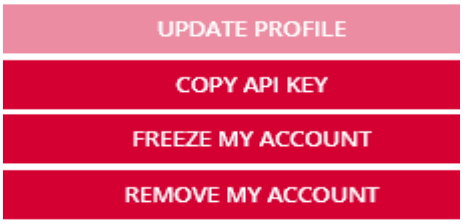
EVDS Python Guide

You must be a registered user to use EVDS (See Member Operations Guide) with Python. Select the "My Page" link. Enter the username and password you set. Click on our username and select "My Profile" from the menu. Get the API key by selecting Copy API Key at the bottom of the page (Figure 1). Api Key (key=XXXXXXX) is defined differently for each user. The "key" parameter from the URL address must come in the http request header.

Figure-1: API Key



Setup

You can install the EVDS package via pip package manager: *pip install evds --upgrade*

Example query_1

From 01-01-2019 to 01-01-2020, the USD and EUR buying rates can be accessed as follows.

```
from evds import evdsAPI
evds = evdsAPI('EVDS_API_KEY')
evds.get_data(['TP. MIN. USD. A.YTL','TP. MIN. EUR. A.YTL'],startdate="01-01-2019",enddate="01-01-2020")
```

get_data function will return the DataFrame. If desired, raw data can be accessed in JSON format with the evds.data command.

Example query _ 2

```
import requests

headers =       {'key':'**********'}

response = requests.get('https://evds3.tcmb.gov.tr/igmevdsms-dis/series=TP. MIN. USD. A-TP. MIN. EUR. A-TP. MIN. CHF. A-TP. MIN. GBP. A-TP. MIN. JPY. A-TP.MK. F. COMPOUND. TUM&startDate=31-01-2024&endDate=31-12-2024&type=xml',headers=headers)
print(response.request.url)
print(response.request.body)
print(response.request.headers)
print(response.content)
```

Note: '**********' is your API key.

Detailed Query

get_data function takes the following parameters:

series

This parameter should be defined as a list. In addition, more than one series can be defined in this list. It is mandatory to define it.

startdate

The date from which the data in the series will be selected is determined by this parameter. It is mandatory to define it.

enddate

If an interval selection is desired on the series, the end date of the interval is specified with this parameter. Its definition is voluntary. If not defined, it is defined as equal to the value of startdate.

aggregation_types

It refers to the aggregation method to be used during the retrieval of data in the series.

Its definition is voluntary. If it is not defined, the predefined method defined for the series is used. It can also take string or list as a value. String, the same method is applied for all series. If it is defined as a list, the specified methods are applied to the series defined in the series parameter, respectively. The methods that can be used are as follows:

Method	**Parameter Value**
Average Lowest Highest Start End Cumulative formulas	avg min max first last sum

It refers to the formula to be applied during the retrieval of the data in the series. Its definition is voluntary. If it is not defined, the predefined formula defined for the series is used. It can also take string or list as a value. If it takes a string, the same formula is applied for all series. If it is defined as a list, the specified formulas are applied to the series defined in the series parameter, respectively. The methods that can be used are as follows:

Formula	**Value**
Percentage Change	**1**
Difference	**2**
Annual Percentage Change	**3**
Yearly Difference	**4**
Compared to the end of the previous year Percentage Change	**5** **6**
Compared to the end of the previous year Difference	**7** **8**
Moving Average	
Moving Sum	

frequency

It expresses how often the data in the series will be fetched. Its definition is voluntary. If not defined, the predefined publication frequency defined for the series is used. It can take the following values.

Frequency	Value
Daily	**1**
Workday	**2**
Weekly	**3**
2 times a month	**4**
Monthly	**5**
3 Months	**6**
6 Months	**7**
Annual	**8**

Listing Available Series

Data series on EVDS are presented in the Main Category, Subcategory and Series hierarchy, respectively.

get_data function does not need to be performed below to use it. If the code of the data series is known, the direct get_data function can be used.

List the main categories

When the package is called, the main data categories are listed automatically via API.

evds.main_categories

You can list the main categories with the command.

CATEGORY_ID	TOPIC_TITLE_TR
1	MARKET DATA
2	CURRENCIES
3	INTEREST STATISTICS
4	MONEY AND BANK STATISTICS

List subcategories

You can access the subcategories under the main category as follows:

evds.get_sub_categories('Main category ID or Name')

Example usage;

evds.get_sub_categories(6)

CATEGORY IDDATAGROUP CODE	DATAGROUP_NAME
6 bie_dbafod	External Debt Principal and Interest Payments and Other Payments...
6 bie_dbdborc	
6 bie_kvdbs	External Debts-Gross (Ministry of Treasury and Finance) Short-Term External Debt Stock (million USD) Long-Term External Debt Stock of the Private Sector...
6 bie_yssk	

In the example above, the subcategories under category 6 are listed. You can also use it directly with the main category name instead of CATEGORY_ID in the get_sub_categories function.

For example

evds.get_sub_categories("CURRENCIES")

List series

You can access the data series under the subcategory as follows:

evds.get_series('Subcategory name')

Example usage;

evds.get_series('bie_dbdborc')

SERIE_CODE	SERIE_NAME	START_DATE
TP. DB. B01	1: TURKEY'S GROSS EXTERNAL DEBT STOCK	01-10-1989
TP. DB. B02	2: SHORT-TERM DEBTS (To the debtor	Accordingly)01-10-1989
TP. DB. B03	2A: PUBLIC (According to the Debtor)	01-10-1989
TP. DB. B04	2A1: GENERAL MANAGEMENT (According to the Borrower)	01-10-1989
TP. DB. B05	2A1a: Central Management	01-10-1989

You can access the data of the series by using SERIE_CODE via the get_data() function.

(*) For the use of EVDS - R, you can access the portal page titled "CBRT: An R Package for Easy Access to the CBRT Database" by Erol Taymaz (METU Professor of Economics) with the link below.

http://users.metu.edu.tr/etaymaz/cbrt-2019.html