLs

### 1.6.1 CEDX Production:

Symbol Listing:

[https://www.cboe.com/europe/derivatives/market\\_statistics/symbols\\_traded/symbol\\_listing/csv/?mkt=cedx](https://www.cboe.com/europe/derivatives/market_statistics/symbols_traded/symbol_listing/csv/?mkt=cedx)

Product Listing:

[https://www.cboe.com/europe/derivatives/market\\_statistics/symbols\\_traded/product\\_listing/csv/?mkt=cedx](https://www.cboe.com/europe/derivatives/market_statistics/symbols_traded/product_listing/csv/?mkt=cedx)

Tick Sizes:

[https://www.cboe.com/europe/derivatives/market\\_statistics/symbols\\_traded/tick/csv/?mkt=cedx](https://www.cboe.com/europe/derivatives/market_statistics/symbols_traded/tick/csv/?mkt=cedx)

Complex Futures Listing:

[https://www.cboe.com/europe/derivatives/market\\_statistics/symbols\\_traded/complex\\_futures\\_listing/csv/?mkt=cedx](https://www.cboe.com/europe/derivatives/market_statistics/symbols_traded/complex_futures_listing/csv/?mkt=cedx)

Daily Activity:

[https://www.cboe.com/europe/derivatives/market\\_statistics/symbols\\_traded/daily\\_activity/csv/?mkt=cedx](https://www.cboe.com/europe/derivatives/market_statistics/symbols_traded/daily_activity/csv/?mkt=cedx)

Basket Component:

[https://www.cboe.com/europe/derivatives/market\\_statistics/symbols\\_traded/basket\\_component/csv/?mkt=cedx](https://www.cboe.com/europe/derivatives/market_statistics/symbols_traded/basket_component/csv/?mkt=cedx)

Market Maker Groups:

[https://www.cboe.com/europe/derivatives/market\\_statistics/symbols\\_traded/market\\_maker\\_groups/csv/?mkt=cedx](https://www.cboe.com/europe/derivatives/market_statistics/symbols_traded/market_maker_groups/csv/?mkt=cedx)

## 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 CEDX Production:

Symbol Listing:

[https://int.batstrading.co.uk/cedx/market\\_data/symbol\\_listing/csv/](https://int.batstrading.co.uk/cedx/market_data/symbol_listing/csv/)

Product Listing:

[https://int.batstrading.co.uk/cedx/market\\_data/product\\_listing/csv/](https://int.batstrading.co.uk/cedx/market_data/product_listing/csv/)

Tick Sizes:

[https://int.batstrading.co.uk/cedx/market\\_data/tick/csv/](https://int.batstrading.co.uk/cedx/market_data/tick/csv/)

Complex Futures Listing:

[https://int.batstrading.co.uk/cedx/market\\_data/complex\\_futures\\_listing/csv/](https://int.batstrading.co.uk/cedx/market_data/complex_futures_listing/csv/)

Daily Activity:

[https://int.batstrading.co.uk/cedx/market\\_data/daily\\_activity/csv/](https://int.batstrading.co.uk/cedx/market_data/daily_activity/csv/)

Basket Component:

[https://int.batstrading.co.uk/cedx/market\\_data/basket\\_component/csv/](https://int.batstrading.co.uk/cedx/market_data/basket_component/csv/)

Market Maker Groups:

[https://int.batstrading.co.uk/cedx/market\\_data/market\\_maker\\_groups/csv/](https://int.batstrading.co.uk/cedx/market_data/market_maker_groups/csv/)

## 2 Common Components

All files will consist 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 ISO date 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 separated (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 midnight, 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=
```

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

### 2.2 Heading

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.

## 3 Symbol File

The symbol file contains the following fields.

Column Name	Type	Value Interpretation
symbol_id	String	Unique 6 character code representing the contract
symbol_type	String	Type of contract represented by the symbol. Allowed values are: option or future
product_code	String	A 6 character code representing the product for the contract. Further details on individual products can be found in the Product file
expiry_dt	Date	Date the contract expires expressed in YYYY-MM-DD ISO date format.
call_put_flag	String	Blank for futures. Takes the value C for Call or P for Put options.
strike_price	Numeric	Blank for futures. The strike price for options.
cfi_code	String	The 6 character CFI Code for the instrument. The third character denotes whether the exercise style is European or American. (E) stands for European style, (A) stands for American style and it will be Blank for futures.
description	String	A human readable description of the contract (ISO 18774 FISO).
isin	String	ISIN
test_symbol	Boolean	"t" if the symbol is a Test symbol, "f" if the symbol is not a test symbol..
first_traded_dt	Date	Date the contract first became available for trading expressed in YYYY-MM-DD ISO date format.
contract_multiplier	Integer	Contract multiplier for the symbol, this can differ from the default contract multiplier set at the product level for equity options.
version	Integer	The number of adjustments made to the symbol due to corporate actions for the underlying.
closing_only	Boolean	"t" if the symbol is closing only, "f" if the symbol is not..

### 3.0.1 Sample Data

Example records for an option and a future on the EZ50.

(line broken for readability):

```
symbol_id,symbol_type,product_code,expiry_dt,call_put_flag,strike_price,cfi_code,
description,isin,test_symbol,first_traded_dt,multiplier,version,closing_only
000001,future,EZ50F,2055-03-26,,,FFICSX,CBOE NL/F 20550326 EZ50,NL0000000001,f,2055-01-21,,,
x00001,option,EZ50O,2055-03-26,C,120.000,0CEICS,CBOE NL/O 20550326 C EBEZ50PP 120,NL0000x00001,f,
2055-01-21,100,0,f
```

## 4 Product File

The product file contains the following fields.

Column Name	Type	Value Interpretation
product_code	String	Unique 6 character code representing the product
underlying_id	String	Unique code representing the underlying for the product This field will be blank when basket_deliverable is "t"
product_type	String	Type of product represented by this row in the file. Allowed values are: option or future
contract_multiplier	Integer	The multiplier between the level of the underlying and the contract value.
currency	String	The ISO currency of the contract.
isin	String	The ISIN of the underlying This field will be blank when basket_deliverable is "t".
matching_unit	String	Which matching unit simple and complex symbols based on this product will be on.
order_book_tick_table	String	Name of the tick size banding used for order book trading for this product. Refers to a tick table definition in the related Cboe Ticks file.
block_tick_table	String	Name of the tick size banding used for block trades submitted for this product. Refers to a tick table definition in the related Cboe Ticks file.
complex_tick_table	String	Name of the tick size banding used for orders in complex symbols submitted for this product. Refers to a tick table definition in the related Cboe Ticks file. Note that volatility strategies will use the tick table for the associated option product.
max_otr_count	Integer	The maximum allowed count based order to trade ratio for this product for participants that are not market makers (calculated according to the rules in RTS9).
max_otr_volume	Integer	The maximum allowed volume based order to trade ratio for this product for participants that are not market makers (calculated according to the rules in RTS9).
min_block_trade_size	Integer	The minimum number of lots required in order to report a block trade in this product (expressed as number of contracts).
min_deferral_size	Integer	The minimum number of lots required in order for a trade to be eligible for deferral (expressed as number of contracts). Always populated for options, empty for futures.
test_product	Boolean	"t" if the product is a test product, "f" if the product is not a test product.
block_price_hilo_pct	Numeric	Values in range 0-100. Percentage used for price validation on trade reports when an on-book execution has occurred on the day and there are high and low price statistics.
block_price_close_pct	Numeric	Values in range 0-100. Percentage used for price validation on trade reports when there is no on-book execution on the day.
min_aim_size	Integer	Minimum number of contracts required to initiate an AIM auction. Always populated for options, empty for futures.
aim_duration_ms	Integer	Length of AIM Exposure in milliseconds. Always populated for options, empty for futures.
c_rfq_duration_ms	Integer	Length of C-RFQ Exposure in milliseconds. Always populated for options, empty for futures.
vol_strat_price_pct	Numeric	Percentage used for validation of futures leg for a volatility strategy. Always populated for futures, empty for options.
threshold_width_pct	Numeric	Percentage used for maximum threshold width. Always populated for futures, empty for options.

Column Name	Type	Value Interpretation
limit_order_prot_pct	Numeric	Percentage used for limit order protection.
underlying_name	String	Name of the underlying.
underlying_type	String	The type of the underlying, can be index or equity.
underlying_primary_mic	String	The ISO mic code of the exchange where the underlying is primary listed. This field will be blank when underlying_type is index or basket_deliverable is "t".
underlying_csd	String	The csd for the underlying. This field will be blank when underlying_type is index or basket_deliverable is "t".
basket_deliverable	Bool	If "t", this indicates the product delivers a basket underlying which is composed of two or more components. The components of the associated basket, can be seen in the "Basket Component" file. Only appropriate for products with an underlying_type of equity, will always be "f" for index products.
basket_id	String	Only populated for products where basket_deliverable is "t" The id should be used to lookup the associated basket within the "Basket Component" file.
basket_isin	String	Only populated for products where basket_deliverable is "t" and is the assigned ISIN for the associated basket.

#### 4.0.1 Sample Data

Data for products based on the NL25 (line broken for readability):

```
product_code,underlying_id,product_type,contract_multiplier,currency,isin,matching_unit,order_book_tick_table,
block_tick_table,complex_tick_table,max_otr_count,max_otr_volume,min_block_trade_size,min_deferral_size,
test_product,block_price_hilo_pct,block_price_close_pct,min_aim_size,aim_duration_ms,
c_rfq_duration_ms,vol_strat_price_pct,threshold_width_pct,limit_order_prot_pct,underlying name,
underlying type,underlying primary mic,underlying csd,basket_deliverable
NL250,BNL25P,option,1000,EUR,DE000SLA22L5,matching_06,pbts_c,
tck_0010,cmplx_0010,250000,250000,0,0,f,10,20,1,10,15,10,10,,index,,f,,
NL25F,BNL25P,future,1000,EUR,DE000SLA22L5,matching_02,tck_0050,
tck_0010,cmplx_0050,250000,250000,0,0,f,10,20,,,0,10,10,,index,,f,,
```

## 5 Complex Futures File

The complex futures file contains the definition of each Futures strategy in terms of its individual legs.

Thus, for a calendar spread involving two legs (a single buy and a single sell), there will be two rows in the file for the individual legs. Each leg row will also include summary columns providing information pertaining to the complex symbol to which the legs belong. These summary columns will have the prefix "complex\_symbol"

Column Name	Type	Value Interpretation
symbol_id	String	Unique 6 character code representing the complex symbol.
leg_symbol_id	String	Unique 6 character code representing the leg symbol.
description	String	The description for this leg of the complex symbol.
product_code	String	The product associated with the leg contract.
expire_dt	Date	The expiry of the leg contract expressed in YYYY-MM-DD ISO date format.
leg_ratio	Integer	The ratio of the leg within the overall complex.
leg_side	String	Whether the individual leg is a Buy (B) or a Sell S.
test_symbol	Boolean	"t" if the symbol is a test symbol, "f" if the symbol is not a test symbol.
complex_symbol_description	String	A human readable description of the contract.
complex_symbol_expire_dt	Date	When the complex symbol expires (minimum of the leg expiry dates) expressed in YYYY-MM-DD ISO date format.
first_traded_dt	Date	Date the contract first became available for trading expressed in YYYY-MM-DD ISO date format.

### 5.0.1 Sample Data

Example record for a complex symbol representing buying the 2055-03-26 expiry and selling the 2055-06-25 expiry of the EZ50 future.

(line broken for readability):

```
symbol_id,leg_symbol_id,description,product_code,expire_dt,  
  leg_ratio,leg_side,test_symbol,complex_symbol_description,complex_symbol_expire_dt,first_traded_dt  
c00002,000002,CBOE NL/F 20550326 DE30,DE40F,2055-03-26,1,B,F,  
  DE40F/20550326:1:S - DE40F/20550625:1:B,2055-03-26,2055-01-21  
c00002,000008,CBOE NL/F 20550625 DE30,DE40F,2055-06-25,1,S,F,  
  DE40F/20550326:1:S - DE40F/20550625:1:B,2055-03-26,2055-01-21
```

## 6 Ticks File

The ticks file describes the allowed minimum price increments in different price bands for each symbol.

Column Name	Type	Value Interpretation
tick_type	String	Name of the tick size. One row will be present per tick band per tick type. The values from the tick_table columns in the Product 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 <i>maximum</i> 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:

```
tick_type,min_price,tick_size
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:

```
tick_type,min_price,tick_size
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.

## 7 Daily Activity File

The daily activity file contains a summary of activity for each symbol. It does not contain test symbols. Expired products are present in the file until the end of the month.

Volume and Price information will become available shortly after the market closes.

Settlement prices will become available shortly after the settlement time for each product. Settlement prices for all of a product's contracts will be published at once. More information on the trading hours for each product can be found on the Cboe European Derivatives Holidays and Hours page:

<https://www.cboe.com/about/hours/european-derivatives/> .

Open interest will become available before the next trading day begins.

If any of the above data is not available yet the ID line of the file will contain a "data-incomplete" warning in the warning header containing a semicolon-separated list of the columns that will become available later.

The daily activity file contains the following fields.

Column Name	Type	Value Interpretation
symbol_id	String	Unique 6 character code representing the contract.
expire_dt	Date	Date the contract expires expressed in YYYY-MM-DD ISO date format.
description	String	A human readable description of the contract (ISO 18774 FISN).
day_volume	Numeric	The total traded volume in the given contract for the selected date, including simple and complex volume.
mtd_volume	Numeric	The total traded volume in the given contract for the month-to-date, including simple and complex volume, and including the current day.
open_interest	Numeric	The total number of outstanding contracts at close.
settlement_price	Numeric	The approved settlement price of the contract.
closing_price	Numeric	The contract price at close.
last_bid	Numeric	The last bid price.
last_ask	Numeric	The last ask price.
prev_open_interest	Numeric	The total number of outstanding contracts at close of the previous trading day.

### 7.0.1 Sample Data

Example record for a daily activity file.

(line broken for readability):

```
symbol_id,expire_dt,description,day_volume,mtd_volume,open_interest,settlement_price,closing_price,
last_bid,last_ask,prev_open_interest
a0001S,2021-09-17,Cboe/F 20210917 CH20P,10680,101218,50000,1215.00000000,1206.00000000,
1203.50000000,1208.00000000,50000
a0001T,2021-09-17,Cboe/F 20210917 DE30G,41442,329892,60000,1537.00000000,1531.50000000,
1531.00000000,1536.00000000,59500
```

## 8 Basket Component File

The basket component file contains the components of all active baskets. A basket is active if it is listed as a "basket\_id" for a product within the "Product File"

The basket component file will allow the identification of the basket it belongs to, the underlying which makes up the component and also the deliverable units of that component per contract share.

The deliverable units should be multiplied by the contract multiplier for the contract in question to get the final delivery.

Examples:

$0.05 \text{ (deliverable units)} * 100 \text{ (contract multiplier)} = 5 \text{ units of the basket component per contract}$

$1.0 \text{ (deliverable units)} * 100 \text{ (contract multiplier)} = 100 \text{ units of the basket component per contract}$

Column Name	Type	Value Interpretation
basket_id	String	Unique identifier for the basket.
underlying_id	String	Unique identifier for the underlying.
isin	String	The ISIN of the underlying .
currency	String	The ISO currency of the underlying.
primary_mic	String	The ISO mic code of the exchange where the underlying is primary listed.
name	String	Name of the underlying.
deliverable_units_per_share	Float	The units delivered per share of the contract.

### 8.0.1 Sample Data

Example record for the basket component file.

(line broken for readability):

```
basket_id,underlying_id,isin,currency,primary_mic,name,deliverable_units_per_share
VODTEST1,TEST1,GB00B17DWD56,GBP,XLON,TEST,0.05
VODTEST1,VOD1,GB00B16GWD56,GBX,XLON,Vodafone,1.0
```

## 9 Market Maker Groups File

The market maker groups file contains the active LPP groups to market make in for constituent products. The index products will be the only member in its group and have same group name as the product code. Multiple Equity Options products can belong to a single group. The group name may or may not be same as the product code.

Column Name	Type	Value Interpretation
group_name	String	Group Name to market make in.
product_code	String	Product Code that belongs to the group.

### 9.0.1 Sample Data

Example record for the market maker groups file.

(line broken for readability):

```
group_name,product_code
UK1000,UK1000
DE40F,DE40F
Eurozone,BMW0
Eurozone,SHEL0
```

## 10 Descriptions for LPP CSV files

### 10.1 LPP Product Mapping

Maps Equity Option products to LPP size, spread and liquidity groups.

Column Name	Type	Value Interpretation
product_code	String	Unique 6 character code representing the product.
underlying_name	String	Name of the underlying.
size_group	Integer	Size group number. Refers to size group table definition in the related LPP.size_group file.
spread_group	Integer	Spread group number. Refers to spread group table definition in the related LPP.spread_group file.
liquidity_group	Integer	Liquidity group number. Refers to liquidity group table definition in the related LPP.liquidity_group file.

### 10.2 LPP Size Group

Maps size group number to minimum quote size.

Column Name	Type	Value Interpretation
group	Integer	Size group number.
min_size	Integer	Minimum quote size.

### 10.3 LPP Spread Group

Maps spread group number to maximum spread floor and ceilings.

Column Name	Type	Value Interpretation
group	Integer	Spread group number.
floor	Numeric	Spread floor: Max spread = MIN [MAX (Floor, % of the bid), Ceiling].
ceiling	Numeric	Spread ceiling: Max spread = MIN [MAX (Floor, % of the bid), Ceiling].

### 10.4 LPP Liquidity Group

Maps liquidity group number to maximum spread as

Column Name	Type	Value Interpretation
group	Integer	Liquidity group number.
max_spread	Numeric	Maximum spread as a factor of bid price: Max spread = MIN [MAX (Floor, % of the bid), Ceiling].

## 11 Support

Please email questions or comments regarding this specification to [tradedeskeurope@cboe.com](mailto:tradedeskeurope@cboe.com).

## 12 Revision History

23 April 2025	Version 1.20 Updated Daily Activity File section to reflect the inclusion of expired products until the end of the month
15 April 2025	Version 1.19 Updated with Cboe Titanium branding.
09 January 2025	Version 1.18 Updated overview section to reflect the inclusion of symbols on holiday
16 July 2024	Version 1.17 Addition of "Descriptions for LPP csv files" section
16 August 2023	Version 1.16 Addition of "Market Maker Groups File" links and section
3 August 2023	Version 1.15 Addition of "Basket Component File" links
3 July 2023	Version 1.14 Addition of multiple new fields to the "Product File" and the introduction of the "Basket Component File" to support basket deliverables
12 May 2023	Version 1.13 Addition of multiple new fields relating to the product underlying
8 February 2023	Version 1.12 Correction of multiplier column to contract_multiplier.
8 January 2023	Version 1.11 Addition of multiplier, version and closing_only columns to Symbol file.
17 November 2021	Version 1.10 Appended prev_open_interest column to Daily Trade Activity file.
17 September 2021	Version 1.9.1 Updated references; Changed DE30 to DE40
20 August 2021	Version 1.9. Added Daily Trade Activity file. Corrected expire_dt column for Complex Futures file. Added trailing slash to backup url links. Fixed column types for price-related columns in Product file.
27 May 2021	Version 1.8. Updated sample data for Complex Futures File. Confirmed futures and options description to be ISO 18774 FISN.
19 May 2021	Version 1.7. Updated description for min_deferral_size.
13 April 2021	Version 1.6. Updated complex symbol description
8 April 2021	Version 1.5. Updated backup urls to reference <a href="http://www.cboe.com">www.cboe.com</a> instead of <a href="http://markets.cboe.com">markets.cboe.com</a> .
31 March 2021	Version 1.4. Remove tick information from symbol files, add to product file. Add additional information to product file. Standardise on Boolean columns.
03 February 2021	Version 1.3. Added first_traded_dt to symbol file and complex futures file.
07 December 2020	Version 1.2. Removed reference to Volatility Strategies residing in their own dedicated unit.
31 August 2020	Version 1.1. Provide additional details in symbol and product file
24 July 2020	Version 1.0. Initial Version