



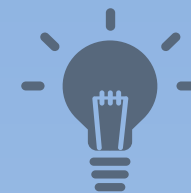
EUROPEAN CENTRAL BANK

EUROSYSTEM



**Statistical
Data Warehouse**

¿Por qué la API del BCE y no otra?



Dimensions

- Overview
- Housing prices
- Housing conditions
- Construction
- Mortgages
- Macroeconomy
- Regions

Data Science Lab

- Discover
- Intelligence
- Report
- Support



- The second one: "R Studio" which is the development environment where our team works.

Our **multidisciplinary team** is composed of members from different areas and background. Economics, Statistics and Computer Science are the main areas, and the join of them makes it possible to understand and adopt their knowledge to the real estate market environment.

The main problem is that the information on the real estate market is either quite heterogeneous or it is missing. Moreover, the constant changes in the behaviour of the real estate market make the evaluation of these types of changes very hard for the professionals. So our first objective is to provide a platform that homogenises and collects all these disperse information then transforming them into useful knowledge.

Our app explores a selected set of indicators that can potentially inform on the state of the housing market. To this aim, we decided to split this approach into **five dimensions**: Housing conditions, Housing prices, Construction, Mortgages and Macroeconomy. Each dimension involves several databases from different sources. Most of them closely related to providing insights about a possible **housing bubble**.

The main **objective** of this application is to create a complete tool for visualising and analysing interactively different effects on the environment of the housing market. This tool will provide answers to the general public, experts, investors and even policymakers all information they need to evaluate, analyse and extract conclusions about changes in prices of houses, prices of renting, different macroeconomic aspects, the evolution of the construction or even if a country is more prone to be owner instead of tenant, among others. With the purpose of answering different questions related to the housing market, giving them enough information to determine what the cause of a phenomenon is and helping them to make predictions and take action.

If this is your first time here, please visit the **support section** in the sidebar menu.

Team

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Uso de la API



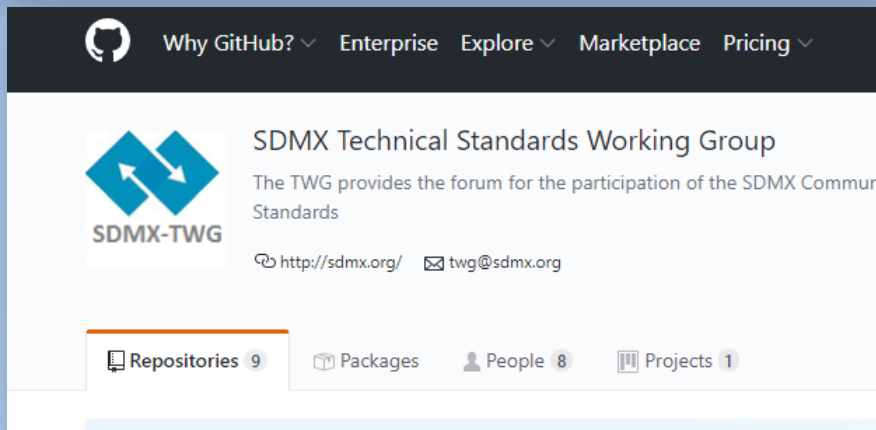
wsEntryPoint

The web service entry point is available at the following location:

<https://sdw-wsrest.ecb.europa.eu/service/>

resource

The resource for data queries is **data**



<https://sdw-wsrest.ecb.europa.eu/help/>
<https://sdw.ecb.europa.eu/>

SDMX: estándar para el intercambio de datos y metadatos estadísticos

Key

`key_population = 'ENA/A.N.DE+ES+FR+PT+IT+GR+BE+DE+GB+IE.W0.S1.S1._Z.POP._Z._Z._Z.PS._Z.N'`

key

Defining the dimension values

As explained in the [Overview](#), the combination of dimensions allows statistical data to be uniquely identified. Such a combination is known as a series key in SDMX and this is what is needed in the `key` parameter.

Let's say for example that exchange rates can be uniquely identified by the following:

- the frequency at which they are measured (e.g.: on a daily basis - code `D`),
- the currency being measured (e.g.: US dollar - code `USD`),
- the currency against which a currency is being measured (e.g.: Euro - code `EUR`),
- the type of exchange rates (Foreign exchange reference rates - code `SP00`) and
- the series variation (such as average or standardised measure for given frequency, code `A`).

In order to build the series key, you need to take the value for each of the dimensions (in the order in which the dimensions are defined in the DSD) and join them with a `.` (dot). The series key for the example above therefore becomes: `D.USD.EUR.SP00.A`

Wildcarding is supported by omitting the value for the dimension to be wildcarded. For example, the following series key can be used to retrieve the data for all daily currencies against the euro: `D..EUR.SP00.A`

The **OR** operator is supported using the `+` (plus) character. For example, the following key can be used to retrieve the exchange rates against the euro for both the US dollar and the Japanese Yen: `D.USD+JPY.EUR.SP00.A`

You can of course combine wildcarding and the OR operator. For example, the following key can be used to retrieve daily or monthly exchange rates of any currency against the euro: `D+M..EUR.SP00.A`



Total population

➤ Total population - Germany - World (all entities, including reference area, including IO), Total economy, Persons, Not applicable, Non transformed data, Neither seasonally adjusted nor calendar adjusted data

[Links to publications \[3\]](#)

[National accounts, Employment (Eurostat ESA2010 TP, table 0110, 0111)]

ENA.A.N.DE.W0.S1.S1._Z.POP._Z._Z._Z.PS._Z.N

Alias: MNA.A.N.DE.W0.S1.S1._Z.POP._Z._Z._Z.PS._Z.N

1991

2018

2019-08-05 10:28

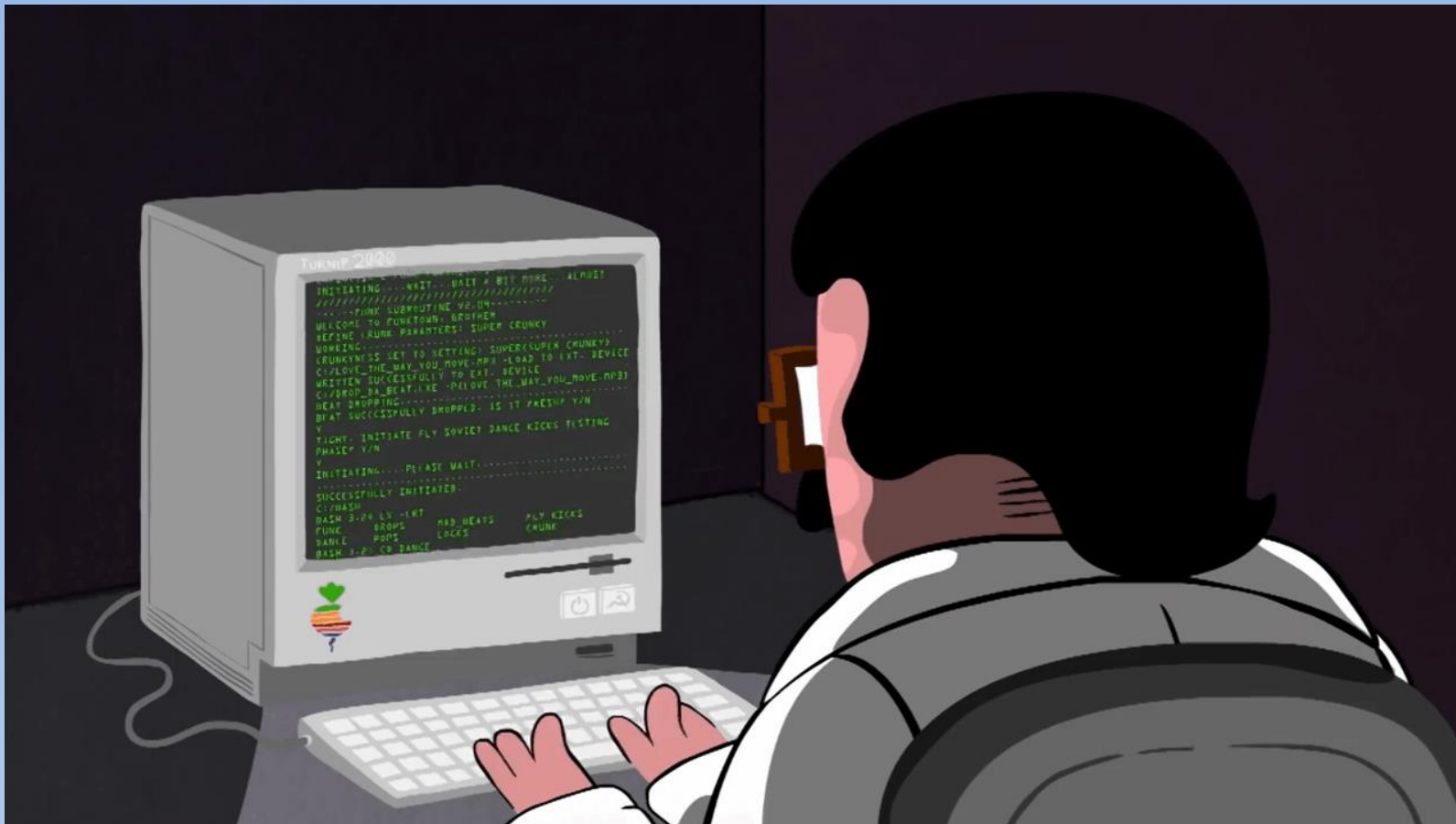
Variables seleccionadas

1 POBLACIÓN

2 TIPO DE
INTERÉS
BANCARIO
EN
CRÉDITOS
AL
CONSUMO

3 TASA DE
DESEMPLEO

Demostración Código Jupyter Notebook





Población (expresada en millones)

	Belgium	Germany	Spain	France	United Kingdom	Greece	Ireland	Italy	Portugal
1995	10137	81308	39718.895	59530	58025	10562.164	3601.300	56844.3	10026.2
1996	10157	81466	39884.247	59742	58164	10608.821	3626.100	56860.3	10063.9
1997	10181	81510	40049.974	59955	58314	10661.312	3664.300	56890.4	10109.0
1998	10203	81446	40214.066	60176	58475	10720.566	3714.167	56906.7	10160.2
1999	10226	81422	40369.667	60487	58684	10761.705	3754.748	56916.3	10217.8

	Belgium	Germany	Spain	France	United Kingdom	Greece	Ireland	Italy	Portugal
2014	11180	80983	46455.123	66312	64597	10892.369	4652.459	60789.1	10401.1
2015	11238	81687	46410.149	66581	65110	10820.964	4695.769	60730.6	10358.1
2016	11295	82349	46449.874	66828	65648	10775.989	4748.994	60627.5	10325.5
2017	11349	82657	46532.869	67063	66040	10754.701	4802.274	60536.7	10300.3
2018	11404	82906	46728.962	67274	66436	10727.560	4860.650	60421.8	10283.8

Media

Belgium	11293.2000
Germany	82116.4000
Spain	46515.3954
France	66811.6000
United Kingdom	65566.2000
Greece	10794.3166
Ireland	4752.0292
Italy	60621.1400
Portugal	10333.7600

Tipo de interés bancario en créditos al consumo (%)

	Belgium	Germany	Spain	France	Greece	Ireland	Italy	Portugal
2019-01	3.74	3.79	4.68	3.13	5.81	3.82	4.58	5.84
2019-02	3.70	3.78	4.70	3.29	5.81	3.82	4.59	5.85
2019-03	3.67	3.78	4.71	3.21	5.83	3.83	4.59	5.87
2019-04	3.62	3.77	4.74	3.11	5.80	3.84	4.59	5.88
2019-05	3.63	3.76	4.77	3.10	5.75	3.84	4.59	5.89
2019-06	3.60	3.76	4.77	3.18	5.70	3.86	4.58	5.98
2019-07	3.60	3.74	4.82	3.08	5.68	3.87	4.58	6.06
2019-08	3.60	3.74	4.84	3.10	5.64	3.85	4.58	6.07
2019-09	3.57	3.71	4.80	3.14	5.65	3.85	4.57	6.24
2019-10	3.55	3.69	4.84	3.07	5.61	3.87	4.57	6.23

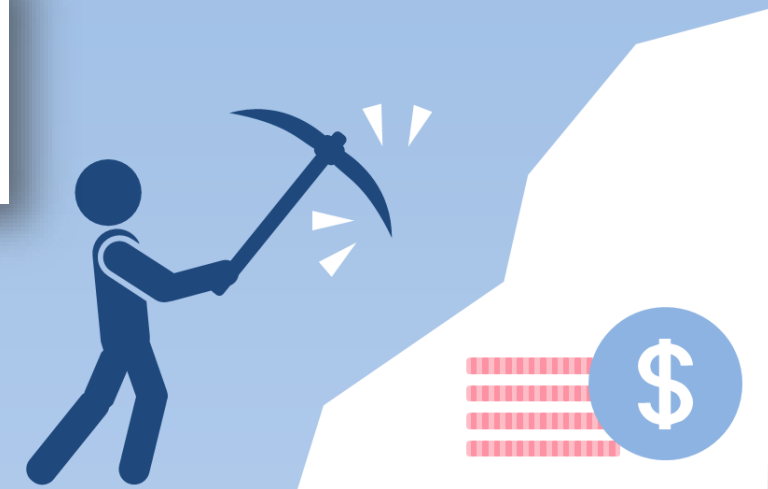
	Belgium	Germany	Spain	France	Greece	Ireland	Italy	Portugal
max	5.52	6.24	6.71	6.61	8.48	6.51	6.78	8.17
min	3.55	3.69	4.18	3.07	5.46	3.59	4.37	5.57



Tasa de desempleo

	Austria	Belgium	FR. Germany	Spain	France	Greece	Ireland	Italy	Netherlands	Portugal
2016	6.0	7.8	4.1	19.6	10.1	23.6	8.4	11.7	6.0	11.2
2017	5.5	7.1	3.8	17.2	9.4	21.5	6.7	11.2	4.9	9.0
2018	4.8	6.4	3.5	15.6	9.0	19.6	5.6	10.7	3.9	7.1
2019	4.6	6.1	3.2	14.4	8.8	18.2	5.1	10.4	3.6	6.3
2020	4.4	5.9	3.0	13.3	8.4	16.9	4.9	10.0	3.6	5.9

	Austria	Belgium	FR. Germany	Spain	France	Greece	Ireland	Italy	Netherlands	Portugal
max	6.0	8.5	5.8	26.1	10.4	27.5	15.5	12.7	7.4	16.4
min	4.4	5.9	3.0	13.3	8.4	16.9	4.9	8.4	3.6	5.9



EUROPEAN DATAWAREHOUSE



El tiempo es oro

