

Хабр



КАК СТАТЬ АВТОРОМ



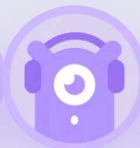
Хабр торт?



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1000+

вакансий с удалёнкой



Хабр Карьера



empenoso

7 фев 2020 в 16:53

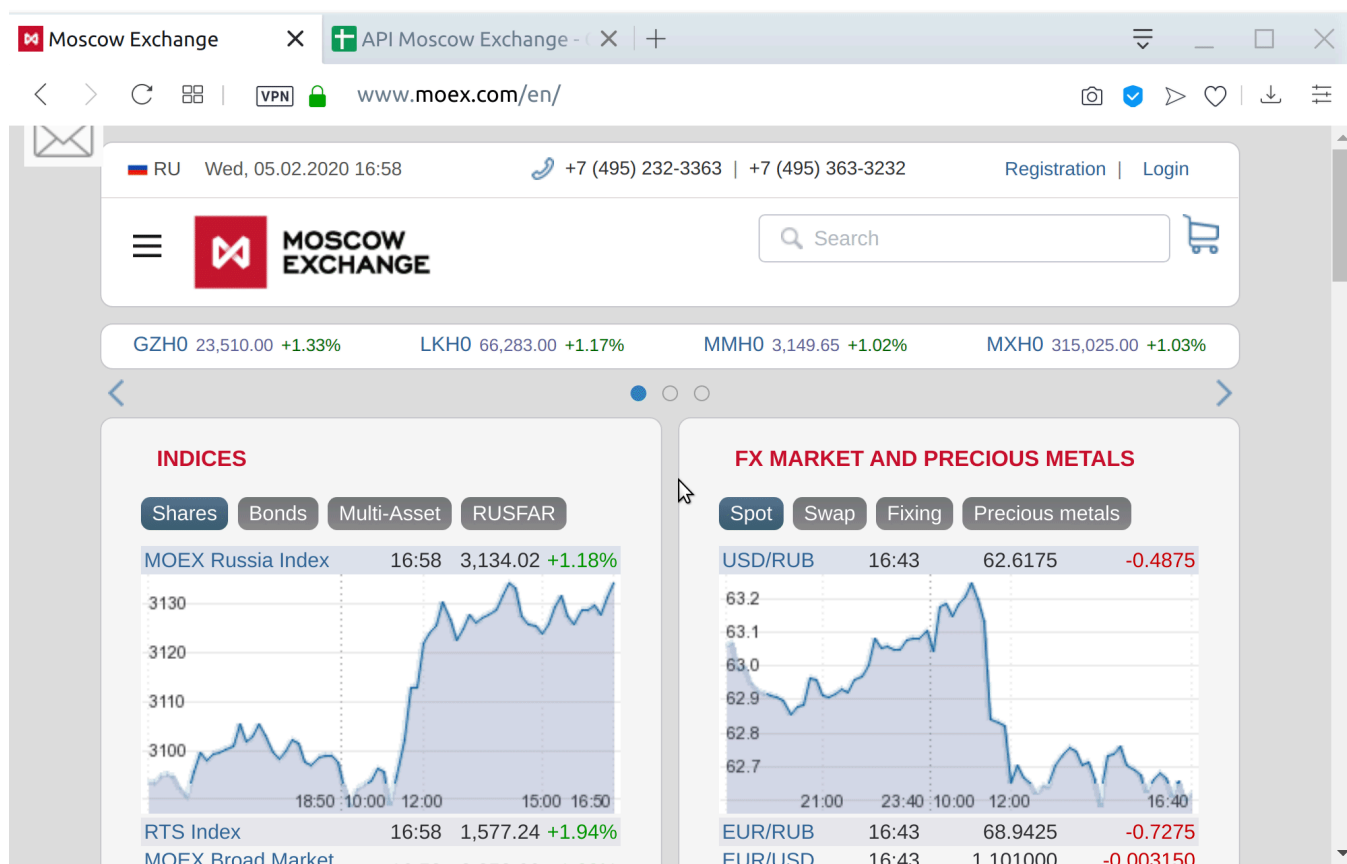
## Free API Moscow Stock Exchange (MOEX) in Google Sheets

2 мин

10K

API\*, Data Mining\*, Google API\*, Алгоритмы\*, Финансы в IT

Last year the number of private investors at Moscow Stock Exchange (MOEX) has doubled and reached 3.86 million: about 1.9 million people have opened accounts at MOEX in 2019. The Saint Petersburg Stock Exchange which specializes in trading of foreign company shares has seen its accounts increase three times from 910,000 to 3,06 million over the past year.



This means that almost 2 million newbies without any actual trading experience and lacking any

specialized software for trading/position analysis have entered the market.

While the broker's mobile applications designed for trading are continuously updated and, in general, quite user-friendly, the position analysis, particularly when several brokers are used, could raise issues. Google Sheets using free MOEX API may become a free solution equipped with automatically downloaded asset prices and parameters.

## MOEX API in Google Spreadsheets

There are two options to be used with MOEX API:

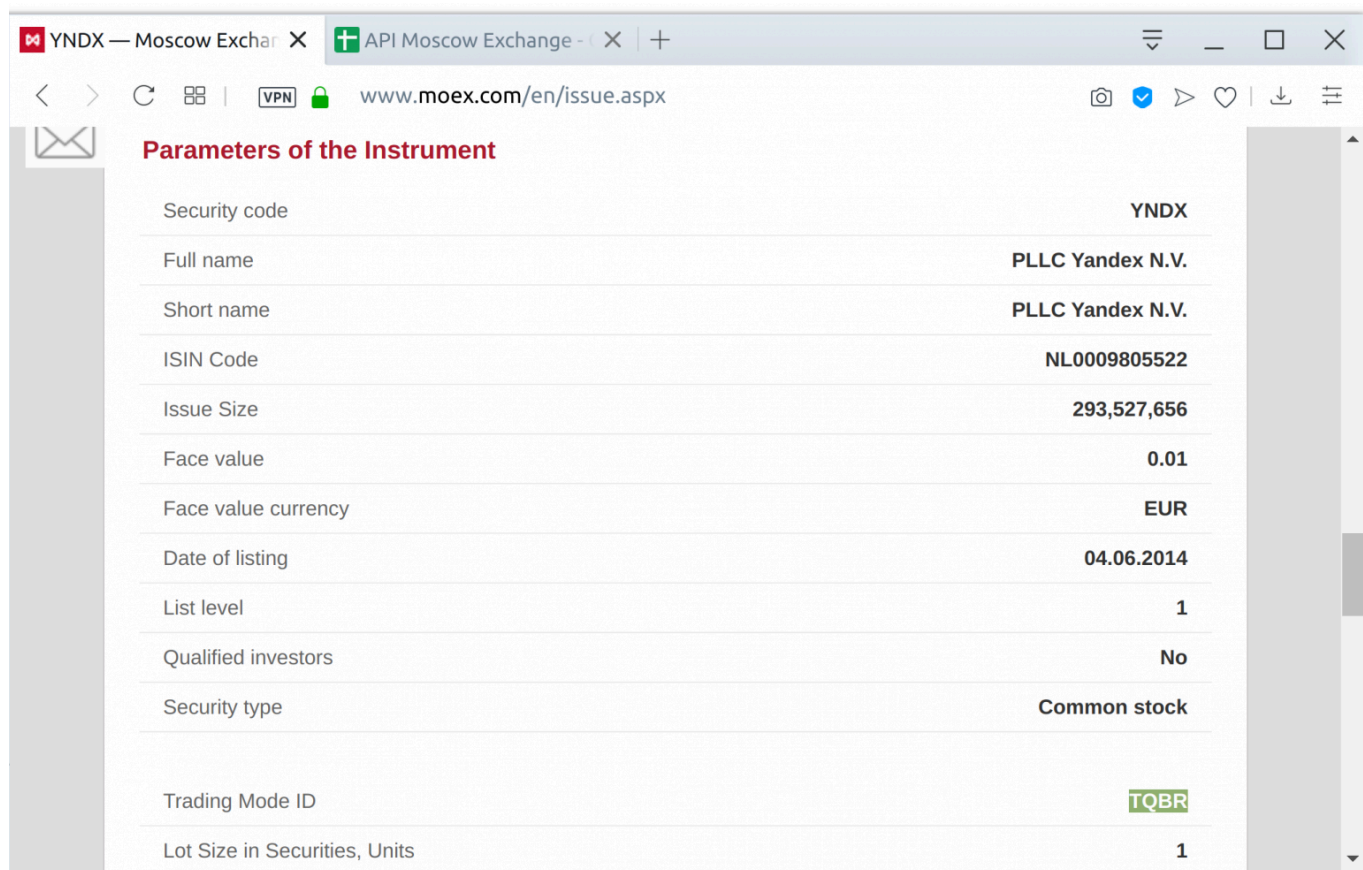
- Formulas
- Google Apps Script

However, it appears that scripts used in free documents usually confuse people, especially if these people have some investments. People are even more confused if they do not understand the script language. That's why I would like to focus on formulas only.

General description and explanation of all the requests that you can send to MOEX API is provided in the guidebook. However, I, for one, did not find this [guidebook](#) that easy to understand, so I had to spend quite a lot of time to cope with it. For that reason, I made [a simple Google Sheet](#) with examples I use myself.

## Trading Mode Identifier

In MOEX API a lot of things depend on Trading Mode Identifier parameter (primary\_boardID). You can look up this parameter at their website using the [search function](#).

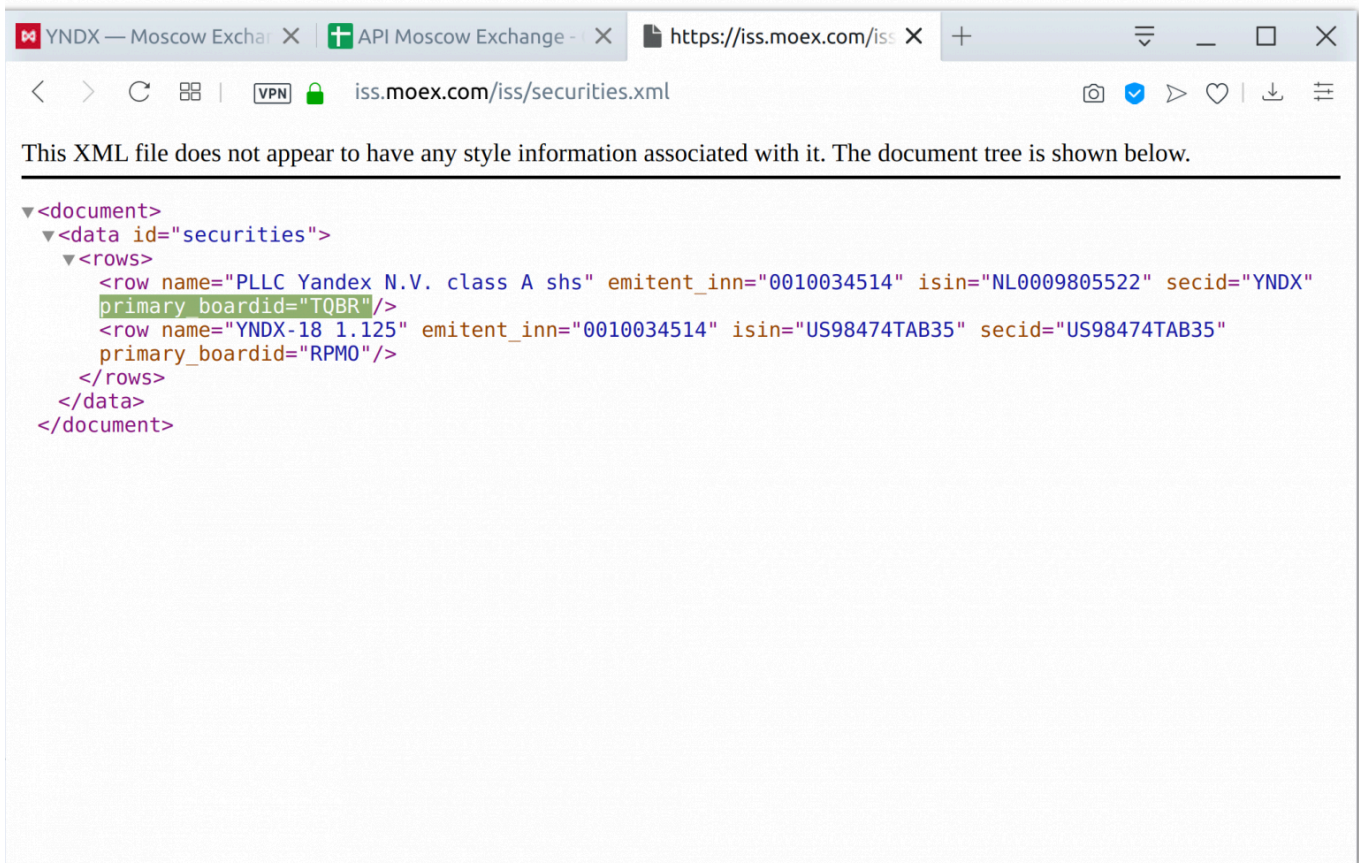


Parameters of the Instrument	
Security code	YNDX
Full name	PLLC Yandex N.V.
Short name	PLLC Yandex N.V.
ISIN Code	NL0009805522
Issue Size	293,527,656
Face value	0.01
Face value currency	EUR
Date of listing	04.06.2014
List level	1
Qualified investors	No
Security type	Common stock
Trading Mode ID	TQBR
Lot Size in Securities, Units	1

### Trading Mode ID

You can also find this identifier using [HTTP request to API](#):

```
https://iss.moex.com/iss/securities.xml?q=WRITE THE FULL INSTRUMENT NAME OR ITS PART HERE
```



This XML file does not appear to have any style information associated with it. The document tree is shown below.

```
<document>
  <data id="securities">
    <rows>
      <row name="PLLC Yandex N.V. class A shs" emitent_inn="0010034514" isin="NL0009805522" secid="YNDX"
        primary_boardid="TQBR"/>
      <row name="YNDX-18 1.125" emitent_inn="0010034514" isin="US98474TAB35" secid="US98474TAB35"
        primary_boardid="RPM0"/>
    </rows>
  </data>
</document>
```

*Trading Mode ID*

## Retrieve stock / bonds names at MOEX

It is really convenient that you can get the full security name. You can also get the short security name automatically.

The screenshot shows a Google Sheet interface with the following elements:

- Formula Bar:** Contains the formula: `=IMPORTxml("https://iss.moex.com/iss/engines/stock/markets/shares/boards/TQBR/securities.xml?iss.meta=off&iss.only=securities&securities.columns=SECID,LATNAME", concatenate("//row[@SECID='",A3,"']/@LATNAME"))`
- Table:** A table with 3 columns (A, B, C) and 11 rows. It is divided into three sections: "Getting stock name", "Getting ETF name", and "Getting OFZ name".

	A	B	C
1	<b>Getting stock name</b>		
2	Security code	Boardid search link:	Name:
3	SBER	<a href="https://iss.moex.com/iss/securities.xml?q=SBER">https://iss.moex.com/iss/securities.xml?q=SBER</a>	Sberbank
4			
5	<b>Getting ETF name</b>		
6	Security code	Boardid search link:	Name:
7	FXMM	<a href="https://iss.moex.com/iss/securities.xml?q=FXMM">https://iss.moex.com/iss/securities.xml?q=FXMM</a>	FinEx CASH EQUIVALENTS USITS
8			
9	<b>Getting OFZ name</b>		
10	SECID	Boardid search link:	Name:
11	SU29006RMFS2	<a href="https://iss.moex.com/iss/securities.xml?q=SU29006RMFS2">https://iss.moex.com/iss/securities.xml?q=SU29006RMFS2</a>	OFZ-PD 29006

At the bottom of the sheet, there is a navigation bar with tabs: Description, Names (selected), Prices, Dividends.

[Google Spreadsheets](#)

## Retrieve stock / bonds prices at MOEX

You can use numerous websites to receive prices for Russian assets, but when it comes to MOEX API relevant examples are introduced on this tab.



The screenshot shows a Google Sheet with the following data:

	A	B
5	<b>Getting ETF Price</b>	
6	Security code	Price:
7	FXMM	1,590.80
8		
9	<b>Getting OFZ Price</b>	
10	SECID	Price:
11	SU29006RMFS2	106.24
12		
13	<b>Getting corporate bond price</b>	
14	SECID	Price:
15	RU000A1018X4	100.50

The formula bar contains the following formula:

```
=IMPORTXML("https://iss.moex.com/iss/engines/stock/markets/bonds/boards/TQOB/securities.xml?iss.meta=off&iss.only=securities&securities.columns=SECID,PREVADMITTEDQUOTE", concatenate("//row[@SECID='", A11, "']/@PREVADMITTEDQUOTE"))
```

[Google Spreadsheets](#)

## Retrieve next coupon payment at MOEX

You can receive coupon date and its value (either corporate or Federal Loan Bonds (OFZ) and Eurobonds) automatically.

The screenshot shows a Google Sheet interface with the following elements:

- Formula Bar:** Contains the formula: `=IMPORTxml("https://iss.moex.com/iss/engines/stock/markets/bonds/boards/TQOB/securities.xml?iss.meta=off&iss.only=securities&securities.columns=SECID,NEXTCOUPON,COUPONVALUE", concatenate("//row[@SECID='", A3, "']/@NEXTCOUPON"))`
- Table:**

	A	B	C
1	<b>Getting the date of the next coupon and value for OFZ</b>		
2	SECID	Date:	Value:
3	SU29006RMFS2	2020-08-05	38.64
4			
5	<b>Getting the next coupon date and value for a corporate bond</b>		
6	SECID	Date:	Value:
7	RU000A1018X4	2020-06-25	32.91
8			
- Footer:** Includes a menu bar with 'Names', 'Prices', 'Dividends', and 'Dividend yield' tabs, and a 'Dividend yield' column header.

[Google Spreadsheets](#)

## Retrieve yield at MOEX

Unfortunately, you can obtain the dividend yield as of a specific date represented in a single formula only for OFZ, as they are very shortlisted. For corporate bonds, you'll have to pick them out in the script or choose the initial search position manually.

The screenshot shows a Google Sheet interface with the following elements:

- Browser Tabs:** "YNDX — Moscow Exchar" and "API Moscow Exchange - ( X +".
- Address Bar:** docs.google.com/spreadsheets/d/105nC1gyPcgf-p8xJtoPnrl65-MDyv9DKk
- Sheet Title:** API Moscow Exchange
- Menu:** File, Edit, View, Insert, Format, Data, Tools, Add-ons, Help
- View Controls:** 100% zoom, View only mode.
- Formula Bar:**

```
=IMPORTxml(concatenate("http://iss.moex.com/iss/history/engines/stock/markets/bonds/boards/TQOB/securities.xml?iss.meta=off&iss.only=history&history.columns=SECID,YIELDATWAP&start=0&date=",TEXT(B3,"yyyy-mm-dd")),concatenate("//row[@SECID='",A3,"']/@YIELDATWAP"))
```
- Table Data:**

	A	B	C
1	<b>Specific date dividend yield for OFZ</b>		
2	SECID	Date:	Value:
3	SU29006RMFS2	2020-01-14	7.37
4			
5	<b>Specific date dividend yield for corporate bond</b>		
6	SECID	Date:	Value:
7	RU000A1018X4	2020-01-15	6.64
8			
- Footer:** Add 1000 more rows at bottom.
- Navigation:** Prices, Dividends, Dividend yield, Offe

[Google Spreadsheets](#)

## Retrieve offer dates at MOEX

Planning your own funds becomes much easier, when you receive offer dates automatically.



The screenshot shows a Google Sheet with the following content:

```

=IFNA(
IMPORTXML("https://iss.moex.com/iss/engines/stock/markets/bonds/boards/EQOB/securities.xml?
iss.meta=off&iss.only=securities&securities.columns=SECID,OFFERDATE",
concatenate("//row[@SECID='",A7,"']/@OFFERDATE"))
,"нет")

```

	A	B
1	<b>Getting offer date for OFZ</b>	
2	SECID	Date:
3	SU29006RMFS2	нет
4		
5	<b>Getting a corporate bond offer date</b>	
6	SECID	Date:
7	RU000A0JW0S4	2020-12-18
8		

At the bottom of the sheet, there is a control bar with "Add 1000 more rows at bottom." and a navigation bar with "Offer" selected.

[Google Spreadsheets](#)

## Conclusion

MOEX API gives you powerful capabilities. In this article I described only those tools that I use as a long-term private investor.

Please note that I have no relations with Moscow Exchange and I use MOEX API only for personal needs.

Author: [Mikhail Shardin](#),

February 6, 2020

**Теги:** [Google Sheets](#), [parsing](#), [quotes](#), [exchanges](#), [investments](#), [statistics](#), [securities](#), [stocks](#), [bonds](#), [stock trading](#)

**Хэбы:** [API](#), [Data Mining](#), [Google API](#), [Алгоритмы](#), [Финансы в IT](#)

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6 часов назад

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Простой



14 мин



3.9K

Обзор

**+25**

5



34

**DimDimDimDimDim**

6 часов назад

### Rust 1.84: новый релиз отличного языка программирования. Еще лучше, еще эффективнее, как всегда



6 мин



2.6K

 +17 8 4

JBFW

14 часов назад

## Подключаем длинную линию 1-wire к Ардуино

 3 мин  4.3K +17 32 28

DAN\_SEA

2 часа назад

## «Профессор, конечно, лопух, но аппаратура при нём» — или немного о костной проводимости

 Средний  9 мин  700

Обзор

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arturdumchev

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## Заговор разработчиков против корпораций

 Средний  15 мин  1.8K

Мнение

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## Стереокамера машинного зрения с поддержкой ИИ на базе FPGA и Arduino Portenta H7

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5 часов назад

## Распознавание образов в мозге с помощью микроплееров



Средний



8 мин



1.1K

Из песочницы



+11



16



6

**chlorine**

7 часов назад

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Простой



7 мин



2K

Из песочницы



+11



68



16

**mikhailmurzak**

21 час назад

## Делаем Телеграм-бота в Cursor AI без знания кода



Простой



5 мин



6.7K

Тutorial



+10



76



15

**subatiq**

3 часа назад

## Зарплата как отражение ценностей компании



Простой



9 мин



1.2K

Из песочницы

Перевод



+8



5



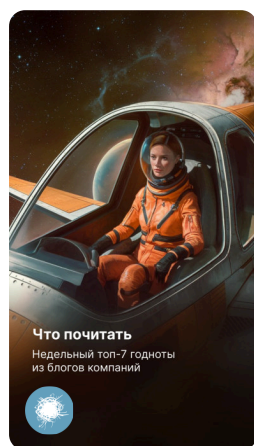
10

Как закрыть ноут в 18:00 и встать со стула — комикс о переработках

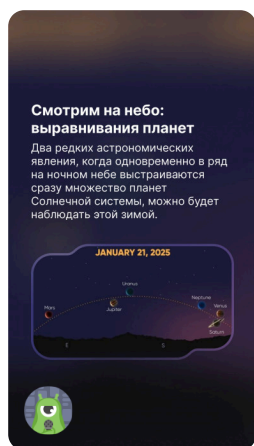
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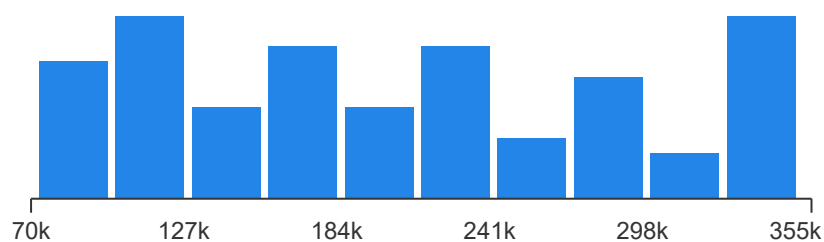


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