

# **CBONDS ADD-IN**



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## Terms and definitions

*Registration number* is the local number of issue of bonds. This number is assigned by the relevant statutory authority.

*Customization* is a Microsoft Excel component enabling access to additional functions and commands.

*Cbonds Sites* are websites with the following Internet Addresses:

- <https://cbonds.com/>
- <https://cbonds.pl/>
- <https://cbonds.it/>
- <https://cbonds.de/>
- <https://cbonds.es/>
- <https://cbonds.hk/>
- <https://cbonds.fr/>

*CUSIP* is a 9-value alphanumeric code unambiguously identifying North-America financial tools intended for clearing and making of transactions. Widely used in USA and Canada.

*ISIN* is a twelve-value alphanumeric code created for the purpose of assigning unique names to bonds or shares. Bonds having code ISIN RegS are issued for international investors and undergo the clearing through systems Clearstream, Luxembourg and Euroclear. Bonds having code ISIN 144A are private issuances in USA to be placed among American investors and to undergo the clearing through system DTC.

## Introduction

"Cbonds Add-in"- is a customization tool developed for Microsoft Excel to enable smooth download of information concerning bonds, their quotes and indices as well as to figure up profitability and perform graphical analysis based on this data.

The manual describes workplace requirements and the installation procedure, and includes instructions on authentication and customization tool handling.

## Preparation

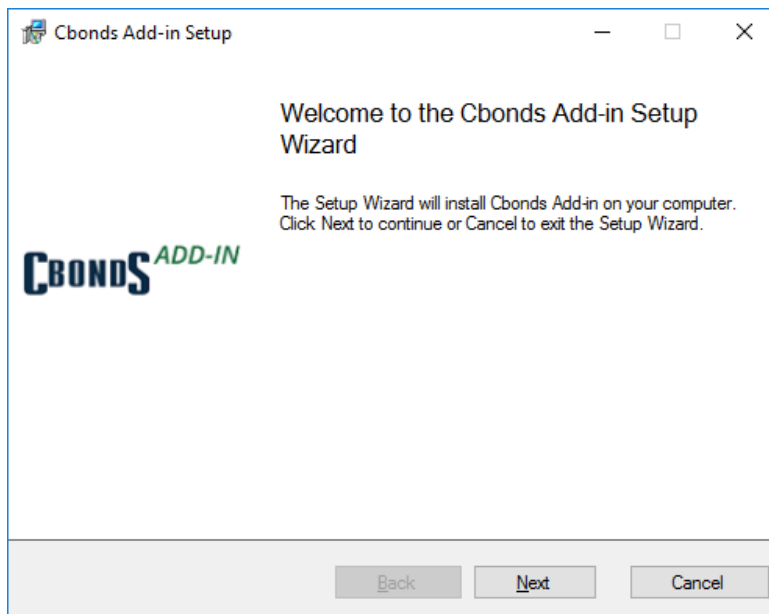
### *System requirements*

To ensure the smooth operation of the customization tool, the following system requirement shall be met:

- Access to Internet;
- Operational system:
  - Microsoft Windows 7;
  - Microsoft Windows 8;
  - Microsoft Windows 10;
- Microsoft Office with Excel package of the following version:
  - 2007;
  - 2010;
  - 2013;
  - 2016;
- Additional software\*:
  - Microsoft .NET Framework 4.6.2;
  - Microsoft Visual Studio 2010 Tools for Office.

### *Installation*

To install the customization tool, it is necessary to run the file with extension ".msi" and to follow its instructions (Fig.1).



*Fig.1. The first screen of the customization tool installer*

---

\* Given the absence of this software, download and installation functions will be offered by the installer.

The installer will check whether it is necessary to install any additional software (Microsoft .NET Framework 4.5 and Microsoft Visual Studio 2010 Tools for Office), and, given the absence of such software, the installer will prompt to install it (Fig.2).

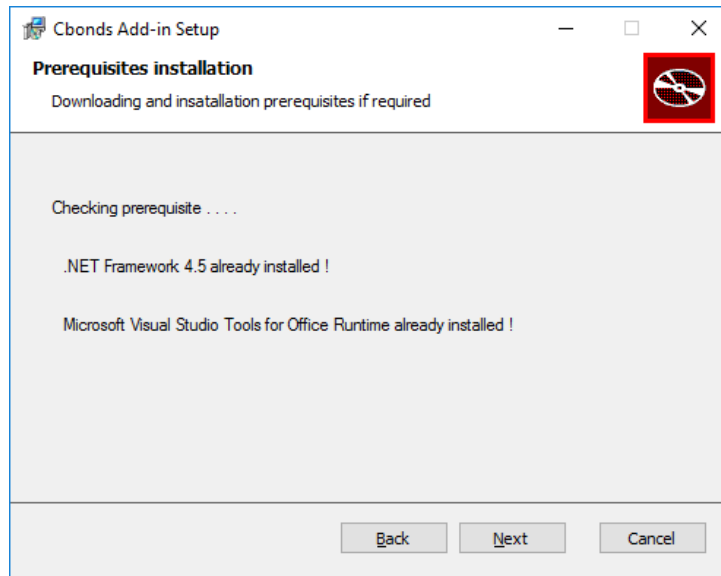
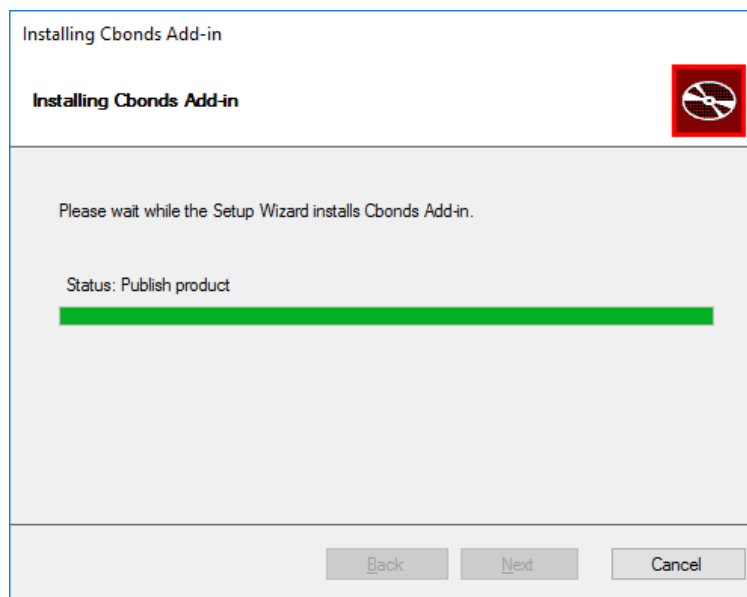
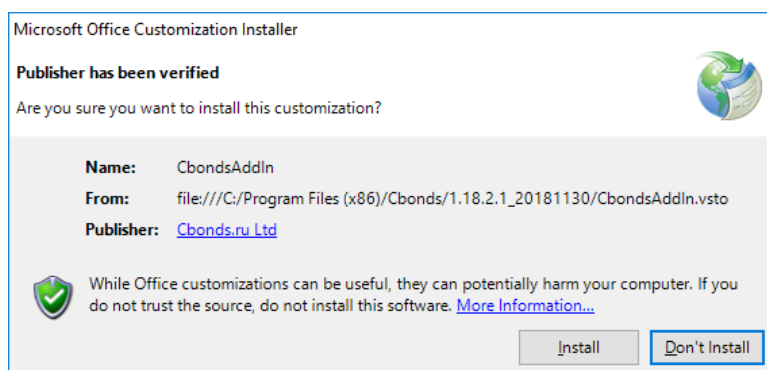


Fig.2. checking the presence of any additional software

Further on, the installer will prompt to install the customization tool (Fig.3).



a)



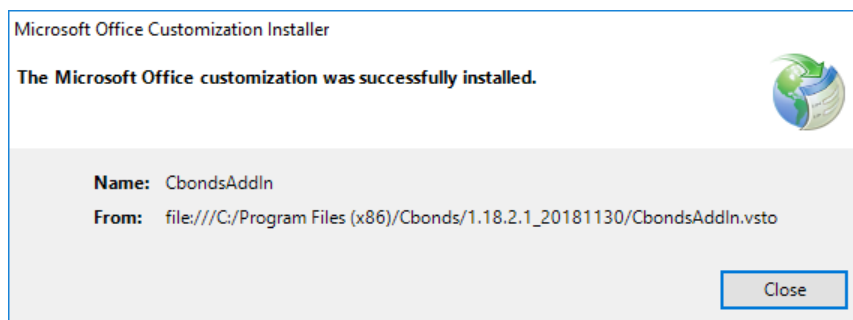
b)

Fig.3. The customization tool installation: the main dialog box (a) and the additional dialog box (b)

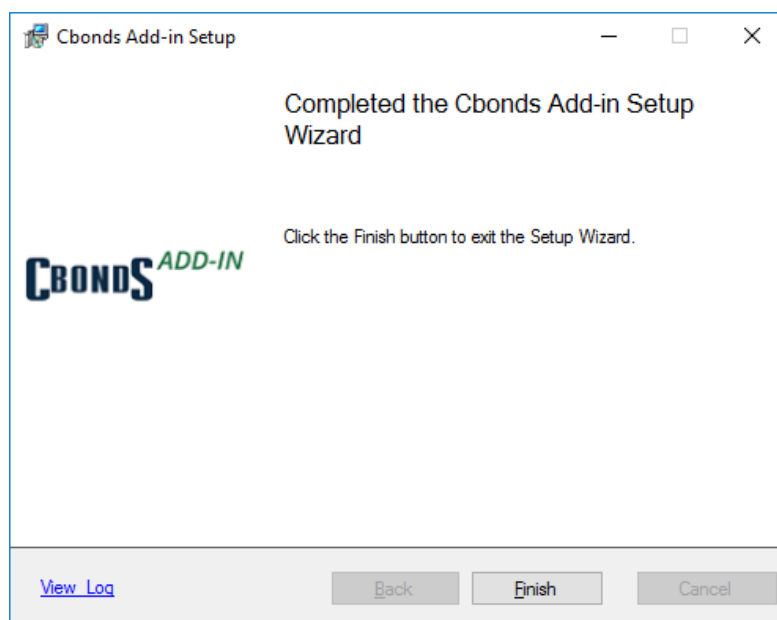


**For the installer to work properly, you need to have Administrator's rights, or run it as Administrator.**

The system will notify the user about the installation results (Fig.4)



a)



b)

Fig.4. Successful installation of the customization tool: the additional dialog box (a), the main dialog box (b)

## Starting the add-in

To run the tool, one needs to perform the following operations sequence:

1. To run Microsoft Excel
2. To open or create a new book
3. To get to the menu item named "CBONDS" (Fig.5)

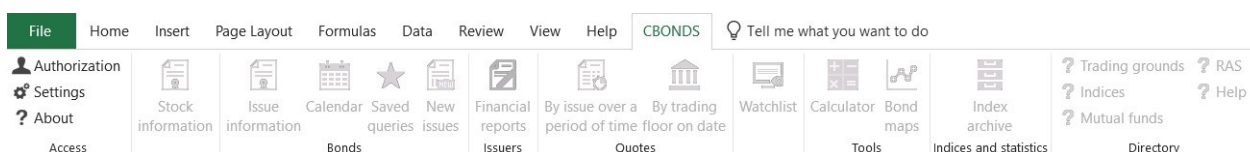
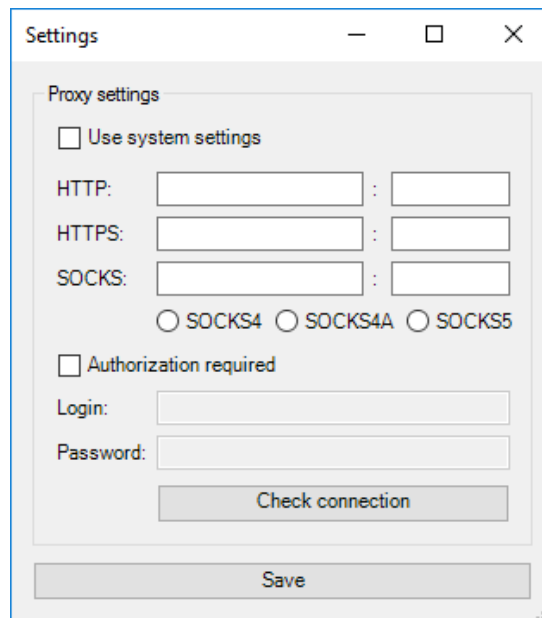


Fig.5. Customization after launching Excel

## Setting up connection and authentication procedure

The customization tool includes the possibility of performing the customization of connection through the proxy. To do this, you have to select the tab "Settings" and uncheck the box "Use system settings" (Fig.6).

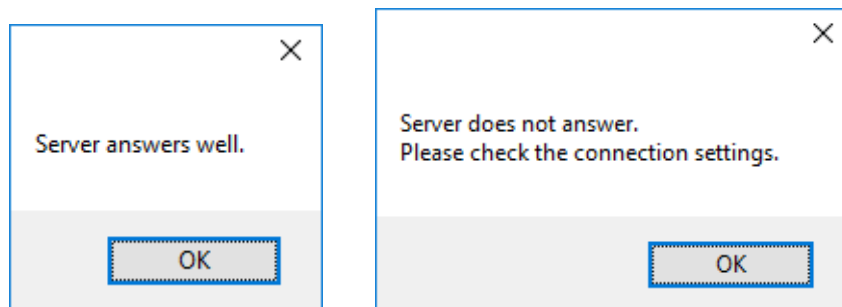


The 'Settings' dialog box contains the following elements:

- Proxy settings** section:
  - ☐ Use system settings
  - HTTP: [text box] : [text box]
  - HTTPS: [text box] : [text box]
  - SOCKS: [text box] : [text box]
  - ☐ SOCKS4 ☐ SOCKS4A ☐ SOCKS5
- ☐ Authorization required
- Login: [text box]
- Password: [text box]
- Check connection button
- Save button

Fig.6. Connection customization

The connection operability can be tried by pressing the respective button. The trial results are shown in Figure 7.

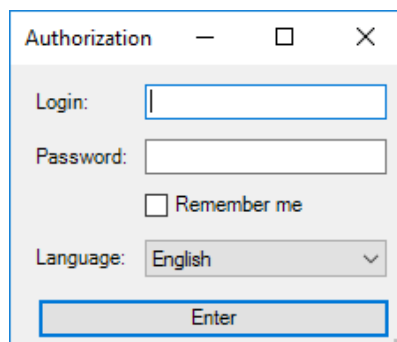


Two dialog boxes are shown side-by-side:

- Left dialog:** "Server answers well." with an OK button.
- Right dialog:** "Server does not answer. Please check the connection settings." with an OK button.

Fig.7. Trial results

To log in, you have to select the respective item of the setting menu.



The 'Authorization' dialog box contains the following elements:

- Login: [text box]
- Password: [text box]
- ☐ Remember me
- Language: English (dropdown menu)
- Enter button



Fig.8. The login window

Fill up the dialog box (Fig.8) by entering your login name and password, and by selecting the customization language: Russian or English.



**Use your login and password from Cbonds websites or email to [pro@cbonds.info](mailto:pro@cbonds.info) to get access.**

The add-in uses the two-step authentication. Upon entering the data you will be given a confirmation code sent to the e-mail address having been specified by you as the contact one in your User Profile on Cbonds site. The code shall be entered into the pop-up box (Fig.9). The two-step authentication shall be completed only once for each device.

Fig.9. The authentication confirmation box

Further on, the system will notify you about the authentication results (Fig.10).

Fig.10. Authentication results

## User interface

In case of successful authentication, you will be awarded the access to functional buttons (Fig.11). Their description is represented in Table 1.

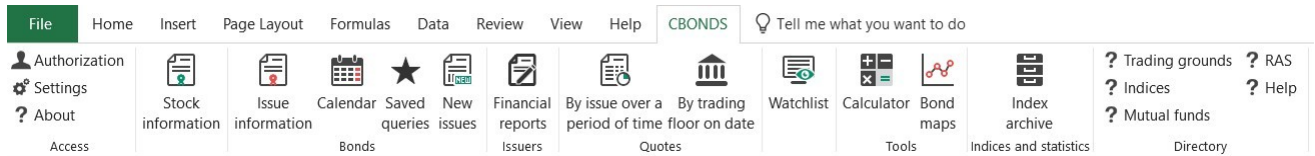


Fig.11. The customization interface after successful authentication

Table 1. Concise description of customization menu items

Menu item	Description
Stock information	Parameters of shares, information on trading and dividends
Issue information	Parameters, exchange quotes and market member quotes, issuance payments schedule
Calendar	Information on archived and anticipated events. The limit of quantity of entries - 2500.
Saved queries	Acquisition of request results saved on sites concerning the search of bond issuances. The limit of quantity of entries - 2500.
New issues	The search of new issuances in terms of regions, countries, and types of securities for the last month. The limit of quantity of entries - 2500.
Financial reports	Accounting balance sheet, financial statements, IFRS indicators
By issue over a period of time	Acquisition of all exchange quotes for an item of securities for a period. The limit on the entries quantity is 2500.
By trading floor on date	Acquisition of exchange market quotes of bonds for a particular date. Quotes are available for the last 40 business days, the entries quantity limit is 2500.
Watchlist	Updating the information on securities from Watchlist
Calculator	Calculation of yield by price expressed as a percentage of face value (excluding ACY)
Bond maps	Acquisition of quotes and drawing up the plot
Current values	Acquisition of current values of indices Cbonds and statistical data of stock market
Index archive	Acquisition of the current archival values of indices. The history depth available: daily indices - five years, monthly - ten years.
Directory	Identifiers of trade platforms, indices, funds, RAS indicators in the Cbonds database and user's guide

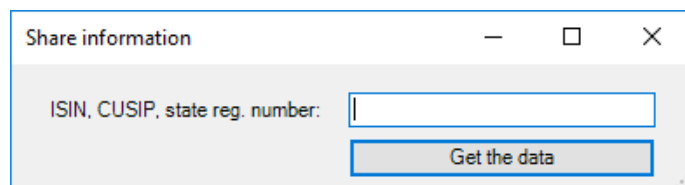
Detailed description of the functionality is available in chapter "Customization tool handling".

## Using the add-in

### Stock information

The menu item "Information about the share" reflects statistic and dynamic parameters of an item of securities.

Click on the menu item and enter the security identifier in the pop-up dialog box (Fig.12).



A dialog box titled "Share information" with a close button (X) in the top right corner. Inside the dialog, there is a label "ISIN, CUSIP, state reg. number:" followed by a text input field. Below the input field is a button labeled "Get the data".

Fig.12. The dialog box allowing the selection of a share

The button "Get the data" creates the CbondsStockPage sheet (Fig.13). If the sheet has been already created in the file, it becomes active.

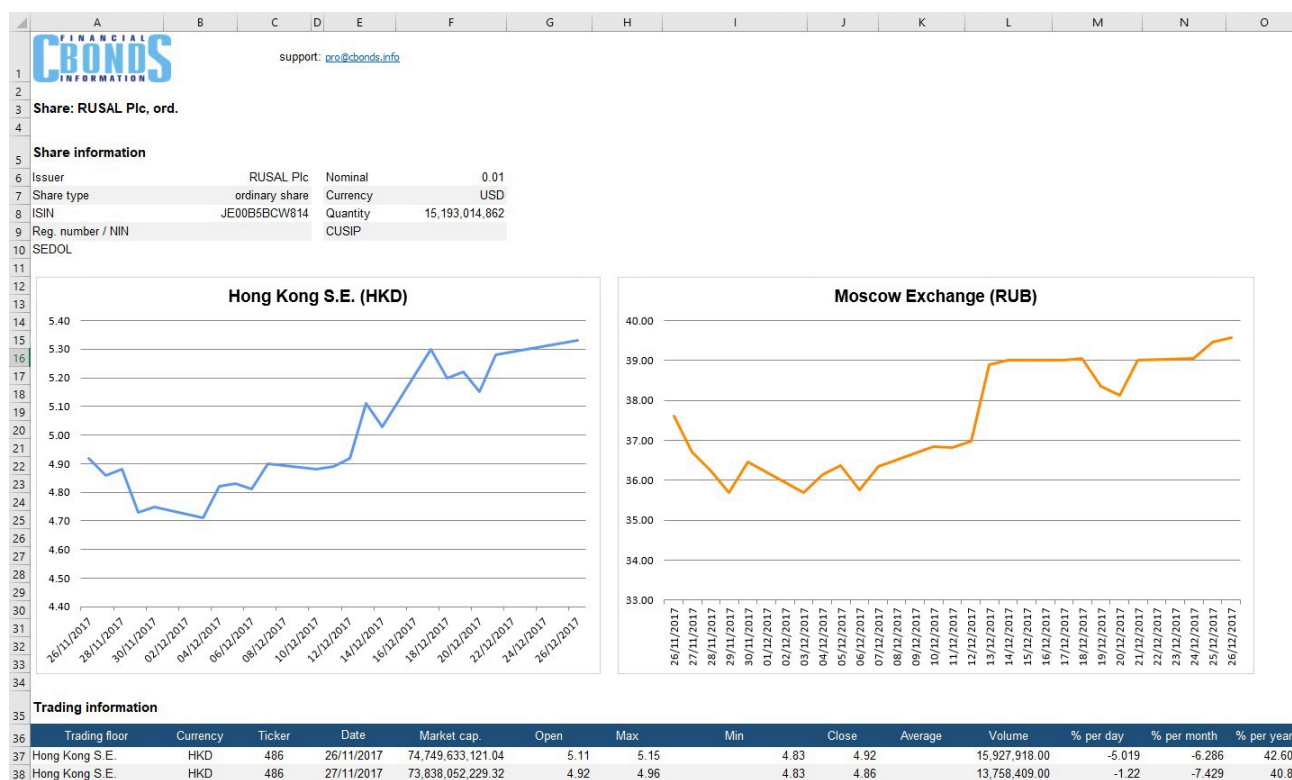


Fig.13. The information sheet for RUSAL Plc shares



**For each stock exchange there will be created its own chart**

The information will be downloaded if you have correctly entered one of the following identifiers:

- Registration number;
- NIN;

- ISIN RegS;
- CUSIP RegS.

Data in the sheet are grouped in blocks as follows:

- Information on the share;
- Trade curve for the last month;
- Information on the exchange trade;
- Dividends.

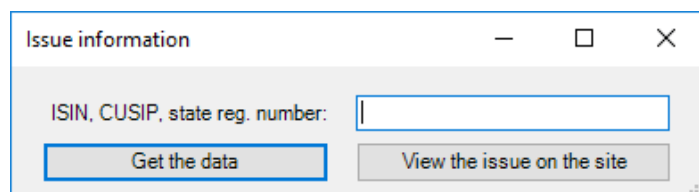
The complete list of fields shown in the sheet is provided in Appendix 1.

## Bonds

### Issue information

The menu item "Information on securities emission" reflects main parameters available in the emission page on Cbonds websites (for example <http://cbonds.com/emissions/issue/242>).

Click on the menu item and enter the security identifier in the pop-up dialog box (Fig.14).



*Fig.14. The dialog box for securities emission selection*

The button "Get the data" creates the CbondsIssuePage sheet (Fig.15). If the sheet has been already created in the file, it becomes active.

The button "See data about the securities emission on the website" opens a new tab in the browser, provided always that you have entered the identifier.

The information will be downloaded if you have correctly entered one of the following identifiers:

- The issuance registration number;
- ISIN RegS;
- ISIN 144A;
- CUSIP RegS;
- CUSIP 144A.

Data in the sheet are grouped in blocks as follows:

- Securities emission Information;
- Cbonds Valuation;
- Exchange and off-exchange quotes (end-of-day, delay);
- Market participants quotes;
- Payment Schedule.


	A	B	C	D	E	F	G	H	I	J
			support: <a href="mailto:pro@cbonds.info">pro@cbonds.info</a>							
1										
2										
3	Issue:		Russia, 12.75% 24jun2028, USD							
4										
5										
6	Issue information									
7	Status	outstanding	State registration number of program							
8	Issuer	Russia	State registration number		MK-0-CM-119					
9	Issue type	International bonds	Registration date		23/06/1998					
10	Currency	USD	ISIN RegS		XS0088543193					
11	Nominal / Minimum Settlement Amount	10,000.00	ISIN 144A		US78307AAE38					
12	Nominal (eurobonds)	1,000.00	CUSIP RegS		X7435HAE6					
13	Outstanding principal amount	10,000.00	CUSIP 144A		78307AAE3					
14	Amount	2,500,000,000.00	End of placement		23/06/1998					
15	Outstanding face value amount	2,500,000,000.00	Interest commencement date		23/06/1998					
16	Day count fraction	30E/360	Maturity		23/06/2028					
17	Issue ratings (ACRA / Expert RA)	- / -	Nearest call-option date							
18	CBR Lombard list (date of inclusion)	04/06/2019	Nearest put-option date							
19										
20	Cbonds Valuation									
21	Trading floor	Date and time	Bid, %	Ask, %	YTM (bid), %	YTM (ask), %	Indicative price, %	YTM (indicative), %		
22	Cbonds Estimation	13/06/2019	165.0901	165.0998	4.11	4.10	165.0950	4.10		
23	Cbonds Valuation	13/06/2019	165.0901	165.0998	4.11	4.10	165.0950	4.10		
24										
25	Stock exchange and OTC quotes									
26	Trading floor	Date and time	Bid, %	Ask, %	YTM (bid), %	YTM (ask), %	Indicative price, %	YTM (indicative), %		
27	Frankfurt S.E.	6/17/2019 7:03:08	164.7000	165.4500	4.14	4.07	165.0750	4.10		
28	Dusseldorf SE	6/17/2019 7:01:39	164.8300	165.3800	4.13	4.07	165.1050	4.10		
29	Munich SE	6/17/2019 6:59:37	164.8100	165.4000	4.13	4.07	165.1050	4.10		
30	Moscow Exchange	6/17/2019 5:47:22					160.0004	4.10		
31	Stuttgart Exchange	13/06/2019	164.8200	165.4500	4.13	4.07	164.7900	4.13		
32	Frankfurt S.E.	13/06/2019	164.6400	165.4200	4.15	4.07	164.5300	4.16		
33	Gettex	13/06/2019	164.5910	165.6190	4.15	4.05	165.1050	4.10		
34	Moscow Exchange	13/06/2019	164.0000	165.5000	4.21	4.07	165.0810	4.11		
35	Moscow Exchange T+	13/06/2019	165.0901	165.0998	4.11	4.10	165.0810	4.11		
36	Dusseldorf SE	13/06/2019	164.8100	165.4000	4.13	4.07	164.8200	4.13		
37	EuroTLX	13/06/2019	164.7400	165.3200	4.14	4.08	165.0300	4.11		
38	Hi- Mtf	13/06/2019	164.0000	167.0000	4.21	3.92	165.5000	4.07		
39	TradeGate	13/06/2019	164.5910	165.6190	4.15	4.05	165.1050	4.10		
40	Quotrix	13/06/2019	164.8110	165.3790	4.13	4.08	165.0950	4.10		
41	NSMA MIRP	13/06/2019					164.8881	4.13		
42	Luxembourg S.E.	13/06/2019					165.0830	4.11		

Fig. 15. The information sheet concerning securities issuance, Russia, 2028 on June 17, 2019.

The complete list of fields displayed in the sheet is provided in Appendix 2.

## Events calendar

Calendar functionality enables obtaining the information about all anticipated issuance events: placement, coupon and amortization payments, offer and redemption, default.

Click on the button to prompt the dialog box (Fig.16). You can turn on the filter screening data by regions, countries, issuers, securities types, the event progress and its period.

Fig.16. The dialog box prompting you to select regions, countries, event types

The button "Get the data" creates the CbondsCalendar sheet (Fig.17) to display data relevant to filters having been chosen. If the sheet has been already created in the file, it becomes active and undergoes updating.


	A	B	C	D	E
1			support: <a href="mailto:pro@cbonds.info">pro@cbonds.info</a>		
2					
3	<b>Countries: Russia;</b>				
4	<b>Issue kinds: Domestic;</b>				
5	<b>Events: Amortisation; Reopening; Redemption; Placement; Option; Coupon payment</b>				
6	<b>Period: 05/03/2017 - 05/10/2017</b>				
7					
8	<b>Bond calendar</b>				
9					
10	Date	Event type	Country	Issuer	Issue
11	03/05/2017	Coupon payment	Russia	VTB-Leasing Finance	VTB-Leasing Finance, 09
12	03/05/2017	Option	Russia	AHML	AHML, 27
13	03/05/2017	Coupon payment	Russia	Novosibirsk	Novosibirsk, 34005
14	03/05/2017	Coupon payment	Russia	Mortgage Agent of ITB 1	Mortgage Agent of ITB 1, class A
15	03/05/2017	Amortisation	Russia	Mortgage Agent of ITB 1	Mortgage Agent of ITB 1, class A

Fig.17. The event schedule concerning bonds emitted by Russian issuers for the time period from May 3 through May 10, 2017.

The complete list of fields displayed in the sheet can be found in Appendix 3.

## Saved queries

The functionality enables acquisition of results of saved requests concerning the search of securities emissions. User can add or delete requests in [Bond Search form at the website](#).

Click on the button to prompt the dialog box intended for selection of a saved request (Fig.18).

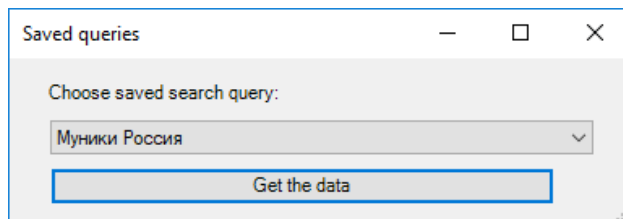


Fig.18. The dialog box for request selection

The button "Get the data" creates the CbondsSavedQuery sheet (Fig.19) to display information relevant to filters having been chosen. If the sheet has been already created in the file, it becomes active and undergoes updating.


	A	B	C	D
				support: <a href="mailto:pro@cbonds.info">pro@cbonds.info</a>
1				
2				
3		Saved search query: Муники Россия		
4				
5				
	Issue	Country	Issuer	Sector
6	Belgorod region, 34009	Russia	Belgorod region	municipal
7	Belgorod region, 34010	Russia	Belgorod region	municipal
8	Belgorod region, 35007	Russia	Belgorod region	municipal
9	Belgorod region, 35008	Russia	Belgorod region	municipal
10	Belgorod region, 35011	Russia	Belgorod region	municipal
11	Volgograd, 34007	Russia	Volgograd	municipal

Fig.19. The result of a saved request



**Synchronize requests with Cbonds website**

The complete list of fields displayed in the sheet can be found in Appendix 4.

## New issues

Functionality enables acquisition of information about issuances having been placed for the last month.

Click on the button to prompt the dialog box (Fig.20). You can turn on the filter screening data by regions, countries, securities types, the event progress and its time period.

Fig.20. The dialog box prompting you to select regions, countries, event types

The button "Get the data" creates the CbondsCalendar sheet (Fig.21) to display data relevant to filters having been selected. If the sheet has been already created in the file, it becomes active and undergoes updating.


	A	B	C	D	E
1			support: <a href="mailto:pro@cbonds.info">pro@cbonds.info</a>		
2					
3	<b>Countries: Russia;</b>				
4	<b>Issue kinds: Domestic;</b>				
5					
6					
7	End of placement	Issue	Country	Issuer	Sector
8	26/11/2017	Oryol region, 34001	Russia	Oryol region	municipal
9	26/11/2017	VTB, KS-2-200	Russia	VTB	corporate
10	27/11/2017	Bank of Russia, COBR-3	Russia	Bank of Russia	sovereign
11	27/11/2017	Avangard-Agro, BO-001P-02	Russia	Avangard-Agro	corporate
12	27/11/2017	VTB, KS-2-201	Russia	VTB	corporate
13	27/11/2017	ROSBANK, BO-002P-03	Russia	ROSBANK	corporate
14	28/11/2017	Novosibirsk, 35009	Russia	Novosibirsk	municipal
15	28/11/2017	VTB, KS-2-202	Russia	VTB	corporate
16	28/11/2017	Koncessii teplosnabzheniya, 02	Russia	Koncessii teplosnabzheniya	corporate
17	28/11/2017	Russia, 26212	Russia	Russia	sovereign
18	28/11/2017	Russia, 26222	Russia	Russia	sovereign

Fig.21. New bond emissions made by Russian issuers for the period from October 30 through November 29, 2017.

The complete list of fields displayed in the sheet can be found in Appendix 5.



## Financial reports

Functionality enables acquisition of data concerning reports drawn up by an issuer according to RAS and IFRS.

Click on the button to prompt the dialog box (Fig.22). A specific issuer may be found by its name, TIN, OGRN, LEI as well as by the identifier of an item of securities. Default settings assumes that all types of reports are selected, and the current year is set as a report one.

**RAS and IFRS financial reporting**

**Organization:**

☒ By name, TIN, OGRN, LEI

**Issuer search**

☐ By issue (ISIN, CUSIP, state reg. number)

☒ Bond ☐ Share

**Report type:**

☒ Balance sheet (thous. RUB) ☒ IFRS Indicators (real sector)

☒ Profit and loss account (thous. RUB) ☒ IFRS Indicators (financial sector)

**Period:**

**Get the data**

Fig.22. The dialog box for the search of an organization and selection of a report type and a report period

The button "Get the data" creates the CbondsIssuerReport sheet (Fig.23) to display data relevant to filters having been chosen. If the sheet has been already created in the file, it becomes active and undergoes updating.

	A	B	C	D	E	F	G
1	<b>FINANCIAL</b>		support: <a href="mailto:pro@cbonds.info">pro@cbonds.info</a>				
2	<b>CBONDS</b>						
3	<b>INFORMATION</b>						
4	<b>Organization: VTB</b>						
5	<b>Report: IFRS Indicators (financial sector);</b>						
6	<b>Period: 06/17/2018 - 06/17/2019</b>						
7	<b>IFRS Indicators (financial sector)</b>						
8	<b>Indicators</b>	29/06/2018	29/09/2018	30/12/2018	30/03/2019		
9	<b>Details</b>						
10	Audited	H	H	a	H		
11	Standards	MCΦO(κ)	MCΦO(κ)	MCΦO(κ)	MCΦO(κ)		
12	Currency	RUB	RUB	RUB	RUB		
13	Unit	1,000,000,000.00	1,000,000,000.00	1,000,000,000.00	1,000,000,000.00		
14	<b>Balance sheet</b>						
15	Cash and cash equivalents	882	739	936	932		
16	Assets due to banks	988	580	693	1,026		
17	Net loans	9,416	10,199	10,695	10,555		
18	Other assets	2,398	2,550	2,437	2,329		
19	Total assets	13,683	14,068	14,761	14,842		
20	<b>Balance (Liabilities and equity)</b>						
21	From banks	785	934	1,426	1,529		

Fig.23. IFRS Report parameters for VTB for the period from June 17<sup>th</sup> 2018 to June 17<sup>th</sup> 2019.

The complete list of fields displayed in the sheet can be found in Appendix 6.

## Quotes

The group "Quotes" represents the exchange quotes data available at the end-of-the- day, as well as data on the trade turnover and quantity of transactions having been made.

### Bond Quotes for a period

Click on the menu item and fill up the pop-up window (Fig.24) by entering the identifier of an item of securities and the time period (the last two weeks are initially set by default). If you are interested in quotes for a particular exchange house, you have to activate the relevant element of the pop-down list by clicking the respective checkbox.

Fig.24. The dialog box for selecting a sought issue and time period

The button "Get the data" creates the CbondsIssueQuotes sheet (Fig.25). If the sheet has been already created in the file, it becomes active.


	A	B	C	D	E	F
1			support: <a href="mailto:pro@cbonds.info">pro@cbonds.info</a>			
2						
3	Issue: Russia, 7.50% 31mar2030, USD					
4	Period: 12/13/2016 - 12/27/2017					
5	Trading floor: Moscow Exchange T+					
6						
7	Trade date	Stock exchange	Trading mode	Bid (at close), %	Ask (at close), %	Bid-ask spread, bp
8	13/12/2016	Moscow Exchange T+	T+ Bonds USD	120.7850	121.7000	91.50
9	14/12/2016	Moscow Exchange T+	T+ Bonds USD	121.0800	122.2000	112.00
10	15/12/2016	Moscow Exchange T+	T+ Bonds USD	120.4500	120.5000	5.00
11	16/12/2016	Moscow Exchange T+	T+ Bonds USD	120.2000	122.2500	205.00
12	19/12/2016	Moscow Exchange T+	T+ Bonds USD	120.4000	120.5200	12.00
13	20/12/2016	Moscow Exchange T+	T+ Bonds USD	120.1001	120.7500	64.99
14	21/12/2016	Moscow Exchange T+	T+ Bonds USD	120.2600	120.5500	29.00

Fig.25. Quotes for the issue Russia, 7.50% 31mar2030, USD for the period from December 13 2016 till December 27 2017.

The information will be downloaded if you have correctly entered one of the following identifiers:

- The issuance registration number;
- ISIN RegS;
- ISIN 144A;
- CUSIP RegS;
- CUSIP 144A.



The complete list of fields shown in the sheet is provided in Appendix 7.

## Quotes by stock exchange for a date

Click on the menu item to select in the pop-up dialog box (Fig.26) a trading platform and a date (previous date is chosen by default).

Fig.26. The dialog box for selecting a interested stock exchange and a date

The button "Get the data" creates the CbondsTFQuotes sheet (Fig.27). If the sheet has been already created in the file, it becomes active.


	A	B	C	D	E	F
1	 <span style="float: right;">support: <a href="mailto:pro@cbonds.info">pro@cbonds.info</a></span>					
2						
3	<b>Trading floor: Moscow Exchange</b>					
4	<b>Date: 12/26/2017</b>					
5						
6	Security	ISIN	State registration number	Currency	Trade date	Trading mode
7	Russia, 12.750% 24jun2028, USD	XS0088543193	MK-0-CM-119	USD	26/12/2017	Main mode: bonds
8	Russia, 11.0% 24jul2018, USD	XS0089375249	MK-0-CM-126	USD	26/12/2017	Main mode: bonds
9	Russia, 7.50% 31mar2030, USD	XS0114288789	SK-0-CM-128	USD	26/12/2017	Main mode: bonds
10	AHML, 08	RU000A0JNPK5	4-08-00739-A	RUB	26/12/2017	Main mode: bonds
11	Moscow, 48	RU000A0JNPN1	RU32048MOS0	RUB	26/12/2017	Main mode: bonds
12	AHML, 10	RU000A0JPJE6	4-10-00739-A	RUB	26/12/2017	Main mode: bonds
13	AHML, 11	RU000A0JPLU8	4-11-00739-A	RUB	26/12/2017	Main mode: bonds
14	Russian Agricultural Bank, 05	RU000A0JQ1H3	40503349B	RUB	26/12/2017	Main mode: bonds
15	Russian Agricultural Bank, 06	RU000A0JPMT8	40603349B	RUB	26/12/2017	Main mode: bonds
16	Russian Agricultural Bank, 07	RU000A0JPTE5	40703349B	RUB	26/12/2017	Main mode: bonds
17	Mobile TeleSystems (MTS), 03	RU000A0JPTJ4	4-03-04715-A	RUB	26/12/2017	Main mode: bonds
18	RZD, 12	RU000A0JQ5Q5	4-12-65045-D	RUB	26/12/2017	Main mode: bonds
19	Gazprom Neft, 04	RU000A0JQ557	4-04-00146-A	RUB	26/12/2017	Main mode: bonds
20	RZD, 17	RU000A0JQ7W9	4-17-65045-D	RUB	26/12/2017	Main mode: bonds
21	RZD, 18	RU000A0JQ7X7	4-18-65045-D	RUB	26/12/2017	Main mode: bonds
22	RZD, 19	RU000A0JQ7Z2	4-19-65045-D	RUB	26/12/2017	Main mode: bonds
23	AHML, 13	RU000A0JQAG8	4-13-00739-A	RUB	26/12/2017	Main mode: bonds
24	AHML, 14	RU000A0JQAL8	4-14-00739-A	RUB	26/12/2017	Main mode: bonds
25	AHML, 15	RU000A0JQAM6	4-15-00739-A	RUB	26/12/2017	Main mode: bonds

Fig.27. Quotes for MOEX as of December 26, 2017.



**You can receive up to 2500 exchange quotes at once**

The complete list of fields shown in the sheet is provided in Appendix 7.

## Watchlist

You can use Watchlist for accommodation of actual data concerning issuances having been chosen and exchange houses you are interested in. The list of securities and stock exchanges can be customized on websites Cbonds (e.g., <http://cbonds.com/watchlist/>).

**!** *If your login and password are not from Cbonds websites, Watchlist item will be inactive*

**■** *To update the information sent your letter to [pro@cbonds.info](mailto:pro@cbonds.info)*

Click on the button to prompt the respective dialog box (Fig.28). You may obtain quotes for chosen trading platforms, from all suppliers, as well as get data on anticipated events, and you can create a market map.

Fig.28. The dialog box of the menu item "Watchlist"

Select the item "By chosen trading platforms" of the dialog box and press the button "Get the data" to create CbondsWatchlist sheet (Fig.29). If the sheet has been already created in the file, it becomes active and undergoes updating.


	A	B	C	D	E	F
1		support: <a href="mailto:pro@cbonds.info">pro@cbonds.info</a>				
2						
3	Watchlist on 06/17/2019					
4						
	Security	Date	Country	Issuer	Issue type	Status
5	Альфа					
6	Alfa Bank, 9.5% 18feb2025, USD	13/06/2019	Russia	Alfa Bank	International bonds	outstanding
7	Alfa Bank, 9.5% 18feb2025, USD	13/06/2019	Russia	Alfa Bank	International bonds	outstanding
8	Alfa Bank, 9.5% 18feb2025, USD	13/06/2019	Russia	Alfa Bank	International bonds	outstanding
9	Alfa Bank, 9.5% 18feb2025, USD	13/06/2019	Russia	Alfa Bank	International bonds	outstanding
10	Банки РФ					
11	Banca Intesa, 001P-01R	13/06/2019	Russia	Banca Intesa	Domestic bonds	outstanding
12	Gazprombank, BO-21	17/03/2019	Russia	Gazprombank	Domestic bonds	redeemed
13	Otkritie Bank, BO-P03	13/06/2019	Russia	Otkritie Bank	Domestic bonds	outstanding
14	Otkritie Bank, BO-P03 (former B&N Bank)	13/06/2019	Russia	Otkritie Bank	Domestic bonds	outstanding

Fig.29. An example of Watchlist with grouping as at June 17, 2019.

Select the item "All quotes" of the dialog box and press the button "Get the data" to create CbondsWatchlist sheet (Fig.30). Unlike the previous item, this case is characterized by the appearance of a column with the type of supplier and by absence of grouping: securities emissions will be sorted according to names. If the sheet has been already created in the file, it becomes active and undergoes updating.


	A	B	C	D	E	F
1				support: <a href="mailto:pro@cbonds.info">pro@cbonds.info</a>		
2						
3	<b>Watchlist on 06/17/2019</b>					
4		Security	Date	Country	Issuer	Issue type
5		ABN AMRO, 0.475% 28jul2020, JPY	13/06/2019	Netherlands	ABN AMRO	International bonds
6		ABN AMRO, 0.475% 28jul2020, JPY	13/06/2019	Netherlands	ABN AMRO	International bonds
7		Absolut Bank, BO-05	13/06/2019	Russia	Absolut Bank	Domestic bonds
8		Acron, BO-001P-01	13/06/2019	Russia	Acron	Domestic bonds
9		Acron, BO-001P-02	13/06/2019	Russia	Acron	Domestic bonds
10		AFK Sistema, 001P-04	13/06/2019	Russia	AFK Sistema	Domestic bonds
11		AFK Sistema, 001P-05	13/06/2019	Russia	AFK Sistema	Domestic bonds
12		AFK Sistema, 001P-06	13/06/2019	Russia	AFK Sistema	Domestic bonds
13		Alfa Bank, 9.5% 18feb2025, USD	13/06/2019	Russia	Alfa Bank	International bonds

Fig.30. An example of Watchlist with quotes from all suppliers as at January 10, 2019.

The list of fields displayed in the CbondsWatchlist sheet is available in Appendix 8.

Select the item "All the quotes" of the dialog box and press the button "Get the data" to create CbondsWatchlist sheet (Fig.31). The default time period is equal to the next six months. If the sheet has been already created in the file, it becomes active and undergoes updating.


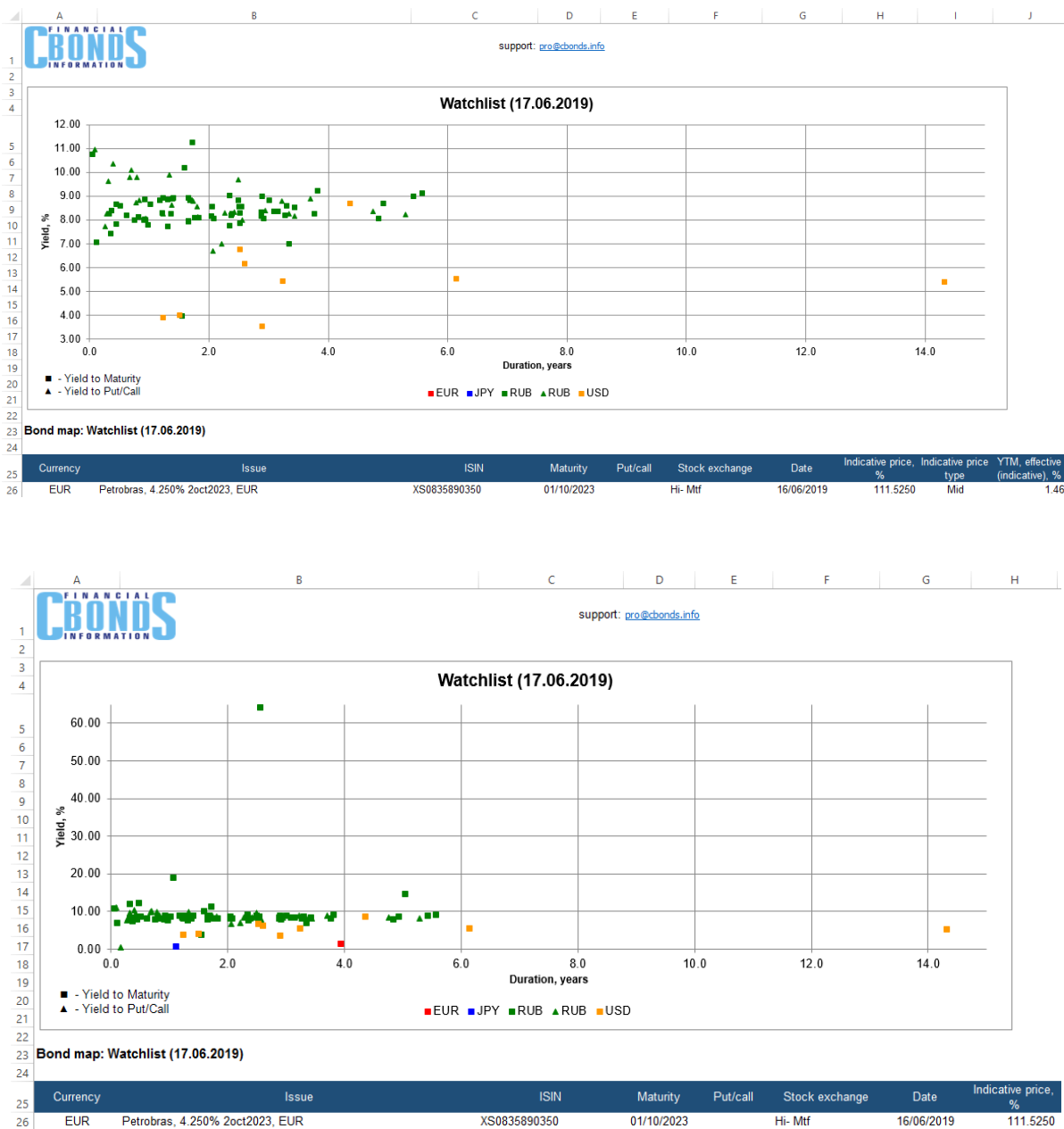
	A	B	C	D	E	F
1				support: <a href="mailto:pro@cbonds.info">pro@cbonds.info</a>		
2						
3	<b>Watchlist event calendar</b>					
4	<b>Period: 06/17/2019 - 12/17/2019</b>					
5						
6	<b>Bond calendar</b>					
7						
8		Date	Event type	Country	Issuer	ISIN
9		16/06/2019	Coupon payment	Russia	Otkritie Bank	RU000A0JXTN0
10		17/06/2019	Coupon payment	Russia	Chelpipe	RU000A0JXTY7
11		17/06/2019	Coupon payment	Russia	Belgorod region	RU000A0JXTW1
12		20/06/2019	Coupon payment	Russia	Kaliningrad region	RU000A0JX2S9
13		20/06/2019	Coupon payment	Russia	Rosneft	RU000A0JX355
14		23/06/2019	Coupon payment	Russia	Khanty-Mansi region	RU000A0JX215
15		23/06/2019	Coupon payment	Russia	Irkutsk region	RU000A0JX314

Fig.31. An example of the event schedule for securities from Watchlist for the period from June 17<sup>th</sup> 2018 to June 17<sup>th</sup> 2019.

Select the item "Bond Map from Watchlist" of the dialog box and press the button "Get the data" to create CbondsWatchlistMap sheet (Fig.32). The sheet demonstrates the curve of profitability against duration, securities emissions are grouped on the basis of currencies. Default setting assumes exclusion of releases<sup>†</sup>. If the sheet has been already created in the file, it becomes active and undergoes updating.



a)

b)

Fig.32. An example of the bond map for securities from Watchlist as at June 17, 2019: without releases (a), and with releases (b)

<sup>†</sup> For the purposes of bond maps, releases mean all quotes falling within the upper and lower five-percent quintile provided that the difference between the maximum and the minimum yield is over 50%.

## Tools

### Calculator

The calculator enables figuring up the simple and effective yield, duration, accrued coupon interest, spreads etc.

Click on the menu item to fill up the pop-up box (Fig.33) by entering the identifier, price, and date (the previous date is set by default).

Fig.33. The dialog box of the calculator with indication of the price and date

The button "Get the data" creates the CbondsCalculator sheet (Fig.34). If the sheet has been already created in the file, it becomes active.

	A	B	C	D	E
1	<b>FINANCIAL CBONDS INFORMATION</b>	support:	<a href="mailto:pro@cbonds.info">pro@cbonds.info</a>		
2					
3	<b>Issue:</b>	<b>Russia, 7.50% 31mar2030, USD</b>			
4					
5					
6	<b>Issue parameters</b>				
7					
8	Face value	1.00	Day count fraction	30E/360	
9	Interest commencement date	31/03/2000	Coupon frequency	2	
10	Maturity date	31/03/2030	Date of put/call		
11					
12					
13	<b>Calculation results</b>				
14	Date	27/12/2017	Outstanding principal amount at par	0.475	
15	YTM (eff.), %	2.04	ACI	0.008609	
16	CY, %	6.25	Current coupon sum	0.017813	
17	ACY, %	4.62	Duration (to maturity), days	1,275	
18	P (excl. ACI), %	120.0000	Modified duration(to maturity)	3.4	
19	P (incl. ACI), %	121.8125	PVBP (to maturity), in currency of issue	0.04	
20	P (excl. ACI), in currency of issue	0.57	Conv (to maturity)	22.38	
21	P (incl. ACI), in currency of issue	0.58	T-spread		

Fig.34. Calculator: calculation results

The information will be downloaded if you have correctly entered one of the following identifiers:

- the issuance registration number;
- ISIN RegS;
- ISIN 144A;
- CUSIP RegS;
- CUSIP 144A.

The complete list of fields shown in the sheet is available in Appendix 9.



## Bond maps

Bond maps enable obtaining the graphical representation of emitted securities being in trade. Such a curve is drawn up as a plot of profitability against duration what makes it possible to operatively ponder the current situation in the global stock market and euro-bond markets in a particular region, county, sector or industry.

Click on the customization menu item to prompt the dialog box (Fig.35) enabling the selection of a customized market map.

Fig.35. The dialog box of the menu item "Market Maps"

Select the item "Pre-set Map" of the dialog box and press the button "Get the data" to create CbondsMap sheet with quotes and curve (Fig.36). If the sheet has been already created in the file, it becomes active and undergoes updating.

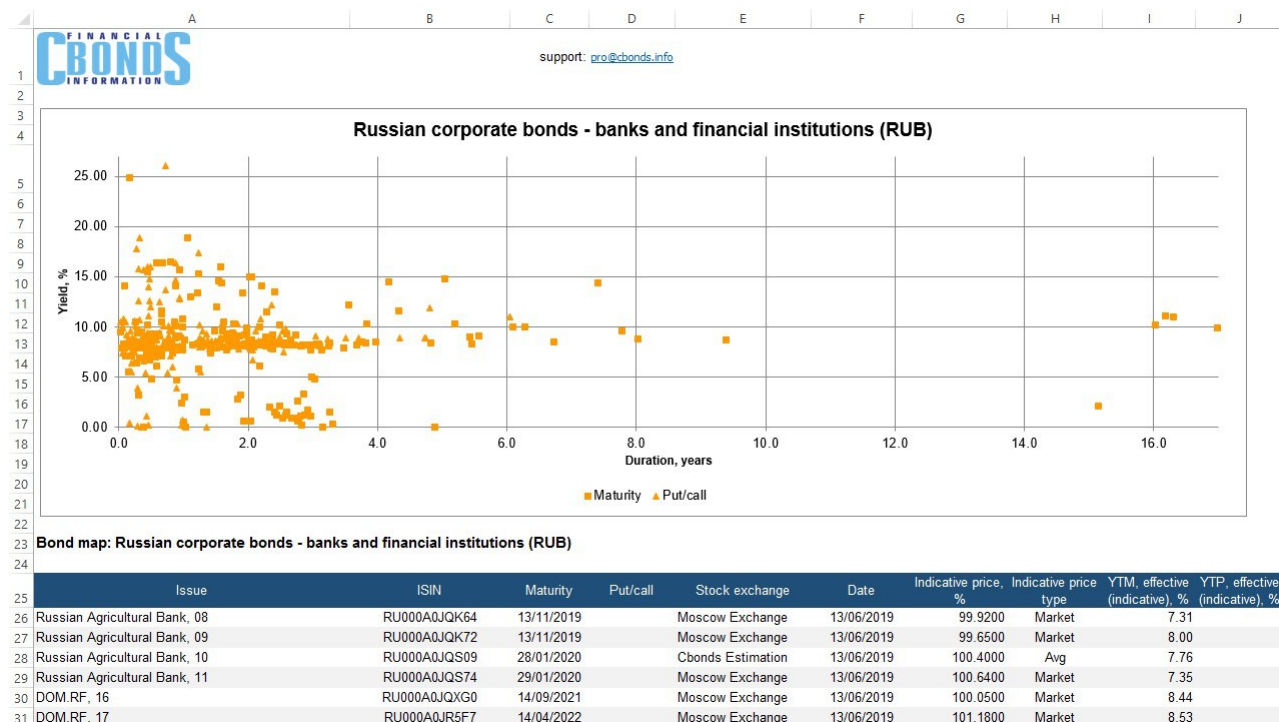


Fig.36. The stock market map concerning banks and financial institutes of Russia as at June 14<sup>th</sup> 019.

The list of maps and passwords displayed in the list is available in Appendix 10.



Select the item "Benchmark on date" of the dialog box and press the button "Get the data" to create CbondsBenchmark sheet (Fig.37). If the sheet has been already created in the file, it becomes active and undergoes updating.

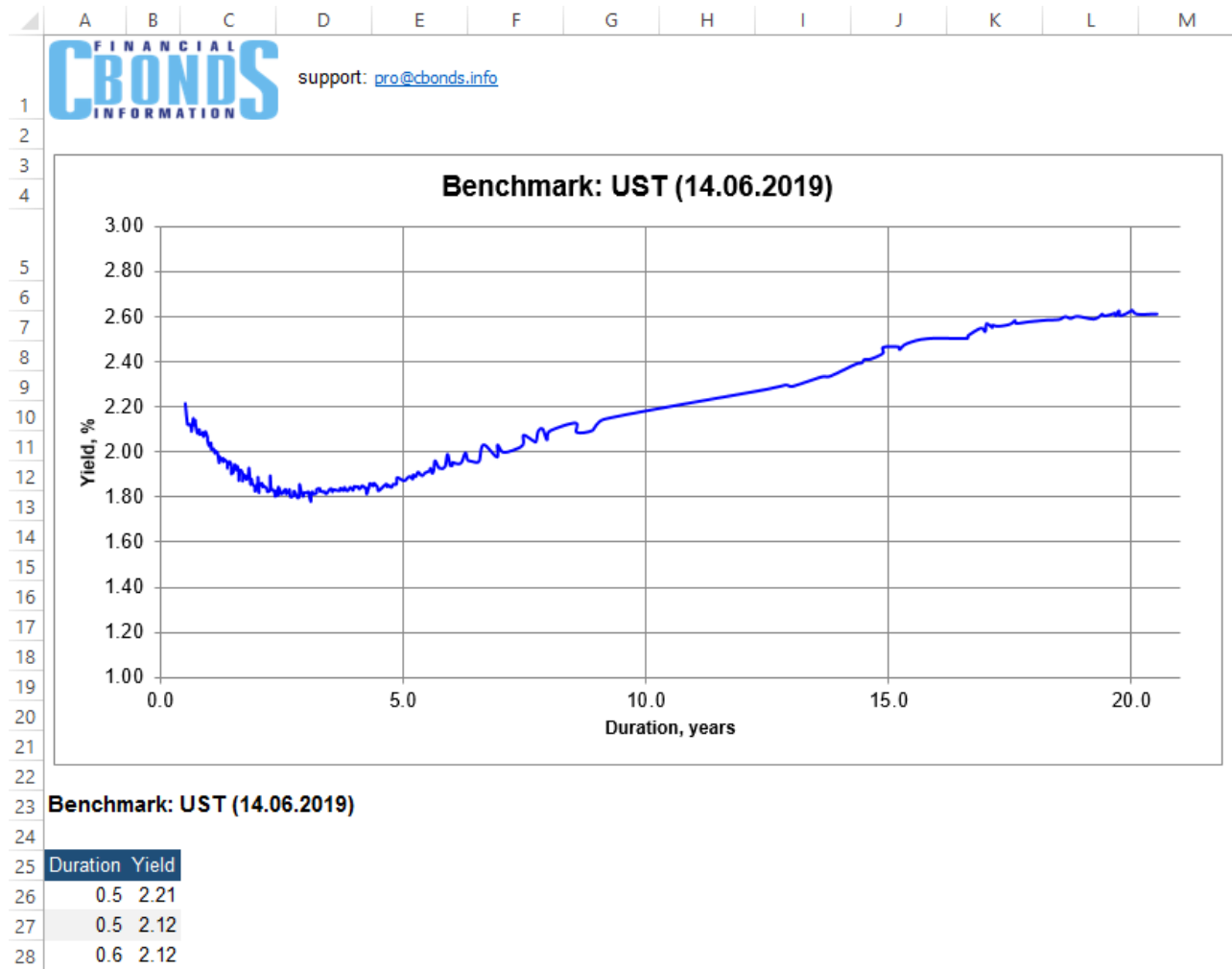


Fig.37. The UST curve on June 14, 2019.

## Indices and statistics

### Current values of indices

Click on the customization menu item to select relevant indices groups in the pop-up dialog box (Fig.38). The list contains daily indices of Cbonds family. Each indices group of Cbonds includes five indices: the full yield index, price index, simple yield index, effective yield index, and duration index.

**Current indices values**

☐ **Corporate bonds**

- ☐ IFX-Cbonds
- ☐ Cbonds-CBI RU BB
- ☐ Cbonds-CBI RU B
- ☐ Cbonds-CBI RU 1-3Y
- ☐ Cbonds-CBI RU 3-5Y
- ☐ Euro-Cbonds IG Russia
- ☐ Euro-Cbonds IG 3Y Russia
- ☐ Euro-Cbonds Corporate EM (CNY)
- ☐ Euro-Cbonds Corporate LatAm
- ☐ Euro-Cbonds Corporate Brazil
- ☐ Euro-Cbonds Corporate Asia
- ☐ Euro-Cbonds Corporate Middle East
- ☐ Euro-Cbonds Corporate Eastern Europe
- ☐ Euro-Cbonds Corporate Africa
- ☐ Euro-Cbonds IG Russia RUB
- ☐ Euro-Cbonds IG Russia EUR
- ☐ Euro-Cbonds NIG Russia
- ☐ Euro-Cbonds Corporate Ukraine
- ☐ Euro-Cbonds Corporate Kazakhstan
- ☐ Euro-Cbonds Corporate EM
- ☐ Euro-Cbonds Corporate EM (BRL)

☐ **Government and municipal bonds**

- ☐ Cbonds-Muni
- ☐ Cbonds-GBI RU
- ☐ Cbonds-GBI RU 1-3Y
- ☐ Cbonds-GBI RU 3-5Y
- ☐ Cbonds-GBI RU 5Y
- ☐ Euro-Cbonds Sovereign Russia
- ☐ Euro-Cbonds Sovereign Ukraine
- ☐ Euro-Cbonds Sovereign CIS
- ☐ Euro-Cbonds Sovereign Poland
- ☐ Euro-Cbonds Sovereign Poland (EUR)
- ☐ Euro-Cbonds Sovereign Eastern Europe
- ☐ Euro-Cbonds Sovereign Eastern Europe (EUR)
- ☐ Euro-Cbonds IG Sovereign Eastern Europe
- ☐ Euro-Cbonds IG Sovereign Eastern Europe (EUR)
- ☐ Euro-Cbonds NIG Sovereign Eastern Europe
- ☐ Euro-Cbonds Sovereign Turkey
- ☐ Euro-Cbonds Sovereign Middle East
- ☐ Euro-Cbonds IG Sovereign Middle East
- ☐ Euro-Cbonds Sovereign Africa
- ☐ Euro-Cbonds Sovereign Brazil
- ☐ Euro-Cbonds Sovereign EM
- ☐ Euro-Cbonds IG Sovereign EM
- ☐ Euro-Cbonds NIG Sovereign EM
- ☐ Euro-Cbonds Sovereign LatAm
- ☐ Euro-Cbonds IG Sovereign LatAm
- ☐ Euro-Cbonds NIG Sovereign LatAm
- ☐ Euro-Cbonds Sovereign Asia
- ☐ Euro-Cbonds NIG Sovereign Asia

☐ **Bond Market statistics**

- ☐ Government bond market (Russia)
- ☐ Eurobond market (Russia)
- ☐ Municipal bond market (Russia)
- ☐ Corporate bond market (Russia)

**Get the data**

Fig.38. The dialog box enabling the selection of indices groups

The button "Get the data" creates the CbondsIndices sheet (Fig.39) containing their current values. If the sheet has been already created in the file, it becomes active.

Index	26.12.2017
IFX-Cbonds	545.22
IFX-Cbonds PI	106.72
IFX-Cbonds YTM	7.99
IFX-Cbonds YTM eff	8.16
IFX-Cbonds D	907.00
Cbonds-CBI RU BB	190.66
Cbonds-CBI RU BB PI	98.10
Cbonds-CBI RU BB YTM	8.21
Cbonds-CBI RU BB YTM eff	8.39
Cbonds-CBI RU BB D	787.00
Cbonds-CBI RU B	180.84
Cbonds-CBI RU B PI	79.08
Cbonds-CBI RU B YTM	9.84
Cbonds-CBI RU B YTM eff	10.12
Cbonds-CBI RU B D	473.00
Cbonds-CBI RU 1-3Y	182.15
Cbonds-CBI RU 1-3Y PI	103.86

Fig.39. The current values of indices

## Index archive

Click on the menu item to prompt the pop-up box (Fig.40) and to enter therein a part of the index name, and then click on "Search". You can choose a sought index among appeared results and then you can specify the time period.

Fig.40. The dialog box enabling the index search and time period selection

The button "Get the data" creates the CbondsIndices sheet (Fig.41) containing their archived values. The checkbox "Data on all indices of the group" enables acquisition of values of all related indices for a chosen time period at once. If the sheet has been already created in the file, it becomes active.


	A	B	C	D	E			
1			support: <a href="mailto:pro@cbonds.info">pro@cbonds.info</a>					
2								
3	Index: IFX-Cbonds							
4	Period: 09/27/2017 - 12/27/2017							
5								
6	Date		Value					
7	27/09/2017		529.00					
8	28/09/2017		530.31					
9	29/09/2017		530.72					
10	02/10/2017		530.44					
11	03/10/2017		530.39					
12	04/10/2017		531.65					

Fig.41. Values of IFX-Cbonds index for the period from February 3 through May 3 2017.



**You can obtain the archive for any of 10,000 indices:  
for five years - for daily indices,  
for ten years - for monthly indices.**

## Cbonds Functions

Cbonds functions are intended for operative acquisition of Cbonds data concerning bonds and trade results.

To see the list of available functions, user have to call up the function master and to select the category "Cbonds functions" (Fig.42).

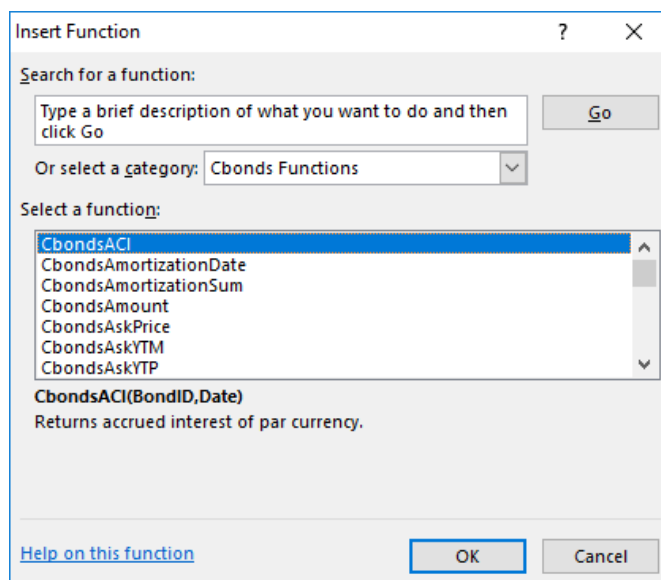


Fig.42. The function master box

Each function is provided with a comprehensive description of parameters and examples. Appendix 11 contains the list of functions with their concise description.

The functions operation is demonstrated on the example of function CbondsMaturityDate (Fig.43). An authorized user fills up the field B2 with a function and refers to the identifier of an item of securities from the field A2 (a) to see the result (b).

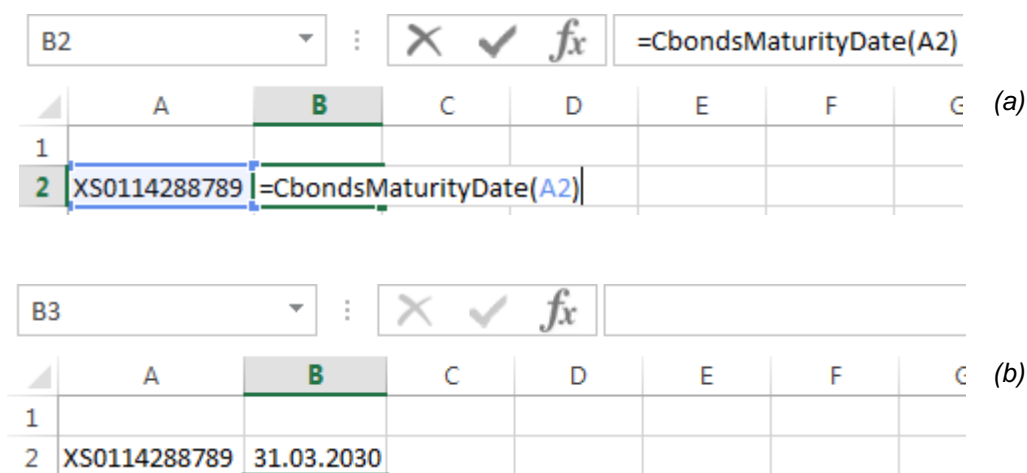


Fig.43. Obtaining the due date by means of function CbondsMaturityDate: entering the formula (a) and obtaining the result (b)

Some functions employ identifiers of trade platforms, indices, funds, and Cbonds database. They are available in the customization menu item "Help".

## Error messages

The list of possible warning messages and necessary actions to be taken during handling the sheets represented in Table 3.

**Table 3. Warnings during handling the sheets**

Messages	Action
The item of securities has been not found in the Cbonds database	Double-check the identification code you've entered
Fail to obtain the list of regions	Server error. Please email to <a href="mailto:pro@cbonds.info">pro@cbonds.info</a> with the note «Cbonds Add-in: error when receiving data»
Fail to get the list of countries	
Creation of Watchlist has been failed	
Fail to obtain the list of trade platforms	
Fail to obtain the list of market maps	
Fail to get the indices list	
No data relevant to your request has been found	If the transferred parameters don't contradict to each other (for example, period end is earlier than the period start) and to the type of variables (text is entered instead of a date), please email to <a href="mailto:pro@cbonds.info">pro@cbonds.info</a> with the note «Cbonds Add-in: checking request»

The following functions-related messages can appear in the fields (Table 4).

**Table 4. Warnings regarding functions**

Messages	Action
Cbonds authorization is requires	Authorize
Server is not responding	Server did not reply on the set limit. If error occurs regularly, please email to <a href="mailto:pro@cbonds.info">pro@cbonds.info</a> with the note «Cbonds Add-in: error when receiving data using a funcion»

## Appendices

### **Appendix 1. List of fields on CbondsStockPage**

#### Stock information block

- |              |                     |
|--------------|---------------------|
| • Issuer     | • ISIN              |
| • Share type | • Reg. number / NIN |
| • Nominal    | • CUSIP             |
| • Currency   | • SEDOL             |
| • Quantity   |                     |

#### Trading information block

- |                 |               |
|-----------------|---------------|
| • Trading floor | • Min         |
| • Currency      | • Close       |
| • Ticker        | • Average     |
| • Date          | • Volume      |
| • Market cap.   | • % per day   |
| • Open          | • % per month |
| • Max           | • % per year  |

#### Dividend information block

- |            |                                     |
|------------|-------------------------------------|
| • Year     | • Closure of registers for AGM      |
| • Payment  | • Closure of registers for dividend |
| • Currency | • Period% per year                  |

### **Appendix 2. List of fields on CbondsIssuePage**

#### Issue information block

- |   |                              |
|---|------------------------------|
| • Status  | • Number of the bond program |
| • Borrower  | • State registration number  |
| • Type of debt obligations                                      | • Registration date          |
| • Issue currency  | • ISIN RegS;                 |
| • Nominal/Minimum settlement amount                             | • ISIN 144A                  |
| • Nominal (Eurobonds)   | • CUSIP RegS;                |
| • Outstanding principal amount                                  | • CUSIP 144A.                |
| • Issue amount  | • Date of end placing        |
| • Volume at current face value                                  | • Interest commencement date |
| • ACY Calculation method  | • Maturity date              |
| • Issue ratings   | • Next offer (call)          |
| • Data of inclusion into the Lombard list of the Bank of Russia | • Next offer (put)           |

#### “Cbonds Valuation” and “Stock exchange и OTC quotes” blocks

- |                         |                             |
|-------------------------|-----------------------------|
| • Trading floor         | • Bid yield                 |
| • Date and time (UTC+3) | • Ask yield                 |
| • Bid                   | • Indicative price          |
| • Ask                   | • Yield by indicative price |

“Market participants’ quotes” block

- Market participant
- Date and time (UTC+3)
- Bid
- Ask
- Last
- Bid yield
- Ask yield
- Last yield

“Payment schedule” block

- Date of coupon end
- Date of actual payment
- List of holders record date
- Coupon rate
- Coupon amount
- Redemption of face value

### ***Appendix 3. List of fields on CbondsCalendar worksheet***

The following fields are available for each event:

- Date
- Event type
- Country
- Issuer
- Instrument
- ISIN
- Registration number
- Instrument type
- Issue amount
- Currency
- Nominal/Minimum settlement amount
- Offer type
- Offer price
- Coupon rate
- Coupon size
- Payment amount
- Redemption of face value
- Buyback amount
- Maturity date
- Arrangers
- Initial issue price
- Initial issue yield
- Order book open time
- Order book close time
- Coupon guidance (lower limit)
- Coupon guidance (upper limit)
- Yield guidance (lower limit)
- Yield guidance (upper limit)
- Default type
- Default reason
- Grace period expiration date
- Actual performance date
- Defaulted obligations amount

### ***Appendix 4. List of fields on CbondsSavedQuery worksheet***

The following fields are available for each query:

- Issue
- Country
- Issuer
- Sector
- Industry
- Currency
- Issue status
- Issue kind
- Current coupon rate, %
- Coupon frequency
- Issue amount
- Outstanding amount
- Outstanding face value amount
- USD equivalent
- Nominal / minimum Settlement Amount
- Integral multiple
- Outstanding face value
- Floating rate
- Initial issue price
- Yield at pricing
- Additional information
- ISIN

- ISIN 144A
- State reg number
- CUSIP RegS
- CUSIP 144A
- WKN code
- WKN code 144A
- Start of placement
- End of placement
- Maturity date
- Nearest put-option date
- Nearest call-option date
- Settlement date
- Date of start circulation
- Registration date
- Stock exchange
- Trade date
- Indicative price
- Effective yield
- Duration
- Trading floors

### ***Appendix 5. List of fields on CbondsNewIssues worksheet***

The following fields are available for each issue:

- End of placement
- Issue
- Country
- Issuer
- Sector
- Industry
- Currency
- Issue status
- Issue kind
- Current coupon rate, %
- Coupon frequency
- Issue amount
- Nominal / minimum Settlement Amount
- Maturity date
- Nearest put-option date
- Nearest call-option date
- ISIN
- ISIN 144A
- State reg number
- CUSIP RegS
- CUSIP 144A
- Initial issue price
- Yield at pricing
- Issue managers

### ***Appendix 6. List of fields in the CbondsIssuerReport sheet***

Balance sheet:

- Intangible assets
- Reserch and development results
- Property, plant and equipment
- Income yielding investments into tangible assets
- Financial investments
- Deferred tax assets
- Other non-current assets
- Total for section I
- Inventories
- VAT on acquired valuables
- Accounts receivable
- Financial investments
- Cash
- Other current assets
- Total for section II
- Issued share capital
- Treasury stock
- Revaluation of non-current assets
- Additional capital (without revaluation)
- Reserve funds
- Retained earnings (uncovered loss)
- Total for section III
- Credits and loans
- Deferred tax liabilities
- Provisions for contingent liabilities
- Other liabilities
- Total for section IV
- Credits and loans
- Accounts payable
- Deferred revenue
- Provision for future expenses



- Other liabilities

#### Profit and loss account:

- Sales revenue
- Cost of goods (services) sold
- Gross profit
- Selling expenses
- Administrative expenses
- Sales profit (loss)
- Revenues from participation in other companies
- Interest receivable
- Interest payable
- Other revenues
- Other expenses
- Profit (loss) before tax

#### IFRS Indicators (real sector):

- Cash and cash equivalents
- Inventories
- Other current assets
- Total current assets
- Fixed assets
- Other non current assets
- Total non current assets
- Total assets
- Current debt
- Other current liabilities
- Total current liabilities
- Non current debt
- Other non current liabilities
- Total non current liabilities
- Retained earnings
- Total equity attributable to shareholders of the company
- Total equity
- Total liabilities and equity
- Revenue

#### IFRS Indicators (financial sector):

- Cash and cash equivalents
- Assets due to banks
- Net loans
- Other assets
- Total assets
- From banks
- Deposits
- Securities issued
- Other liabilities
- Total liabilities

- Total for section V

- Current income tax
- Change in deferred tax liabilities
- Change in deferred tax assets
- Other
- Net profit (loss)
- Revaluation of fixed assets, not included in net profit (loss)
- Result of other operations, not included in net profit (loss)
- Total financial result for the period
- Basic earnings (loss) per share
- Diluted earnings (loss) per share

- Gross profit
- Operational profit
- Profit before taxation
- Net profit
- Operational cash flow
- Investment cash flow
- Financial cash flow
- Total debt
- Net debt
- EBITDA
- OIBDA
- Capital expenditure
- Free cash flow
- Revenues, YoY (%)
- EBITDA, YoY (%)
- EBITDA margin (%)
- Net debt / EBITDA
- Total debt / Equity
- Cash Flow To Capital Expenditures

- Equity
- Total liabilities and equity
- Interest income
- Interest expense
- Net interest income before impairment
- Provisions for impairment
- Net interest income after impairment
- Commission income
- Commission expenses
- Operational income

- Operational expenses
- Profit before taxation
- Net profit
- Operational cash flow
- Investment cash flow
- Financial cash flow
- Net change in cash and cash equivalents
- Loan portfolio
- Loan portfolio impairment reserve
- Loans overdue by more than 90 days
- Tier I capital adequacy
- Tier II capital adequacy
- Assets, YoY (%)
- Equity, YoY (%)
- Operating expense ratio
- Loan-to-deposit ratio

## ***Appendix 7. List of fields on CbondsIssueQuotes and CbondsTFQuotes worksheets***

The following fields are available on the worksheets with quotes:

- Stock exchange name
- Instrument
- ISIN code
- Registration number
- Currency
- Trading date
- Trading mode
- Quote for purchase, closing (bid)
- Quote for sale, closing (ask)
- Bid-ask spread, bp
- Average price
- Opening price
- Minimum price
- Maximum price
- Last price
- Weighted average price
- Market price
- Market price 2 (pension accruals)
- Acknowledged exchange quotation
- Closing price
- Indicative price
- Indicative price type
- Turnover
- Number of transactions.
- Volume of transactions in instruments
- Current coupon rate
- Maturity date
- YTM by individual price
- YTM by bid price
- YTM by ask price
- YTM by last price
- YTM by closure price
- ACY
- Duration
- Modified duration
- Offer date (put/call)
- Yield to offer by individual price
- Yield to offer by bid price
- Yield to offer by ask price
- Yield to offer by last price
- Yield to offer by closure price
- Duration to offer
- Modified duration to offer
- G-spread, bp
- T-spread, bp
- Benchmark for T-spread

## ***Appendix 8. List of fields on CbondsWatchlist worksheet***

The following fields are available on the worksheet:

- Issue
- Trading date
- Country
- Issuer
- Instrument type
- Status
- Currency
- ISIN
- State registration number
- Nominal/Minimum settlement amount

- Integral multiple
- Outstanding principal amount
- Maturity date
- Offer date (put/call)
- Coupon rate
- Coupon amount
- Stock exchange
- Bid, closed
- Ask, closed
- Price, avg
- Market price
- Acknowledged exchange quotation
- Closing price
- Indicative price
- Indicative price type
- Yield, eff.
- Change in yield, bp
- ACY
- Duration
- Modified duration

## ***Appendix 9. List of fields on CbondsCalculator worksheet***

### Issue parameters

- Face value
- Interest commencement date
- Maturity date
- Basis for ACY and coupons calculation
- Coupon payment period
- Offer date

### Calculation parameters of the calculator:

- Date
- YTM (eff), %
- YTP (eff), %
- CY, %
- ACY, %
- P (net), %
- P (gross), %
- P (net), in the currency of face value
- P (gross), in the currency of face value
- Outstanding principal amount
- ACY
- Current coupon amount
- D (to maturity), days
- D (to offer), days
- MD (to maturity)
- MD (to offer)
- PVBP (to maturity), in the currency of face value
- PVBP (to offer), in the currency of face value
- Conv (to maturity)
- Conv (to offer)
- G-spread, bp
- T-spread, bp

## ***Appendix 10. List of fields on CbondsMap worksheet***

### Available market maps:

- Apple bonds and international bonds (USD)
- Argentine sovereign international bonds (USD)
- Armenian government bonds (AMD)
- Australian government bonds (AUD)
- Austrian government bonds (EUR)
- Azerbaijani sovereign international bonds (USD)
- Azerbaijani corporate bonds (AZN)
- Bahraini government bonds (BHD)
- Bahraini sovereign international bonds (USD)
- Belgian government bonds (EUR)
- Bosnian and Herzegovinian government bonds (BAM, issuer - Bosnia and Herzegovina)

- Bosnian and Herzegovinian government bonds (BAM, issuer - Republika Srpska)
- Brazilian government bonds (BRL)
- Brazilian sovereign international bonds (USD)
- British government bonds (GBP)
- Bulgarian government bonds (BGN)
- Canadian government bonds (CAD)
- Chilean government bonds (CLP)
- Chilean sovereign international bonds (USD)
- Chinese government bonds (CNY)
- Colombian government bonds (COP)
- Colombian sovereign international bonds (USD)
- Costa Rican government bonds (CRC)
- Costa Rican sovereign international bonds (USD)
- Croatian government bonds (HRK)
- Cypriot government bonds (EUR)
- Czech government bonds (CZK)
- Danish government bonds (DKK)
- Dominican government bonds (DOP)
- Dominican sovereign international bonds (USD)
- Dutch government bonds (EUR)
- Ecuadorian sovereign international bonds (USD)
- Egyptian government bonds (EGP)
- Egyptian sovereign international bonds (USD)
- EIB international bonds (USD)
- Finnish government bonds (EUR)
- French government bonds (EUR)
- Georgian government bonds (GEL)
- German government bonds (EUR)
- Ghanaian government bonds (GHS)
- Hong Kong government bonds (HKD)
- Hungarian government bonds (HUF)
- Hungarian sovereign international bonds (USD)
- Icelandic government bonds (ISK)
- Indian government bonds (INR)
- Indonesian government bonds (IDR)
- Indonesian sovereign international bonds (USD)
- Irish government bonds (EUR)
- Israeli government bonds (ILS)
- Israeli sovereign international bonds (USD)
- Italian government bonds (EUR)
- Jamaican sovereign international bonds (USD)
- Japanese government bonds (JPY)
- Jordanian sovereign international bonds (USD)
- Kazakh government bonds (KZT)
- Kenyan government bonds (KES)
- Korean government bonds (KRW)
- Latvian government bonds (EUR)
- Lebanese sovereign international bonds (USD)
- Lithuanian government bonds (EUR)
- Malaysian government bonds (MYR)
- Maltese government bonds (EUR)
- Mexican government bonds (MXN)
- Mexican sovereign international bonds (USD)
- Namibian government bonds (NAD)
- New Zealand government bonds (NZD)
- Nigerian government bonds (NGN)
- Norwegian government bonds (NOK)
- Omani sovereign international bonds (USD)
- Pakistani sovereign international bonds (USD)
- Panamanian sovereign international bonds (USD)
- Pemex international bonds (USD)
- Peruvian government bonds (PEN)
- Peruvian sovereign international bonds (USD)
- Petrobras international bonds (USD)
- Philippine government bonds (PHP)
- Philippines sovereign international bonds (USD)
- Polish government bonds (PLN)
- Polish sovereign international bonds (USD)
- Portuguese government bonds (EUR)
- Qatari sovereign international bonds (USD)
- Romanian government bonds (RON)
- Russian corporate bonds - banks (RUB)
- Russian corporate bonds - banks and financial institutions (RUB)
- Russian corporate bonds - chemical and petrochemical industry (RUB)
- Russian corporate bonds - communication (RUB)

- Russian corporate bonds - construction and development (RUB)
- Russian corporate bonds - engineering industry (RUB)
- Russian corporate bonds - ferrous metals (RUB)
- Russian corporate bonds - financial institutions (RUB)
- Russian corporate bonds - food industry (RUB)
- Russian corporate bonds - mining industry (RUB)
- Russian corporate bonds - nonfinancial sector (RUB)
- Russian corporate bonds - oil and gas (RUB)
- Russian corporate bonds - power (RUB)
- Russian corporate bonds - trade and retail (RUB)
- Russian corporate bonds - transportation (RUB)
- Russian corporate international bonds - banks and financial institutions, B (USD)
- Russian corporate international bonds - banks and financial institutions, BB and higher (USD)
- Russian corporate international bonds - nonfinancial sector, B (USD)
- Russian corporate international bonds - nonfinancial sector, BB and higher (USD)
- Russian government bonds (RUB)
- Russian municipal bonds (RUB)
- Russian sovereign international bonds (USD)
- Saudi Arabian sovereign international bonds (USD)
- Singapore government bonds (SGD)
- Slovak government bonds (EUR)
- Slovenian government bonds (EUR)
- South African government bonds (ZAR)
- South African sovereign international bonds (USD)
- Spanish government bonds (EUR)
- Sri Lankan government bonds (LKR)
- Sri Lankan sovereign international bonds (USD)
- Swedish government bonds (SEK)
- Swedish sovereign international bonds (USD)
- Swiss government bonds (CHF)
- Swiss government bonds (CHF)
- Taiwanese government bonds (TWD)
- Thai government bonds (THB)
- Tunisian government bonds (TND)
- Turkish corporate bonds (TRY)
- Turkish corporate international bonds (USD)
- Turkish government bonds (TRY)
- Ukrainian government bonds (UAH)
- Ukrainian sovereign international bonds (USD)
- Uruguayan sovereign international bonds (USD)
- USA corporate bonds and international bonds - banks (USD)
- USA government bonds (USD)
- Venezuelan sovereign international bonds (USD)
- Vietnamese government bonds (VND)

The following fields are available on the maps worksheets:

- Instrument
- ISIN
- Redemption
- Offer (put/call)
- Stock exchange name
- Date
- Indicative price
- Indicative price type
- YTM by individual price
- Yield to offer by individual price, %
- Yield type
- ACY
- Duration
- Duration to offer

## **Appendix 11. List of available functions**

<b>Function</b>	<b>Description</b>
CbondsACI	Returns the accrued coupon yield in face value currency
CbondsAdmittedPrice	Returns admitted price of a bond
CbondsAmortizationDate	Returns the nearest amortization date regarding the given date
CbondsAmortizationSum	Returns the nearest amortization sum in face value currency regarding the given date
CbondsAmortizedBonds	Returns "yes" if the issue is classified as "Amortized Bond". Otherwise, "no" is returned
CbondsAmount	Returns the issue amount
CbondsAskPrice	Returns ask price of a bond in percentage of par value
CbondsAskYTM	Returns yield to maturity by ask price in percentage per annum
CbondsAskYTP	Returns yield to put/call option by ask price in percentage per annum
CbondsAvgPrice	Returns weighted average price of a bond
CbondsBidPrice	Returns bid price of a bond in percentage of par
CbondsBidYTM	Returns yield to maturity by bid price in percentage per annum
CbondsBidYTP	Returns yield to put/call-option by bid price in percentage per annum
CbondsBondName	Returns issue name
CbondsCalcConv	Returns convexity to maturity
CbondsCalcConvToPutCall	Returns convexity to put/call option
CbondsCalcCY	Returns current yield in percentage per annum
CbondsCalcDuration	Returns duration to maturity in days
CbondsCalcDurationToPutCall	Returns duration to put/call option in days
CbondsCalcGSpread	Returns the G-Spread or T-Spread for securities
CbondsCalcModifiedDurationToMaturity	Returns modified duration to maturity
CbondsCalcModifiedDurationToPutCall	Returns modified duration to put/call option

CbondsCalcPVBPToMaturity	Returns the absolute value of the change the dirty price of a bond when its YTM is changed for one bp
CbondsCalcPVBPToPutCall	Returns the absolute value of the change the dirty price of a bond when its YTP is changed for one bp
CbondsCalcYTM	Returns yield to maturity in percentage per annum
CbondsCalcYTMnom	Returns nominal yield to maturity in percentage per annum
CbondsCalcYTP	Returns yield to put/call option in percentage per annum
CbondsCalcYTPnom	Returns nominal yield to put/call option in percentage per annum
CbondsCalcZSpread	Returns Z-Spread to G-Curve or Z-Spread to swaps, depending on the selected parameter: swaps or G- curve
CbondsCallDate	Returns the nearest call-option date. If the nearest call-option is less than 14 days away, then the date of the next call-option date is displayed
CbondsCbrfLombard	Returns "yes" if the issue is in the last lombard list of The Bank of Russia. Otherwise, "no" is returned
CbondsCFI	Returns CFI RegS of the issue
CbondsCleanPriceCalcYTM	Returns clean price of a bond in percentage of par value
CbondsCleanPriceCalcYTP	Returns clean price of a bond in percentage of par value
CbondsClosePrice	Returns close price of a bond in percentage of par value
CbondsCloseYTM	Returns yield to maturity by close price in percentage per annum
CbondsCloseYTP	Returns yield to put/call option by close price in percentage per annum
CbondsConvertible	Returns "yes" if the issue is classified as "Convertible". Otherwise, "no" is returned
CbondsCouponDate	Returns the nearest coupon date regarding the given date
CbondsCouponDescription	Returns a description of the coupon rate of the bond
CbondsCouponNumber	Returns the number of the nearest coupon period regarding the given date
CbondsCouponPeriod	Returns the coupon frequency per year
CbondsCouponRate	Returns the nearest coupon rate in percentage per annum regarding the given date
CbondsCouponSum	the nearest coupon sum in face value currency regarding the given date
CbondsCurrency	Returns the issue currency
CbondsCurrentCouponRate	Returns a current coupon rate in percentage per annum



CbondsDayCountFraction	Returns day count fraction
CbondsDealsNumber	Returns daily number of deals with a bond
CbondsDuration	Returns duration to maturity in days
CbondsDurationToPutCall	Returns duration to put/call option in days
CbondsEmitentCountry	Returns the issuer's country by its issue ID
CbondsEmitentIndustry	Returns the issuer's industry by its issue ID
CbondsEmitentLEI	Returns the issuer's LEI by its issue ID
CbondsEmitentName	Returns the issuer's name by its issue ID
CbondsEmitentPSRN	Returns the issuer's PSRN by its issue ID
CbondsEmitentTIN	Returns the issuer's TIN by its issue ID
CbondsEmitentType	Returns the issuer's type by its issue ID
CbondsETFLastPrice	Returns ETF last price in trading currency
CbondsETFNAV	Returns the ETF's net asset value in the fund's currency
CbondsETFNAVusd	Returns the ETF's net asset value in USD
CbondsFloatingRate	Returns "yes" if the issue has a floating coupon rate. Otherwise, "no" is returned
CbondsForeignBonds	Returns "yes" if the issue is classified as "Foreign Bonds". Otherwise, "no" is returned
CbondsGreenBonds	Returns "yes" if the issue is classified as "Green bonds". Otherwise, "no" is returned
CbondsIndexDate	Returns date of the current index value
CbondsIndexedFaceValue	Returns "yes" if the issue has an indexed face value. Otherwise, "no" is returned
CbondsIndexMeasure	Returns index measure
CbondsIndexValue	Returns the index value on date
CbondsIndicativeCY	Returns the current yield by an indicative price in percentage per annum
CbondsIndicativePrice	Returns indicative price of a bond in percentage of par
CbondsIndicativeYTM	Returns the yield to maturity by an indicative price in percentage per annum
CbondsIndicativeYTP	Returns the yield to put/call option by an indicative price in percentage per annum
CbondsIntegralMultiple	Returns integral multiple of the issue
CbondsInternationalBonds	Returns "yes" if the issue is an international bond. Otherwise, "no" is returned
CbondsIssueRatingsACRA	Returns current issue ratings from ACRA rating agency
CbondsIssueRatingsExpertRA	Returns current issue ratings from Expert RA rating agencies
CbondsLastPrice	Returns last price of a bond in percentage of par value
CbondsLastYTM	Returns yield to maturity by close price in percentage per annum



CbondsLastYTP	Returns yield to maturity by last price in percentage per annum
CbondsLiquidity	Returns the last liquidity index for Eurobonds of Russia and the CIS
CbondsMargin	Returns the margin of the bond
CbondsMarketPrice	Returns market price of a bond from Moscow Exchange
CbondsMaturityDate	Returns the issue maturity date
CbondsMaxPrice	Returns the maximum price of a bond
CbondsMinimumSettlementAmount	Returns minimum settlement amount for international bonds
CbondsMinPrice	Returns the minimum price of a bond
CbondsMortgageBonds	Returns "yes" if the issue is classified as "Mortgage bonds". Otherwise, "no" is returned
CbondsMutualFundNAV	Returns the mutual fund net asset value
CbondsMutualFundShare	Returns the mutual fund share
CbondsNominal	Returns the issue nominal
CbondsNextCallDate	Returns the nearest call-option date
CbondsNextPutDate	Returns the nearest put-option date
CbondsOnlineAskPrice	Returns online ask price of a bond in percentage of par value
CbondsOnlineBidPrice	Returns online bid price of a bond in percentage of par value
CbondsOnlineIndicativePrice	Returns online indicative price of a bond in percentage of par value
CbondsOpenPrice	Returns the open price of a bond
CbondsOutstandingFaceValue	Returns the issue outstanding principal amount
CbondsOutstandingFaceValueAmount	Returns the issue outstanding face value amount
CbondsOutstandingFaceValueIndexed	Returns outstanding principal amount for indexed issues
CbondsPaymentsNumber	Returns the coupon frequency per year
CbondsPerpetual	Returns "yes" if the issue is classified as "Perpetual". Otherwise, "no" is returned
CbondsPlacementDate	Returns placement date
CbondsPreviousAmortizationDate	Returns the previous amortization date regarding the given date
CbondsPreviousAmortizationSum	Returns the previous amortization sum in face value currency regarding the given date
CbondsPreviousCouponDate	Returns the previous coupon date regarding the given date
CbondsPreviousCouponRate	Returns the previous coupon rate in percentage per annum regarding the given date
CbondsPreviousCouponSum	Returns the previous coupon sum in face value currency regarding the given date
CbondsPreviousIndexDate	Returns date of the previous index value
CbondsPreviousIndexValue	Returns index previous index value

CbondsPrivateIssue	Returns "yes" if the issue is classified as "Non- Marketable Securities". Otherwise, "no" is returned
CbondsPutDate	Returns the nearest put-option date. If the nearest put-option is less than 14 days away, then the date of the next put-option date is displayed
CbondsRAS	Returns the value of a specific indicator of reporting under RAS in rubles
CbondsRecordDate	Returns the record date of the nearest coupon period regarding the given date
CbondsReferenceRate	Returns the reference rate of the bond
CbondsRegistrationDate	Returns the registration date of the issue
CbondsSecuritization	Returns "yes" if the issue is classified as "Securitization". Otherwise, "no" is returned
CbondsStatusName	Returns the status of a bond
CbondsStockAskPrice	Returns stock ask price in trading currency
CbondsStockAvgPrice	Returns stock average price in trading currency
CbondsStockBidPrice	Returns stock bid price in trading currency
CbondsStockCurrency	Returns stock trading currency
CbondsStockDealsNumber	Returns stock daily deals number
CbondsStockLastPrice	Returns stock last price in trading currency
CbondsStockName	Returns stock name
CbondsStockTradingVolume	Returns stock daily trading volume
CbondsStructuredNote	Returns "yes" if the issue is classified as "Structured product". Otherwise, "no" is returned
CbondsSubordinatedDebt	Returns "yes" if the issue is classified as "Subordinated". Otherwise, "no" is returned
CbondsSukukBonds	Returns "yes" if the issue is classified as "Sukuk". Otherwise, "no" is returned
CbondsTradingFloorName	Returns trading floor name
CbondsTradingVolume	Returns daily trading volume of a bond in the issue currency
CbondsVariableRateType	Returns the variable rate type of the bond