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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:

- [http://cbonds.ru/](http://cbonds.ru/)
- [http://cbonds.com/](http://cbonds.com/)
- [http://cbonds.it/](http://cbonds.it/)
- [http://cbonds.de/](http://cbonds.de/)
- [http://cbonds.es/](http://cbonds.es/)
- [http://ru.cbonds.info/](http://ru.cbonds.info/)
- [http://ua.cbonds.info/](http://ua.cbonds.info/)
- [http://pl.cbonds.info/](http://pl.cbonds.info/)
- [http://em.cbonds.info/](http://em.cbonds.info/)

*CUSIP* is a 9-value alphanumerical 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;

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](image)

* 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).

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

Starting the add-in

To run the tool, one need 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)
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).

![Fig.6. Connection customization]

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

![Fig.7. Trial results]

To log in, you have to select the respective item of the setting menu.
Fill up the dialog box (Fig.8) by entering your login name and password, and by selecting the customization language: Russian or English.

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.

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

**Table 1. Concise description of customization menu items**

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

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).

![Fig.12. The dialog box allowing the selection of a share](image)

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](image)

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](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](image)

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.
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.

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.

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](image)

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.

![Fig.19. The result of a saved request](image)

✔️ 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.

![New issues dialog box](image)

*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.

![CbondsCalendar sheet](image)

*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.

![Fig.22. The dialog box for the search of an organization and selection of a report type and a report period](image)

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.

![Fig.23. IFRS Report parameters for VTB for the period from June 17th 2018 to June 17th 2019.](image)

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](image)

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

![Fig.25. Quotes for the issue Russia, 7.50% 31mar2030, USD for the period from December 13 2016 till December 27 2017.](image)

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.

✔ No limits for period selection

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](image)

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

![Fig.27. Quotes for MOEX as of December 26, 2017.](image)

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.ru/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

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"](Image)

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.

![Fig.29. An example of Watchlist with grouping as at June 17, 2019.](Image)

- 20 -
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.

**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.

**Fig.31. An example of the event schedule for securities from Watchlist for the period from June 17th 2018 to June 17th 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†. If the sheet has been already created in the file, it becomes active and undergoes updating.

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

† 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](image)

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

![Fig.34. Calculator: calculation results](image)

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"](image)

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 14th 019.](image)

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.

![Fig.38. The dialog box enabling the selection of indices groups](image)

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.

![Fig.39. The current values of indices](image)
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.

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).

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).

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

<table>
<thead>
<tr>
<th>Messages</th>
<th>Action</th>
</tr>
</thead>
<tbody>
<tr>
<td>The item of securities has been not found in the Cbonds database</td>
<td>Double-check the identification code you’ve entered</td>
</tr>
<tr>
<td>Fail to obtain the list of regions</td>
<td>Server error.</td>
</tr>
<tr>
<td>Fail to get the list of countries</td>
<td>Please email to <a href="mailto:pro@cbonds.info">pro@cbonds.info</a> with the note «Cbonds Add-in: error when receiving data»</td>
</tr>
<tr>
<td>Creation of Watchlist has been failed</td>
<td></td>
</tr>
<tr>
<td>Fail to get the list of market maps</td>
<td></td>
</tr>
<tr>
<td>Fail to obtain the list of trade platforms</td>
<td></td>
</tr>
<tr>
<td>Fail to obtain the list of market maps</td>
<td></td>
</tr>
<tr>
<td>No data relevant to your request has been found</td>
<td>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»</td>
</tr>
</tbody>
</table>

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

Table 4. Warnings regarding functions

<table>
<thead>
<tr>
<th>Messages</th>
<th>Action</th>
</tr>
</thead>
<tbody>
<tr>
<td>Cbonds authorization is requires</td>
<td>Authorize</td>
</tr>
<tr>
<td>Server is not responding</td>
<td>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»</td>
</tr>
</tbody>
</table>
Appendices

Appendix 1. List of fields on CbondsStockPage

Stock information block
- Issuer
- Share type
- Nominal
- Currency
- Quantity
- ISIN
- Reg. number / NIN
- CUSIP
- SEDOL

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

Dividend information block
- Year
- Payment
- Currency
- Closure of registers for AGM
- Closure of registers for dividend
- Period% per year

Appendix 2. List of fields on CbondsIssuePage

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

“Cbonds Valuation” and “Stock exchange и OTC quotes” blocks
- Trading floor
- Date and time (UTC+3)
- Bid
- Ask
- Bid yield
- Ask yield
- Indicative price
- Yield by indicative price
“Market participants’ quotes” block

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

“Payment schedule” block

- Date of coupon end
- Date of actual payment
- List of holders record date

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
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
- Research 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

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

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

- 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

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

- 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
Appendix 9. List of fields on CbondsCalculator worksheet

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

<table>
<thead>
<tr>
<th>Function</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>CbondsACI</td>
<td>Returns the accrued coupon yield in face value currency</td>
</tr>
<tr>
<td>CbondsAdmittedPrice</td>
<td>Returns admitted price</td>
</tr>
<tr>
<td>CbondsAmortizationDate</td>
<td>Returns the nearest amortization date regarding the given date</td>
</tr>
<tr>
<td>CbondsAmortizationSum</td>
<td>Returns the nearest amortization sum in face value currency regarding the given date</td>
</tr>
<tr>
<td>CbondsAmount</td>
<td>Returns the issue amount</td>
</tr>
<tr>
<td>CbondsAskPrice</td>
<td>Returns ask price in percentage of par value</td>
</tr>
<tr>
<td>CbondsAskYTM</td>
<td>Returns yield to maturity by ask price in percentage per annum</td>
</tr>
<tr>
<td>CbondsAskYTP</td>
<td>Returns yield to put/call option by ask price in percentage per annum</td>
</tr>
<tr>
<td>CbondsAvgPrice</td>
<td>Returns weighted average price</td>
</tr>
<tr>
<td>CbondsBidPrice</td>
<td>Returns bid price in percentage of par</td>
</tr>
<tr>
<td>CbondsBidYTM</td>
<td>Returns yield to maturity by bid price in percentage per annum</td>
</tr>
<tr>
<td>CbondsBidYTP</td>
<td>Returns yield to put/call-option by bid price in percentage per annum</td>
</tr>
<tr>
<td>CbondsBondName</td>
<td>Returns issue name</td>
</tr>
<tr>
<td>CbondsCalcConv</td>
<td>Returns convexity to maturity</td>
</tr>
<tr>
<td>CbondsCalcConvToPutCall</td>
<td>Returns convexity to put/call option</td>
</tr>
<tr>
<td>CbondsCalcCY</td>
<td>Returns current yield in percentage per annum</td>
</tr>
<tr>
<td>CbondsCalcDuration</td>
<td>Returns duration to maturity in days</td>
</tr>
<tr>
<td>CbondsCalcDurationToPutCall</td>
<td>Returns duration to put/call option in days</td>
</tr>
<tr>
<td>CbondsCalcGSpread</td>
<td>Returns the G-Spread or T-Spread for securities</td>
</tr>
<tr>
<td>CbondsCalcModifiedDurationToMaturity</td>
<td>Returns modified duration to maturity</td>
</tr>
<tr>
<td>CbondsCalcModifiedDurationToPutCall</td>
<td>Returns modified duration to put/call option</td>
</tr>
<tr>
<td>CbondsCalcPVBPToMaturity</td>
<td>Returns the absolute value of the change the dirty price of a when its YTM is changed for one bp</td>
</tr>
<tr>
<td>CbondsCalcPVBPToPutCall</td>
<td>Returns the absolute value of the change the dirty price of a when its YTP is changed for one bp</td>
</tr>
<tr>
<td>CbondsCalcYTM</td>
<td>Returns yield to maturity in percentage per annum</td>
</tr>
<tr>
<td>CbondsCalcYTP</td>
<td>Returns yield to put/call option in percentage per annum</td>
</tr>
<tr>
<td>CbondsCalcZSpread</td>
<td>Returns Z-Spread to G-Curve or Z-Spread to swaps, depending on the selected parameter: swaps or G-curve</td>
</tr>
<tr>
<td>Function</td>
<td>Description</td>
</tr>
<tr>
<td>-----------------------------------</td>
<td>-----------------------------------------------------------------------------</td>
</tr>
<tr>
<td>CbondsCallDate</td>
<td>Returns the nearest call-option date</td>
</tr>
<tr>
<td>CbondsCleanPriceCalcYTM</td>
<td>Returns clean price in percentage of par value</td>
</tr>
<tr>
<td>CbondsCleanPriceCalcYTP</td>
<td>Returns clean price in percentage of par value</td>
</tr>
<tr>
<td>CbondsClosePrice</td>
<td>Returns close price in percentage of par value</td>
</tr>
<tr>
<td>CbondsCloseYTM</td>
<td>Returns yield to maturity by close price in percentage per annum</td>
</tr>
<tr>
<td>CbondsCloseYTP</td>
<td>Returns yield to put/call option by close price in percentage per annum</td>
</tr>
<tr>
<td>CbondsCouponDate</td>
<td>Returns the nearest coupon date regarding the given date</td>
</tr>
<tr>
<td>CbondsCouponRate</td>
<td>Returns the nearest coupon rate in percentage per annum regarding the given date</td>
</tr>
<tr>
<td>CbondsCouponSum</td>
<td>Returns the nearest coupon sum in face value currency regarding the given date</td>
</tr>
<tr>
<td>CbondsCurrency</td>
<td>Returns the issue currency</td>
</tr>
<tr>
<td>CbondsCurrentCouponRate</td>
<td>Returns a current coupon rate in percentage per annum</td>
</tr>
<tr>
<td>CbondsDealsNumber</td>
<td>Returns daily deals number</td>
</tr>
<tr>
<td>CbondsDuration</td>
<td>Returns duration to maturity in days</td>
</tr>
<tr>
<td>CbondsDurationToPutCall</td>
<td>Returns duration to put/call option in days</td>
</tr>
<tr>
<td>CbondsIndexValue</td>
<td>Returns the index value on date</td>
</tr>
<tr>
<td>CbondsIndicativeCY</td>
<td>Returns the current yield by an indicative price in percentage per annum</td>
</tr>
<tr>
<td>CbondsIndicativePrice</td>
<td>Returns indicative price in percentage of par</td>
</tr>
<tr>
<td>CbondsIndicativeYTM</td>
<td>Returns the yield to maturity by an indicative price in percentage per annum</td>
</tr>
<tr>
<td>CbondsIndicativeYTP</td>
<td>Returns the yield to put/call option by an indicative price in percentage per annum</td>
</tr>
<tr>
<td>CbondsLastPrice</td>
<td>Returns last price in percentage of par value</td>
</tr>
<tr>
<td>CbondsLastYTM</td>
<td>Returns yield to maturity by close price in percentage per annum</td>
</tr>
<tr>
<td>CbondsLastYTP</td>
<td>Returns yield to maturity by last price in percentage per annum</td>
</tr>
<tr>
<td>CbondsMarketPrice</td>
<td>Returns market price from Moscow Exchange</td>
</tr>
<tr>
<td>CbondsMaturityDate</td>
<td>Returns the issue maturity date</td>
</tr>
<tr>
<td>CbondsMutualFundNAV</td>
<td>Returns the mutual fund net asset value</td>
</tr>
<tr>
<td>CbondsMutualFundShare</td>
<td>Returns the mutual fund share</td>
</tr>
<tr>
<td>CbondsNominal</td>
<td>Returns the issue nominal</td>
</tr>
<tr>
<td>CbondsOutstandingFaceValueAmount</td>
<td>Returns the issue outstanding face value amount</td>
</tr>
<tr>
<td>CbondsOutstandingPrincipalAmount</td>
<td>Returns the issue outstanding principal amount</td>
</tr>
<tr>
<td>CbondsPaymentsNumber</td>
<td>Returns the coupon frequency per year</td>
</tr>
</tbody>
</table>
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
CbondsPutDate  Returns the nearest put-option date
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
CbondsTradingFloorName  Returns trading floor name
CbondsTradingVolume  Returns daily trading volume in the issue currency