Package ‘deflateBR’

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deflate

Deflate Nominal Brazilian Reais Using Various Price Indexes

Description

deflate() uses data from the Brazilian Institute for Applied Economic Research’s API (IPEA-DATA) to adjust nominal Brazilian Reais for inflation.

Usage

deflate(nominal_values, nominal_dates, real_date, index = c("ipca", "igpm", "igpdi", "ipc", "inpc"))

Arguments

nominal_values A numeric vector containing nominal Brazilian Reais to deflate.
nominal_dates A Date vector with corresponding nominal dates (i.e., when nominal values were measured). Values are set to the previous month, following the standard methodology used by the Brazilian Central Bank.
real_date A value indicating the reference date to deflate nominal values in the format ‘MM/YYYY’ (e.g., ’01/2018’ for January 2018).
index Indicates the price index used to deflate nominal Reais. Valid options are: ipca, igpm, igpdi, ipc, and inpc.

Details

Each one of the five price indexes included in the function are maintained by two Brazilian agencies: IPCA and INPC indexes are maintained by Brazilian Institute of Geography and Statistics (IBGE); IGP-M, IGP-DI, and IPC are maintained by Getulio Vargas Foundation (FGV). For an overview of the indexes’ methodologies and covered periods, check the Brazilian Central Bank official FAQ.

Value

A numeric vector.

References

For more information on the Brazilian Institute for Applied Economic Research’s API, please check (in Portuguese): http://www.ipeadata.gov.br/.

Examples

## Not run:
# Use IPCA index to deflate a vector of nominal Brazilian Reais
reais <- rep(100, 5)
actual_dates <- seq.Date(from = as.Date("2001-01-01"), to = as.Date("2001-05-01"), by = "month")

# Use IGPM index to deflate the same vector
reais_igpm <- deflate(reais, actual_dates, real_date = "01/2018", index = "igpm")

# Use INPC index to deflate the same vector
reais_inpc <- deflate(reais, actual_dates, real_date = "01/2018", index = "inpc")
deflate(reais, actual_dates, "01/2018", "ipca")

# Using IGP-M index
deflate(reais, actual_dates, "01/2018", "igpm")

## End(Not run)

---

**Description**

`igpdi()` is a convenience function to deflate nominal Brazilian Reais using the Getulio Vargas Foundation’s IGP-DI price index.

**Usage**

`igpdi(nominal_values, nominal_dates, real_date)`

**Arguments**

- `nominal_values`: A numeric vector containing nominal Brazilian Reais to deflate.
- `nominal_dates`: A Date vector with corresponding nominal dates (i.e., when nominal values were measured). Values are set to the previous month, following the standard methodology used by the Brazilian Central Bank.
- `real_date`: A value indicating the reference date to deflate nominal values in the format 'MM/YYYY' (e.g., '01/2018' for January 2018).

**Value**

A numeric vector.

**See Also**

`deflate`.

**Examples**

```r
## Not run:
# Use IGP-DI index to deflate a vector of nominal Brazilian Reais
reais <- rep(100, 5)
actual_dates <- seq.Date(from = as.Date("2001-01-01"), to = as.Date("2001-05-01"), by = "month")
igpdi(reais, actual_dates, "01/2018")

## End(Not run)
```
Description

`igpm()` is a convenience function to deflate nominal Brazilian Reais using the Getulio Vargas Foundation’s IGP-M price index.

Usage

```r
igpm(nominal_values, nominal_dates, real_date)
```

Arguments

- `nominal_values`: A numeric vector containing nominal Brazilian Reais to deflate.
- `nominal_dates`: A `Date` vector with corresponding nominal dates (i.e., when nominal values were measured). Values are set to the previous month, following the standard methodology used by the Brazilian Central Bank.
- `real_date`: A value indicating the reference date to deflate nominal values in the format 'MM/YYYY' (e.g., '01/2018' for January 2018).

Value

A numeric vector.

See Also

`deflate`.

Examples

```r
## Not run:
# Use IGP-M index to deflate a vector of nominal Brazilian Reais
reais <- rep(100, 5)
actual_dates <- seq.Date(from = as.Date("2001-01-01"), to = as.Date("2001-05-01"), by = "month")
igpm(reais, actual_dates, "01/2018")
## End(Not run)
```
**inflation**

*Calculate Inflation Between Two Dates*

**Description**

`inflation()` is a convenience function used to calculate the inflation rate between two periods.

**Usage**

```r
inflation(initial_date, end_date, index = c("ipca", "inpc", "igpm", "igpdi", "ipc"))
```

**Arguments**

- `initial_date`: Initial date in the 'MM/YYYY' format (character).
- `end_date`: End date in the 'MM/YYYY' format (character).
- `index`: One of the following options: `ipca`, `inpc`, `igpm`, `igpdi`, and `ipc`. Each one of these options uses the following price indexes, respectively: IPCA and INPC indexes maintained by Brazilian Institute of Geography and Statistics (IBGE); and IGP-M, IGP-DI, and IPC maintained by Getulio Vargas Foundation (FGV). For an overview of the indexes’ methodologies and covered periods, check the Brazilian Central Bank official FAQ.

**Value**

The inflation rate, in percent, between `initial_date` and `end_date`.

**See Also**

`deflate`.

**Examples**

```r
## Not run:
# Inflation rate between January 2010 to January 2018 calculated using IPCA price index
inflation("01/2010", "01/2018", "ipca")

# Inflation rate between January 2014 to December 2014 calculated using IGP-M price index
inflation("01/2014", "12/2014", "igpm")

## End(Not run)
```
### Description

`inpc()` is a convenience function to deflate nominal Brazilian Reais using the Brazilian Institute of Geography and Statistics’ INPC price index.

### Usage

```r
inpc(nominal_values, nominal_dates, real_date)
```

### Arguments

- **nominal_values**: A numeric vector containing nominal Brazilian Reais to deflate.
- **nominal_dates**: A Date vector with corresponding nominal dates (i.e., when nominal values were measured). Values are set to the previous month, following the standard methodology used by the Brazilian Central Bank.
- **real_date**: A value indicating the reference date to deflate nominal values in the format 'MM/YYYY' (e.g., '01/2018' for January 2018).

### Value

A numeric vector.

### See Also

`deflate`.

### Examples

```r
## Not run:
# Use INPC index to deflate a vector of nominal Brazilian Reais
reais <- rep(100, 5)
actual_dates <- seq.Date(from = as.Date("2001-01-01"), to = as.Date("2001-05-01"), by = "month")
inpc(reais, actual_dates, "01/2018")
## End(Not run)
```
Description

ipc() is a convenience function to deflate nominal Brazilian Reais using the Getulio Vargas Foundation’s IPC price index.

Usage

ipc(nominal_values, nominal_dates, real_date)

Arguments

nominal_values  A numeric vector containing nominal Brazilian Reais to deflate.
nominal_dates  A Date vector with corresponding nominal dates (i.e., when nominal values were measured). Values are set to the previous month, following the standard methodology used by the Brazilian Central Bank.
real_date  A value indicating the reference date to deflate nominal values in the format 'MM/YYYY' (e.g., '01/2018' for January 2018).

Value

A numeric vector.

See Also

deflate.

Examples

## Not run:
# Use IPC index to deflate a vector of nominal Brazilian Reais
reais <- rep(100, 5)
actual_dates <- seq.Date(from = as.Date("2001-01-01"), to = as.Date("2001-05-01"), by = "month")

ipc(reais, actual_dates, "01/2018")

## End(Not run)
ipca

Deflate Nominal Brazilian Reais Using IPCA

Description

ipca() is a convenience function to deflate nominal Brazilian Reais using the Brazilian Institute of Geography and Statistics' IPCA price index.

Usage

ipca(nominal_values, nominal_dates, real_date)

Arguments

nominal_values A numeric vector containing nominal Brazilian Reais to deflate.
nominal_dates A Date vector with corresponding nominal dates (i.e., when nominal values were measured). Values are set to the previous month, following the standard methodology used by the Brazilian Central Bank.
real_date A value indicating the reference date to deflate nominal values in the format 'MM/YYYY' (e.g., '01/2018' for January 2018).

Value

A numeric vector.

See Also
deflate.

Examples

## Not run:
# Use IPCA index to deflate a vector of nominal Brazilian Reais
reais <- rep(100, 5)
actual_dates <- seq.Date(from = as.Date("2001-01-01"), to = as.Date("2001-05-01"), by = "month")
ipca(reais, actual_dates, "01/2018")
## End(Not run)
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