

Package ‘BacenAPI’

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Version 0.2.0

Title Data Collection from the Central Bank of Brazil

Description Provides tools to facilitate the access and processing of data from the Central Bank of Brazil API. The package allows users to retrieve economic and financial data, transforming them into usable tabular formats for further analysis. The data is obtained from the Central Bank of Brazil API: <https://api.bcb.gov.br/dados/serie/bcdata.sgs.\\{series_code\\}/dados?formato=json&dataInicial=\\{start_date\\}&dataFinal=\\{end_date\\}>.

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URL <https://github.com/LissandroSousa/BacenAPI>

BugReports <https://github.com/LissandroSousa/BacenAPI/issues>

Imports httr, httr2, jsonlite, magrittr

Encoding UTF-8

LazyData true

RoxygenNote 7.3.2

NeedsCompilation no

Depends R (>= 3.5)

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bacen_api	<i>Connection to the Central Bank API</i>
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Description

This function establishes a connection with the Central Bank of Brazil (BACEN) API, using the 'httr' or 'httr2' packages to retrieve data in JSON format and convert it into a readable format such as data frames.

Usage

```
bacen_api(url, httr = TRUE)
```

Arguments

url	A string containing the BACEN API URL for the desired series.
httr	A logical value. If 'TRUE', the function uses the 'httr' package for the connection. Otherwise, it uses the 'httr2' package. The default value is 'TRUE'.

Value

Returns the data retrieved from the BACEN API.

Examples

```
# Example using the `httr` package:
url <- bacen_url(433, "01/01/2020", "31/12/2023") # in the format "dd/mm/yyyy"
data <- bacen_api(url, httr = TRUE)
```

bacen_search	<i>Search for Financial Indicators Series Number</i>
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Description

Performs a search for financial indicator series based on a keyword.

Usage

```
bacen_search(keyword)
```

Arguments

keyword A string containing the search term in Portuguese - BR (e.g., "câmbio", "juros", "Bovespa").

Value

A data frame with the columns 'Code', 'Full_Name', 'Unit', 'Periodicity', and 'Start_Date' corresponding to the search results.

A data frame with the columns 'Code', 'Full_Name', 'Unit', 'Periodicity', and 'Start_Date' corresponding to the search results.

Examples

```
# Search for indices related to Fortaleza
bacen_search("fortaleza")
```

```
# Search for indices related to Fortaleza
bacen_search("fortaleza")
```

bacen_series

Fetch Multiple Central Bank Series

Description

This function retrieves data from multiple Central Bank series, given a vector of series IDs and corresponding names.

Usage

```
bacen_series(series, names, start_date, end_date, httr = TRUE)
```

Arguments

series A numeric vector containing the series IDs from Central Bank API.

names A character vector containing the names corresponding to each series.

start_date A string specifying the start date in "dd/mm/yyyy" format.

end_date A string specifying the end date in "dd/mm/yyyy" format.

httr A logical value indicating whether to use 'httr' ('TRUE') or 'httr2' ('FALSE'). Default is 'TRUE'.

Value

A 'data.frame' containing the retrieved series data.

Examples

```
series <- c('433', '13005')
names <- c('ipca_br', 'ipca_for')
data <- bacen_series(series, names,
"01/01/2020", "31/12/2023",
httr = TRUE) # in the format "dd/mm/yyyy"
```

bacen_url

Creation of URLs to Access the Central Bank API

Description

This function generates URLs to access specific time series data provided by the Central Bank of Brazil API.

Usage

```
bacen_url(series, start_date, end_date)
```

Arguments

series	Desired series code(s). Must be a number or a vector of numbers.
start_date	Start date of the period of interest, in the format "dd/mm/yyyy".
end_date	End date of the period of interest, in the format "dd/mm/yyyy".

Value

Returns a vector containing the generated URLs for each provided series.

Examples

```
# Generate a URL for series 433 (IPCA) from 01/01/2003 to 31/12/2023.
bacen_url(433, "01/01/2020", "31/12/2023") # in the format "dd/mm/yyyy"
```

dataset

Financial Indicators Dataset

Description

This dataset contains information on financial indicator series available from BacenAPI.

Usage

dataset

Format

A data frame with multiple rows and 5 columns:

Code (character) The unique series number.

Full_Name (character) The name of the financial series.

Unit (character) The unit of measurement for the data.

Periodicity (character) The frequency of data collection (e.g., daily, monthly, yearly).

Start_Date (Date) The starting date of the series.

Source

Central Bank of Brazil (Bacen)

Examples

```
data("dataset")  
head(dataset)
```

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