Package ‘rbcb’

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Type Package

Title R Interface to Brazilian Central Bank Web Services

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Description The Brazilian Central Bank API delivers many datasets which regard economic activity, regional economy, international economy, public finances, credit indicators and many more. For more information please see <http://dadosabertos.bcb.gov.br/>. These datasets can be accessed through 'rbcb' functions and can be obtained in different data structures common to R ('tibble', 'data.frame', 'xts', ...).

URL https://github.com/wilsonfreitas/rbcb

BugReports https://github.com/wilsonfreitas/rbcb/issues

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Encoding UTF-8

LazyData true

Imports httr, jsonlite, tibble, xts, xml2, utils, stats

RoxygenNote 6.0.1

Suggests testthat

NeedsCompilation no

Repository CRAN

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R topics documented:

`get_all_currencies` *All currency values*

Description

Gets all currency values

Usage

```
get_all_currencies(date)
```

Arguments

`date`	reference date

Value

A `data.frame` with all currency values from the given date. The currency rates come quoted in BRL.

Examples

```
get_all_currencies("2017-03-10")
```

`get_currency` *Get currency values for a given period*

Description

Given a currency symbol and a time interval (in dates) this function returns the bid and ask time series of currency rates.

Usage

```
get_currency(symbol, start_date, end_date, as = c("tibble", "xts",
  "data.frame", "text"))
```

Arguments

`symbol`	currency symbol
`start_date`	time interval initial date
`end_date`	time interval last date
`as`	the object's returning type The `symbol` argument is a three digits character which represents one currency. The symbols can be obtained with `list_currencies`. The time series date range is defined by `start_date` and `end_date`.

Value

The time series with the bid and ask currency rates regarding the given symbol quoted in BRL. The default returning is a `tibble`-fashioned `data.frame` with the three columns: `date`, `ask` and `bid`. The `as` argument also accepts `data.frame` to return old fashioned data frames, `xts` to return a xts object with two variables (bid and ask) and `text` which returns the text content download from BCB site.

Examples

```
get_currency("USD", "2017-03-01", "2017-03-10")
```

`get_currency_cross_rates` *Get currency matrix from BCB*

Description

The currency matrix has the currency cross rates for all currencies present in the BCB system.

Usage

```
get_currency_cross_rates(date, ref = c("ask", "bid"))
```

Arguments

`date`	reference date
`ref`	reffers to `bid` or `ask` rates (default `ask`) `date` is the reference date by which the currency rates must be downloaded. `ref` defaults to `ask` and `bid` returns all currency cross rates calculated with bid rates.

Value

A square `matrix` with `colnames` and `rownames` filled with currency symbols The cells must be read as `ROW` in `COL`, for example, BRL (row) in USD (column) means Brazilian Reals in American Dollars.

Examples

```
x <- get_currency_cross_rates("2017-03-10")
currencies <- c("USD", "BRL", "AUD", "EUR", "CAD")
x[currencies, currencies]
```

`get_series` *Get the series from BCB*

Description

Get the series from BCB

Usage

```
get_series(code, start_date = NULL, end_date = NULL, last = 0,
  name = NULL, as = c("tibble", "xts", "ts", "data.frame", "text"),
  ts_options = NULL)
```

Arguments

`code`	series code
`start_date`	series initial date. Accepts ISO character formated date and `Date`.
`end_date`	series final date. Accepts ISO character formated date and `Date`.
`last`	last items of the series
`name`	series name to be used in the returning object
`as`	the returning type: data objects (`tibble, xts, data.frame, ts`) or `text` for raw JSON
`ts_options`	options to be passed to `ts` function (when `as = 'ts'` provided)

`code` argument can be obtained in the SGS system site. In this site searches can be executed in order to find out the desired series and use the series code in the `code` argument.

The arguments `start_date`, `end_date` and `last` are optional. If none of these arguments are set, then the entire time series is downloaded. Define `start_date` and `end_date` to download a period of data and to download the last `N` registers define the `last` argument to `N` a positive integer. Once `last` is provided it overrides the arguments `start_date` and `end_date`.

If `name` argument is set the returning series is properly named, if not the `code` argument is used. Note that the code is `numeric`.

Value

`tibble` is the default returning class, but the argument `as` can be set to `xts`, `data.frame`, `ts`, or `text` to return these other types. `text` returns the JSON data provided by the remote API.

Examples

```
# download the entire series
## Not run: get_series(1)
# download a period of dates
## Not run: get_series(1, start_date = '2016-12-01')
```

```
## Not run: x <- get_series(1, start_date = '2016-12-01', end_date = '2016-12-31')
# downlaod the last register
x <- get_series(1, last = 1)
```

`list_currencies` *List all currencies*

Description

Lists all currencies and presents their name, symbol, numeric code, country name and county numeric code

Usage

```
list_currencies()
```

Value

A `data.frame` with information of all currencies

Examples

```
list_currencies()
```

`rbcb` *R interface to Brazilian Central Bank RESTful API*

Description

The Brazilian Central Bank API delivers many datasets which regard economic activity, regional economy, international economy, public finances, credit indicators and many more. These datasets can be accessed through `rbcb` functions and can be obtained in different data structures common to R (tibble, data.frame, xts, ...).

`search_series` *Search for series in dadosabertos.bcb.gov.br site*

Description

Search for series in dadosabertos.bcb.gov.br site

Usage

```
search_series(q, page = 1)
```

Arguments

q	query string
page	page number to visualize of returning search The page argument defaults to 1 which shows the first page of a returning search. The search results also show the number of pages and the other pages can be showed by changing this argument to the page to be presented.

Value

Display the search results on the screen

Examples

```
search_series("IPCA")
```

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