

# **Format of publicly available BSSE pre-trade and post-trade data**

(Updated: 30 December 2022)

Bratislava Stock Exchange (hereinafter referred to as „The Stock Exchange“ or „BSSE“) provides public the output of pre-trade and post-trade data in a machine-processable form through a public interface. The information provides a real picture of what is happening on the spot market, while the basic data are accessible without a delay, the trading data with a delay of 15 minutes. Each type of data forms a set of data for the selected business day, while it is possible to choose a back date for seven calendar days from the current day.

## **Pre-trade data:**

- Static data of securities - Shares (file CPA001A)
- Static data of securities - Bonds (file CPAD01A)
- Orders (file OBJK01A) \*
- Market Makers Orders (file OBJT01A) \*

## **Post-trade data:**

- Dynamic data of securities – Shares (file - CPAD01A) \*
- Dynamic data of securities – Bonds (file- CPDD01A) \*
- Transactions (file OB0001A) \*
- Cancelled transactions (file ZO0001A)

Note: \* Data files marked with an asterisk contain data with a delay of 15 minutes.

## Transmission format description

The data in the files are provided by BSSE, i.e. the data are produced by the Stock Exchange and the customer will ensure their further processing. The individual records in the file are arranged according to the time of their creation on a given day, while the first data is always the date and time of creation of the given record:

DDMMYYYYHHMMSS#

The request for sending pre-trade and post-trade data can be entered on the BSSE's website: <https://www.bsse.sk/en/pre-trade-and-post-trade-data/>, while it is possible to select the type of data, the date of the trading day (a maximum of seven calendar days from the current day.). It is necessary to enter an e-mail address, to which a ZIP file with the required data sets will be sent.

The data in the files can be created in different phases of the trading day:

**Morning Transmission (R).** Transmission of summary information about the status on the Stock Exchange prior to the start of trading.

**Continuous Daily Transmission (D).** Transmission of updated information about development of the trading on the BSSE.

**Afternoon Transmission (P).** Transmission of summary information about the status on the Stock Exchange after the daily closing of trading.

	Time of generating
Records in CPA001A	; R
Records in CPD001A	; R
Records in CPAD01A	; D
Records in CPDD01A	; D
Records in OB0001A	; D
Records in ZO0001A	; D
Records in OBJK01A	; R, D
Records in OBJT01A	; R, D

**Note:**

The following message transmission mechanism is recommended:

At the beginning of the day, the customer will try to download the file containing the message No 1. Afterwards he will cyclically try to download the file containing the message with the number greater by 1. Should the connection break, the customer will download all files starting with the last message number.

The record code is comprised of an abbreviation, a record format version number, and a format sub-version letter code.

Change of version means a substantial change in the format, meaning an inclusion/exclusion of the field(s) in/from the message body, or a change of format of a certain field.

Change of subversion means for example adding a new field at the end of message. That means you have a possibility on your side to design a software application that will allow working with various versions.

If a field does not have an assigned value, the records will contain pre-defined value as follows:

- In the case of strings - spaces
- In the case of numbers - character "0" (ASCII 48)
- In the case of date - characters "00000000" (ASCII 48 x 8)
- In the case of time - characters "000000" (ASCII 48 x 6)
- In the case of logical variables - character "N" (no)

If the field's real value does not take up the pre-defined size in the format, the individual fields will be leveled:

- To the right in the case of numbers
- To the left in the case of strings

**Note:**

For numerical entries, the decimal place separator will be a dot.

**Note:**

The BSSE's trading day schedule is comprised of time intervals (T10 to Tn). The time intervals specify also the time of generating the individual messages.

<i>Time</i>	<i>Activity</i>
T40 - 30 minutes	Morning transmission
T40 - 10 minutes	Daily continuous transmission permission
T50 + 20 minutes	Daily continuous transmission ban
T80 + 60 minutes	Afternoon transmission

Current Txx values:

T40 = 11:00

T50 = 15:30

T80 = 16:00

**The following is the meaning of used abbreviations:**

CPA	- Securities - shares, static part	
CPAD	- Securities - shares, dynamic part	
CPD	- Securities - bonds, static part	
CPDD	- Securities - bonds, dynamic part	
OB	- Transactions closed on the BSSE	
ZO	- Transactions cancelled on the BSSE	
OBJK	- Orders to buy and sell securities - continuous system	
OBJB	- Orders to buy and sell securities - block system	
OBJT	- Orders to buy and sell securities – market makers system	
UPO	- Reported direct transactions of members	
REPO	- Closed REPO transaction of members	
IDXP	- Description of Stock Exchange Indexes	
LEI	- Legal Entity Identifier (LEI of issuer)	
MIC	- MIC Codes of BSSE markets	
CFI	- Classification of Financial Instruments code	
BTI	- Bond Type	(EUSB-Sovereign, OEPB-Other Public, CVTB-Convertible, CVDB-Covered, CRPB-Corporate, OTHR-Other)
BSI	- Bond Type – Seniority	(SNDB-Senior Debt, MZZD-Mezzanine, SBOD-Subordinated Debt, JUND-Junior Debt)

**Numerical designation of Stock Markets (Market) used**

<b>Market</b>	<b>Segment</b>	<b>Name</b>	<b>Status Acronym</b>		<b>MIC</b>
<b>1</b>	0	Listed	A	K	XBRA
<b>2</b>	0	Registered	V		XBRA
<b>3</b>	0	Regulated free	A	V	XBRA
<b>4</b>	0	Multilateral Trading Facility	A	M	EBRA
<b>11</b>	1	Listed main	A	H	XBRA
<b>12</b>	1	Listed paralell	A	P	XBRA
<b>13</b>	1	Listed new	V	N	XBRA

Status item values :

A – active

S – suspended, put on hold

V – discarded, cancelled

**Name:** Securities - shares, static part.

**Description:** Records contain identification of records of securities - shares - that are traded on the Stock Exchange. They contain data that do not change during the day and are valid for the whole day.

	Type/Format	Length
<b>&lt;Record CPA001A&gt; ::=</b>		
<Record creation date >	; D/DDMMYYYY	8
< Record creation time>	; T/HHMMSS	6
#	; A	1
<Abbreviation of security>	; A/#UUU##UX	8
<Name of security>	; A/X20	20
<ISIN>	; A/UU#10	12
<Unitary nominal value>	; N/#7,4	12
<Date of issue>	; D/DDMMYYYY	8
<Date of decisive day>	; D/DDMMYYYY	8
<Date of dividend payout>	; D/DDMMYYYY	8 *1
<Net dividend>	; N/#7,4	12
<Issue volume in units>	; N/#12	12
<Name/Bearer>	; A/U	1
<Profit per share>	; N/N#11,4	17
<Type of share>	; A/U	1
<Date of finding the annual profit>	; D/DDMMYYYY	8
<Previous average>	; N/#7,4	12
<Date of previous average>	; D/DDMMYYYY	8
<Annual maximum price for 365 days>	; N/#7,4	12
<Annual minimum price for 365 days>	; N/#7,4	12
<P/E>	; N/N#5,2	9
<Midrange>	; N/#7,4	12
<Market capitalization>	; N/N#11,4	17
<Market>	; N/#6	6
<CFI>	; A/X6	6
<LEI>	; A/X20	20

\*1 - mentioned date of the dividend payout will not be entered (i.e. the date = 0) unless it is introduced in the BSSE's trading system.

Possible values of <Name/Bearer>:

M – Name

D – Bearer

Possible values of <Type of share>:

A – Share

P – Unit

F – Shares of Investment Funds

L - Co-operative Units

V- Takeover Bid

**Name:** Securities - shares, dynamic part.

**Description:** Records contain a clear identification of the security plus the dynamic data that are calculated for the security during the trading day.

	Type/Format	Length
<Record CPAD01A> ::=		
<Record creation date >	; D/DDMMYYYY	8
< Record creation time>	; T/HHMMSS	6
#	; A	1
<Abbreviation of security>	; A/#UUU##UX	8
<ISIN>	; A/UU#10	12
<Minimum price>	; N/#7,4	12
<Maximum price>	; N/#7,4	12
<Last price>	; N/#7,4	12
<Number of transactions>	; N/#6	6
<Number of units>	; N/#12	12
<Volume of transactions>	; N/#11,4	16
<Minimum request - continuous>	; N/#7,4	12
<Maximum request - continuous>	; N/#7,4	12
<Minimum offer - continuous>	; N/#7,4	12
<Maximum offer - continuous>	; N/#7,4	12
<Minimum request - blocks>	; N/#7,4	12
<Maximum request - blocks>	; N/#7,4	12
<Minimum offer - blocks>	; N/#7,4	12
<Maximum offer - blocks>	; N/#7,4	12

**Name:** Securities - bonds, static part.

**Description:** Records contain identification of the records of securities - bonds - that are traded on the Stock Exchange. They contain data that does not change during the day and is valid for the entire day..

	Type/Format	Length
<Record CPD001A> ::=		
<Record creation date >	; D/DDMMYYYY	8
< Record creation time>	; T/HHMMSS	6
#	; A	1
<Abbreviation of security>	; A/#UUU##UX	8
<Name of security>	; A/X20	20
<ISIN>	; A/UU#10	12
<Unitary nominal value>	; N/#7,4	12
<Date of issue>	; D/DDMMYYYY	8
<Interest rate>	; N/#2,3	6
<Payment frequency in months>	; N/#2	2
<Maturity date>	; D/DDMMYYYY	8
<Next closest maturity date>	; D/DDMMYYYY	8
<Issue volume in units>	; N/#12	12
<Current unitary nominal value>	; N/#7,4	12
<Bond type>	; A/U	1
<Previous average>	; N/#7,4	12
<Date of previous average>	; D/DDMMYYYY	8
<Annual maximum price for 365 days>	; N/#7,4	12
<Annual minimum price for 365 days>	; N/#7,4	12
<Yield>	; N/#3,2	6
<Midrange>	; N/#7,4	12
<Market>	; N/#6	6
<CFI>	; A/X6	6

Possible values of <Bond type>:

D – Corporate bond

R – Government bond

T – T-bill

**Name:** Securities - bonds, dynamic part.

**Description:** Records contain a clear identification of the security plus the dynamic data that are calculated for the security during the trading day.

	Type/Format	Length
<b>&lt;Record CPDD01A&gt; ::=</b>		
<Record creation date >	; D/DDMMYYYY	8
< Record creation time>	; T/HHMMSS	6
#	; A	1
<Abbreviation of security>	; A/#UUU##UX	8
<ISIN>	; A/UU#10	12
<Minimum price>	; N/#7,4	12
<Maximum price>	; N/#7,4	12
<Last price>	; N/#7,4	12
<Number of transactions>	; N/#6	6
<Number of units>	; N/#12	12
<Volume of transactions>	; N/#11,4	16
<Minimum request - continuous>	; N/#7,4	12
<Maximum request - continuous>	; N/#7,4	12
<Minimum offer - continuous>	; N/#7,4	12
<Maximum offer - continuous>	; N/#7,4	12
<Minimum request - blocks>	; N/#7,4	12
<Maximum request - blocks>	; N/#7,4	12
<Minimum offer - blocks>	; N/#7,4	12
<Maximum offer / blocks>	; N/#7,4	12



**Name:** Transactions closed on the BSSE.

**Description:** Records contain detailed information about transactions closed by the BSSE's trading system. These are the transactions closed in electronic order book (price making modules) of trading system. Transaction anonymity is characteristic for all types of transactions on the Stock Exchange.

	Type/Format	Length
<b>&lt;Record OB0001A&gt; ::=</b>		
<Record creation date >	; D/DDMMYYYY	8
< Record creation time>	; T/HHMMSS	6
#	; A	1
<Sequential number>	; N/#6	6
<Date of transaction>	; D/DDMMYYYY	8
<Time of transaction>	; T/HHMMSS	6
<Abbreviation of security>	; A/#UUU##UX	8
<ISIN>	; A/UU#10	12
<Nominal unitary value>	; N/#7,4	12
<Number of units>	; N/#12	12
<Price>	; N/#7,4	12
<Total sum>	; N/#11,4	16
<+Aliquot interest yield>	; N/N#11,4	17
<Type of transaction>	; A/UU	2
<JIO>	; A/X38	38
<ETF>	; A/X25	25

Possible values of <Type of transaction>:

A – Trade from auction module

K – Trade from continuous module

T – Trade from market makers module

JIO       - Unique Trade Identification  
in format: YYYYMMDDThhmmssdddZrzdknnt

ETF       - list of appropriate MiFID II RTS1 and RTS2 post-trade transparency flags (comma separated)

**Name:** Transactions cancelled on the BSSE.

**Description:** Records contain detailed information about transactions cancelled by the BSSE's trading system or by the order of the head of trading. These are the transactions coming from electronic order book (price making modules) of trading system. Transaction anonymity is characteristic for all types of transactions on the Stock Exchange.

	Type/Format	Length
<b>&lt;Record ZO0001A&gt; ::=</b>		
<Record creation date >	; D/DDMMYYYY	8
< Record creation time>	; T/HHMMSS	6
#	; A	1
<Sequential number>	; N/#6	6
<Date of transaction>	; D/DDMMYYYY	8
<Time of transaction>	; T/HHMMSS	6
<Abbreviation of security>	; A/#UUU##UX	8
<ISIN>	; A/UU#10	12
<Unitary nominal value>	; N/#7,4	12
<Number of units>	; N/#12	12
<Price>	; N/#7,4	12
<Total sum>	; N/#11,4	16
<+Aliquot interest yield>	; N/N#11,4	17
<Type of transaction>	; A/UU	2
<JIO>	; A/X38	38
<ETF>	; A/X25	25

Possible values of <Type of transaction>:

A – Trade from auction module

K – Trade from continuous module

T – Trade from market makers module

JIO - Unique Trade Identification (identical format as for file OB0001A)

ETF - list of appropriate MiFID II RTS1 and RTS2 post-trade transparency flags (comma separated)

**Name:** Orders to buy and sell securities - auction system and continuous system.

**Description:** Records contain information about the best orders on both the buy and sell side. The status in the three best price levels is listed.

	Type/Format	Length
<Record OBJK01A> ::=		
<Record creation date >	; D/DDMMYYYY	8
< Record creation time>	; T/HHMMSS	6
#	; A	1
<Date of trading>	; D/DDMMYYYY	8
<Abbreviation of security>	; A/#UUU##UX	8
<ISIN>	; A/UU#10	12
<Number of units - sale 1>	; N/#12	12
<Best price - sale 1>	; N/#7,4	12
<Number of units - sale 2>	; N/#12	12
<Best price - sale 2>	; N/#7,4	12
<Number of units - sale 3>	; N/#12	12
<Best price - sale 3>	; N/#7,4	12
<Number of units - purchase 1>	; N/#12	12
<Best price - purchase 1>	; N/#7,4	12
<Number of units - purchase 2>	; N/#12	12
<Best price - purchase 2>	; N/#7,4	12
<Number of units - purchase 3>	; N/#12	12
<Best price - purchase 3>	; N/#7,4	12

**Name:** Orders to buy and sell securities – market makers system

**Description:** Records contain information about the best orders on both the buy and sell side. The maximum number of units is taken into account in orders. The status in the three best price levels is listed.

	Type/Format	Length
<Record OBJT01A> ::=		
<Record creation date >	; D/DDMMYYYY	8
< Record creation time>	; T/HHMMSS	6
#	; A	1
<Date of trading>	; D/DDMMYYYY	8
<Abbreviation of security>	; A/#UUU##UX	8
<ISIN>	; A/UU#10	12
<Number of units - sale 1>	; N/#12	12
<Best price - sale 1>	; N/#7,4	12
<Number of units - sale 2>	; N/#12	12
<Best price - sale 2>	; N/#7,4	12
<Number of units - sale 3>	; N/#12	12
<Best price - sale 3>	; N/#7,4	12
<Number of units - purchase 1>	; N/#12	12
<Best price - purchase 1>	; N/#7,4	12
<Number of units - purchase 2>	; N/#12	12
<Best price - purchase 2>	; N/#7,4	12
<Number of units - purchase 3>	; N/#12	12
<Best price - purchase 3>	; N/#7,4	12

## Nomenclature:

<b>Types</b>	<b>A</b>	- alphanumeric
	<b>N</b>	- numeric
	<b>T</b>	- time
	<b>D</b>	- date
	<b>L</b>	- logical
<b>Formats</b>	<b>N</b>	- +/- character (only "-" is mentioned typically)
	<b>#</b>	- digit
	<b>X</b>	- optional character
	<b>U</b>	- capital letter
	<b>L</b>	- small letter

## Examples:

X30	- 30 optional characters ("a trial string")
N#11	- "-" character followed by a maximum 11-digit cardinal number ("-12345", "12345678901", "0", "-12345678901")
#7,2	- a real number containing seven digits before the decimal point and two digits after the decimal point. The separator is the comma "," character. ("1234567,12", "0,01", "0,00")
#UUU##UX	- a digit followed by three capital letters, followed by two digits, a capital letter and an optional character. ("1SLN01A", "2XXX01C*")