Package 'readrba'

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Title Download and Tidy Data from the Reserve Bank of Australia

Version 0.1.11

Description Download up-to-date data from the Reserve Bank of Australia in a tidy data frame. Package includes functions to download current and historical statistical tables (<https://www.rba.gov.au/statistics/tables/>) and forecasts (<https://www.rba.gov.au/publications/smp/forecasts-archive.html>). Data includes a broad range of Australian macroeconomic and financial time series.

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Encoding UTF-8

RoxygenNote 7.3.2

URL https://mattcowgill.github.io/readrba/index.html

BugReports https://github.com/MattCowgill/readrba/issues

Suggests covr, testthat, knitr, rmarkdown, markdown, ggplot2

Imports readxl (>= 1.3.0), tidyr (>= 1.0.0), dplyr (>= 1.0.0), purrr, rlang, xml2, rvest (>= 0.3.6), stringr, httr, lubridate

Depends R (>= 3.6.0)

VignetteBuilder knitr

NeedsCompilation no

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Contents

`browse_rba_series` *Browse available RBA data series*

Description

Use these functions to find the table number or series ID of the data you're interested in.

Usage

```
browse_rba_series(search_string = "")

browse_rba_tables(search_string = "", refresh = FALSE)
```

Arguments

`search_string`	Word or phrase to search for, such as "gold" or "commodity" or "labour". If left as `""`, the function will return all series.
`refresh`	logical; `FALSE` by default. When `FALSE`, internal data is used. When `TRUE`, the RBA website is re-scraped to obtain current information about available tables This can take a few seconds.

Value

A `data.frame` (`tbl_df`) containing RBA data series/tables that match the `search_string`. Where no `search_string` is supplied, the data.frame will contain information about all RBA series/tables.

The data.frame returned by `browse_rba_tables()` includes a column called `readable`. This column takes the value `TRUE` if the table is able to be read by `read_rba()` and `FALSE` if it cannot be read.

Examples

```
# Find series that contain 'unemployment'
browse_rba_series("unemployment")

# Or all labour-related series
browse_rba_series("labour")

# Or those related to commodities
```

```
browse_rba_series("commodities")

# Or all series
browse_rba_series()

# Or just look for tables that contain the word 'labour'
browse_rba_tables("labour")

# Or all tables
browse_rba_tables()

# To re-scrape the RBA website to ensure you have up-to-date information
# about available tables:
## Not run:
browse_rba_tables(refresh = TRUE)

## End(Not run)
```

`rba_forecasts` *Compile the RBA's public forecasts of key economic variables over time*

Description

Compile the RBA's public forecasts of key economic variables over time

Usage

```
rba_forecasts(
  refresh = TRUE,
  all_or_latest = c("all", "latest"),
  remove_old = TRUE
)

read_forecasts(...)
```

Arguments

`refresh`	logical; default is `TRUE`. When set to `TRUE`, up-to-date forecasts will be downloaded from the RBA's website. When `FALSE`, only the package's internal data will be returned, which may be out of date.
`all_or_latest`	character; default is `"all"`. When `"all"` is specified, all publicly-available forecasts will be returned; when `"latest"`, only the latest forecasts will be used.
`remove_old`	logical; default is `TRUE`. When `TRUE`, any observations for which the `date` is more than 180 days prior to the `forecast_date` is excluded.
`...`	Arguments passed to `rba_forecasts()`

Details

Forecasts are not available for all series on all forecast dates. CPI inflation and GDP growth are included in all forecasts. The unemployment rate is included in most forecasts. Other series are included inconsistently, based on their availability in the underlying source data.

All forecasts issued on or before November 2014 come from Tulip and Wallace (2012), RBA RDP2012-07. Data available: https://www.rba.gov.au/statistics/historical-forecasts.html.

Data from 2015 to August 2018 are scraped from the RBA's quarterly Statement on Monetary Policy (https://www.rba.gov.au/publications/smp/2020/aug/). Note from from Feb 2015 to August 2018 (inclusive) only include a few series; those from November 2018 onwards include more series.

Data from November 2018 to present comes from the published 'Forecasts Archive' file on the RBA website (https://www.rba.gov.au/publications/smp/forecasts-archive.html).

`read_forecasts()` is a wrapper around `rba_forecasts()`.

Value

A tidy `tbl_df` containing 8 columns:

`forecast_date` The (approximate) date on which the forecast was published. Note that this is the first day of the publication month, so the `forecast_date` for forecasts in the February 2020 Statement on Monetary Policy is `as.Date("2020-02-01")`.

`date` The date to which the forecast pertains. Note that this is the first day of the final month of the relevant quarter. For example, a forecast of GDP in the June quarter 2021 will be `as.Date("2021-06-01")`.

`year_qtr` The year and quarter to which the forecast pertains, such as 2019.1.

`series` Short, snake_case description of the data series being forecast, such as `gdp_change` or `unemp_rate`. These are consistent over time.

`value` The forecast value, in per cent. For example, if GDP growth is forecast to be 3 per cent, the value will be `3`. Note that where a forecast is given as a range (eg. 3.5-4.5%) the `value` will be the midpoint of the range (eg. 4%).

`series_desc` Full description of the series being forecast, as per the RBA website, such as "Real household disposable income". Note that series descriptions are not necessarily consistent over time; the values here are those published by the RBA. The `series` column is consistent over time.

`source` For recent forecasts, this is 'SMP', meaning the RBA's Statement on Monetary Policy. Forecasts prior to 2014 are sourced from various places; see `Details`.

`notes` Notes accompanying the forecasts, as per the RBA's website. Note these are identical for item in a given `forecast_date`.

Examples

```
forecasts <- read_forecasts()
```

read_cashrate *Convenience function to get the RBA's cash rate.*

Description

Convenience function to get the RBA's cash rate.

Usage

```
read_cashrate(type = c("target", "interbank", "both"))

rba_cashrate(...)
```

Arguments

type	One of 'target' (the default), 'interbank', or 'both'.
	'target' The RBA's cash rate target.
	'interbank' The interbank overnight cash rate.
	'both' Both the cash rate target and interbank overnight cash rate.
	'target' fetches the RBA cash rate target. 'interbank'
...	arguments passed to read_cashrate()

Details

Note that in the very early 1990s, the cash rate target was expressed as a range (eg. "17% to 17.5%"). Where this is the case, the value returned here (and in read_rba()) is the mid-point of this range.

If type = 'both', note that the returned tbl is tidy/long.

rba_cashrate() is a wrapper around read_cashrate().

Value

A tbl_df with two columns: date and cash_rate.

read_rba *Download, import, and tidy statistical tables from the RBA*

Description

Download, import, and tidy statistical tables from the RBA

Usage

```
read_rba(
  table_no = NULL,
  cur_hist = "current",
  series_id = NULL,
  path = tempdir(),
  update_urls = FALSE
)

read_rba_seriesid(series_id, path = tempdir())
```

Arguments

table_no	Character vector of table number(s), such as "A1" or c("a1.1", "g1").
cur_hist	Character; valid values are "current" or "historical".
series_id	Optional, character. Specifying series_id is an alternative to specifying table_no. Supply unique RBA time series identifier(s). For example, "GCPIAG" is the identifier for the CPI, so series_id = "GCPIAG" will return this series. You can supply multiple series IDs as a character vector, such as series_id = c("GCPIAG", "GCPIAGSAQP"). Note that cur_hist is ignored if you specify series_id - both current and historical data will be included in the output.
path	Directory in which to save downloaded RBA Excel file(s). Default is tempdir().
update_urls	Logical; default is FALSE. When FALSE, an internal table is used to fetch the URL(s) corresponding to the requested data. If TRUE, the RBA website is scraped to obtain updated URL(s). Must be either a vector of either length 1 (eg. "cur_hist = "current") or the same length as table_no (eg. cur_hist = c("current", "historical")). cur_hist is ignored if series_id is specified.

Details

read_rba() downloads, imports and tidies data from statistical tables published by the Reserve Bank of Australia. You can specify the requested data using the table_no or series_id.

To find the table_no or series_id that corresponds to the data you want, use the functions browse_rba_tables() and/or browse_rba_series(). Note that some historical exchange rate tables do not have table numbers on the RBA website; they have been assigned table numbers - see browse_rba_tables("exchange rates").

To see which tables cannot currently be read, run browse_rba_tables(FALSE).

read_rba_seriesid() is a wrapper around read_rba().

Certain corporate networks restrict your ability to download files in an R session. On some of these networks, the "wininet" method must be used when downloading files. Users can specify the method that will be used to download files by setting the "R_READRBA_DL_METHOD" environment variable.

For example, the following code sets the environment variable for your current session: `Sys.setenv("R_READRBA_DL_METHO = "wininet")` You can add `"R_READRBA_DL_METHOD"` to your .Rprofile to have this persist across sessions.

Value

A single tidy tibble containing the requested table(s)

Examples

```
## Not run:
# Get a single table:
read_rba(table_no = "a1.1")

# Get multiple tables, combined in a tidy tibble:
read_rba(table_no = c("a1.1", "g1"))

# Get both the current and historical versions of a table
read_rba(table_no = c("a1.1", "a1.1"), cur_hist = c("current", "historical"))

# Get data based on the series ID:
read_rba(series_id = "GCPIAG")

# Or, equivalently, use:
read_rba_seriesid("GCPIAG")

# Get multiple series IDs:
read_rba(series_id = c("GCPIAG", "GCPIAGSAQP"))

## End(Not run)
```

---

read_rba_local *Load and tidy local RBA Excel sheets*

Description

Load and tidy local RBA Excel sheets

Usage

```
read_rba_local(filenames, series_id = NULL)
```

Arguments

`filenames`	Vector of filename(s) (with path) pointing to local RBA Excel sheets
`series_id`	Optional series ID

Value

A `tbl_df` containing tidied RBA Excel sheet(s)

Examples

```
## Not run:
read_rba_local("data/rba_file.xls")

## End(Not run)
```

`tidy_rba` *Tidy a statistical table from the RBA*

Description

Tidy a statistical table from the RBA

Usage

```
tidy_rba(excel_sheet, series_id = NULL)
```

Arguments

`excel_sheet`	Dataframe of RBA spreadsheet.
`series_id`	Optional series ID

Value

Tidy tibble

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