

# Package ‘deflateBR’

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**Type** Package  
**Title** Deflate Nominal Brazilian Reais  
**Version** 1.1.2  
**Description** Simple functions to deflate nominal Brazilian Reais using several popular price indexes downloaded from the Brazilian Institute for Applied Economic Research.  
**License** MIT + file LICENSE  
**Depends** R (>= 3.1.2)  
**Imports** dplyr (>= 0.5.0), lubridate, httr  
**Encoding** UTF-8  
**LazyData** true  
**URL** <https://github.com/meirelesff/deflatebr/>  
**BugReports** <https://github.com/meirelesff/deflatebr/issues/>  
**RoxxygenNote** 6.1.0  
**Suggests** knitr, rmarkdown  
**NeedsCompilation** no  
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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 <a href="#">Brazilian Central Bank</a> . |
| 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")
```

```
deflate(reais, actual_dates, "01/2018", "ipca")

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

## End(Not run)
```

igpdi

*Deflate Nominal Brazilian Reais Using IGP-DI***Description**

`ipc()` 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**

```
## 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)
```

---

**igpm***Deflate Nominal Brazilian Reais Using IGP-M*

---

## Description

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

## Usage

```
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

```
## 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**

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

**Arguments**

|                           |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |
|---------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <code>initial_date</code> | Initial date in the 'MM/YYYY' format (character).                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |
| <code>end_date</code>     | End date in the 'MM/YYYY' format (character).                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |
| <code>index</code>        | One of the following options: <code>ipca</code> , <code>inpc</code> , <code>igpm</code> , <code>igpdi</code> , and <code>ipc</code> . 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 <a href="#">FAQ</a> . |

**Value**

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

**See Also**

[deflate](#).

**Examples**

```
## 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)
```

---

**inpc***Deflate Nominal Brazilian Reais Using INPC*

---

**Description**

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

**Usage**

```
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**

```
## 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)
```

---

`ipc`*Deflate Nominal Brazilian Reais Using IPC*

---

### 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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