

Package ‘bbk’

July 8, 2024

Title Client for the Deutsche Bundesbank and European Central Bank APIs

Version 0.4.0

Description Download data and metadata from the 'Bundesbank SDMX Web Service API' found at <https://www.bundesbank.de/en/statistics/time-series-databases/help-for-sdmx-web-service/web-service-interface-data> and the 'ECB Data Portal API' found at <https://data.ecb.europa.eu/help/api/overview>.

License MIT + file LICENSE

URL <https://m-muecke.github.io/bbk/>, <https://github.com/m-muecke/bbk>

BugReports <https://github.com/m-muecke/bbk/issues>

Depends R (>= 4.1.0)

Imports htrr2, stats, utils, xml2

Suggests ggplot2, scales, testthat (>= 3.0.0), tibble

Config/testthat/edition 3

Encoding UTF-8

RoxygenNote 7.3.2

NeedsCompilation no

Author Maximilian Muecke [aut, cre] (<https://orcid.org/0009-0000-9432-9795>)

Maintainer Maximilian Muecke <muecke.maximilian@gmail.com>

Repository CRAN

Date/Publication 2024-07-08 11:00:02 UTC

Contents

bbk_data	2
bbk_metadata	3
bbk_series	4
ecb_data	5
ecb_metadata	6

Index**8**

bbk_data	<i>Returns Bundesbank data for a given flow and key</i>
----------	---

Description

Returns Bundesbank data for a given flow and key

Usage

```
bbk_data(
  flow,
  key = NULL,
  start_period = NULL,
  end_period = NULL,
  first_n = NULL,
  last_n = NULL
)
```

Arguments

flow	character(1) flow to query, 5-8 characters. See bbk_metadata() for available dataflows.
key	character(1) key to query.
start_period	character(1) start date of the data. Supported formats: <ul style="list-style-type: none"> • YYYY for annual data (e.g., "2019") • YYYY-S[1-2] for semi-annual data (e.g., "2019-S1") • YYYY-Q[1-4] for quarterly data (e.g., "2019-Q1") • YYYY-MM for monthly data (e.g., "2019-01") • YYYY-W[01-53] for weekly data (e.g., "2019-W01") • YYYY-MM-DD for daily and business data (e.g., "2019-01-01") If NULL, no start date restriction is applied (data retrieved from the earliest available date). Default NULL.
end_period	character(1) end date of the data, in the same format as start_period. If NULL, no end date restriction is applied (data retrieved up to the most recent available date). Default NULL.
first_n	numeric(1) number of observations to retrieve from the start of the series. If NULL, no restriction is applied. Default NULL.
last_n	numeric(1) number of observations to retrieve from the end of the series. If NULL, no restriction is applied. Default NULL.

Value

A `data.frame()` with the requested data.

Source

<https://www.bundesbank.de/en/statistics/time-series-databases/help-for-sdmx-web-service/web-service-interface-data>

See Also

Other data: [bbk_series\(\)](#), [ecb_data\(\)](#)

Examples

```
# fetch all data for a given flow and key
bbk_data("BBSIS", "D.I.ZAR.ZI.EUR.S1311.B.A604.R10XX.R.A.A._Z._Z.A")
# fetch data for multiple keys
bbk_data("BBK01", c("TTA032", "TTA010"))
# specified period (start date-end date) for daily data
bbk_data(
  "BBSIS", "D.I.ZAR.ZI.EUR.S1311.B.A604.R10XX.R.A.A._Z._Z.A",
  start_period = "2020-01-01",
  end_period = "2020-08-01"
)
# or only specify the start date
bbk_data(
  "BBSIS", "D.I.ZAR.ZI.EUR.S1311.B.A604.R10XX.R.A.A._Z._Z.A",
  start_period = "2024-04-01"
)
```

bbk_metadata
Returns the available Bundesbank metadata

Description

Retrieval of the metadata stored in the Bundesbank's time series database. Access via the SDMX Web Service API of the Bundesbank.

Usage

```
bbk_metadata(type, id = NULL, lang = c("en", "de"))
```

Arguments

type	character(1) the type of metadata to query. One of: "datastructure", "dataflow", "codelist", or "concept".
id	character(1) id to query. Default NULL.
lang	character(1) language to query, either "en" or "de". Default "en".

Value

A `data.frame()` with the queried metadata. The columns are:

<code>id</code>	The id of the metadata
<code>name</code>	The name of the metadata

Source

<https://www.bundesbank.de/en/statistics/time-series-databases/help-for-sdmx-web-service/web-service-interface-metadata>

See Also

Other metadata: [ecb_metadata\(\)](#)

Examples

```
bbk_metadata("datastructure")
bbk_metadata("dataflow", "BBSIS")
bbk_metadata("odelist", "CL_BBK_ACIP_ASSET_LIABILITY")
bbk_metadata("concept", "CS_BBK_BSPL")
```

<code>bbk_series</code>	<i>Returns the Bundesbank time serie that is found with the specified time series key</i>
-------------------------	---

Description

Returns the Bundesbank time serie that is found with the specified time series key

Usage

```
bbk_series(key)
```

Arguments

<code>key</code>	character(1) key to query.
------------------	----------------------------

Value

A `data.frame()` with the requested data.

Source

<https://www.bundesbank.de/en/statistics/time-series-databases/help-for-sdmx-web-service/web-service-interface-data>

See Also

[bbk_data\(\)](#) for an endpoint with more options.

Other data: [bbk_data\(\)](#), [ecb_data\(\)](#)

Examples

```
bbk_series("BBEX3.M.DKK.EUR.BB.AC.A01")
bbk_series("BBAF3.Q.F41.S121.DE.S1.W0.LE.N._X.B")
bbk_series("BBBK11.D.TTA000")
```

ecb_data	<i>Returns ECB data for a given flow and key</i>
----------	--

Description

Returns ECB data for a given flow and key

Usage

```
ecb_data(
  flow,
  key = NULL,
  start_period = NULL,
  end_period = NULL,
  first_n = NULL,
  last_n = NULL
)
```

Arguments

flow	character(1) flow to query.
key	character(1) key to query.
start_period	character(1) start date of the data. Supported formats: <ul style="list-style-type: none"> • YYYY for annual data (e.g., "2019") • YYYY-S[1-2] for semi-annual data (e.g., "2019-S1") • YYYY-Q[1-4] for quarterly data (e.g., "2019-Q1") • YYYY-MM for monthly data (e.g., "2019-01") • YYYY-W[01-53] for weekly data (e.g., "2019-W01") • YYYY-MM-DD for daily and business data (e.g., "2019-01-01") If NULL, no start date restriction is applied (data retrieved from the earliest available date). Default NULL.
end_period	character(1) end date of the data, in the same format as start_period. If NULL, no end date restriction is applied (data retrieved up to the most recent available date). Default NULL.

first_n	numeric(1) number of observations to retrieve from the start of the series. If NULL, no restriction is applied. Default NULL.
last_n	numeric(1) number of observations to retrieve from the end of the series. If NULL, no restriction is applied. Default NULL.

Source

<https://data.ecb.europa.eu/help/api/data>

See Also

Other data: [bbk_data\(\)](#), [bbk_series\(\)](#)

Examples

```
# fetch US dollar/Euro exchange rate
ecb_data("EXR", "D.USD.EUR.SP00.A")
# fetch data for multiple keys
ecb_data("EXR", c("D.USD", "JPY.EUR.SP00.A"))
```

ecb_metadata

Returns the available ECB metadata

Description

Retrieval of the metadata stored in the ECB's time series database. Access via the SDMX Web Service API of the ECB

Usage

```
ecb_metadata(type, agency = NULL, id = NULL)
```

Arguments

type	character(1) the type of metadata to query. One of: "datastructure", "dataflow", "codelist", or "concept".
agency	character(1) id of the agency to query. Default NULL.
id	character(1) id of the resource to query. Default NULL.

Value

A `data.frame()` with the queried metadata. The columns are:

agency	The agency of the metadata
id	The id of the metadata
name	The name of the metadata

Source

<https://data.ecb.europa.eu/help/api/metadata>

See Also

Other metadata: [bbk_metadata\(\)](#)

Examples

```
ecb_metadata("datastructure")
ecb_metadata("datastructure", "ECB")
ecb_metadata("datastructure", "ECB", "ECB_EXR1")
ecb_metadata("datastructure", id = "ECB_EXR1")
```

Index

* data

- bbk_data, [2](#)
- bbk_series, [4](#)
- ecb_data, [5](#)

* metadata

- bbk_metadata, [3](#)
- ecb_metadata, [6](#)

- bbk_data, [2](#), [5](#), [6](#)
- bbk_data(), [5](#)
- bbk_metadata, [3](#), [7](#)
- bbk_metadata(), [2](#)
- bbk_series, [3](#), [4](#), [6](#)

- ecb_data, [3](#), [5](#), [5](#)
- ecb_metadata, [4](#), [6](#)