

# Package ‘cbsots’

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**Type** Package

**Title** CBS Open Timeseries

**Version** 1.5.1

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**Description** Tools from downloading timeseries using the cbsodataR package.

**License** GPL-3

**LazyData** TRUE

**RoxygenNote** 7.1.1

**Roxygen** list(markdown = TRUE, old\_usage = TRUE)

**Depends** R (>= 3.5.0),  
regts

**Imports** cbsodataR (>= 0.2.5),  
data.table,  
openxlsx (>= 4.2.2),  
shiny,  
shinyjs (>= 0.4.0),  
htmlwidgets,  
jsonlite,  
shinyalert,  
stringdist,  
utils,  
stringr

**Suggests** testthat,  
knitr,  
rmarkdown,  
R.rsp

**VignetteBuilder** knitr,  
R.rsp

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edit_ts_code	<i>Edit timeseries codes</i>
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Description

Edit timeseries codes

Usage

```
edit_ts_code(ts_code_file, use_browser = TRUE, browser, debug = FALSE,
             base_url = NULL)
```

Arguments

ts_code_file	the name of a file where the timeseries coding is stored. This file does not have to exist yet. If it does exist, then it should be an rds file containing a ts_code object.
use_browser	if TRUE (the default), then display the graphical user interface in the browser. Otherwise the RStudio viewer is used.
browser	a character vector specifying the path of the browser. Specify "default" to use the default browser. The approach used when this argument has not been specified depends on the operating system. For non-Windows operating systems, the default browser is also used if argument browser has not been specified. For Windows, a different approach is used because the Shiny app does not work well in the Internet Explorer. The function tries to find the location of Chrome or FireFox and if the search is succesful then this browser is used. Otherwise an error is issued.
debug	a logical. If TRUE, then use the debugging mode (only for developpers)
base_url	optionally specify a different server. Useful for third party data services implementing the same protocol.

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fill\_tables\_from\_table

*Fill tables with values from another table.*


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## Description

This function fills in the Select and Code fields from a base table based on common Keys or Titles. The function tries to find matching keys or titles and updates the corresponding Select en Code fields. The function creates a match report in directory match\_reoport for each table and dimension. The match report is an Excel file with a name composed of the table id of the base table and the new table, and the and the dimension, e.g. 83186NED\_83361NED\_TypeZelfstandige.xlsx. This function is still experimental and you should always check the results carefully.

## Usage

```
fill_tables_from_table(ts_code, ids, base_id, base_url = NULL)
```

## Arguments

ts_code	a ts_code object. This object can be created and modified with function <a href="#">edit_ts_code</a> , which starts a Shiny app
ids	ids of tables to be filled from the base tabel
base_id	the id of the base table
base_url	optionally specify a different server. Useful for third party data services implementing the same protocol.

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get\_ts

*Return CBS timeseries*


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## Description

Return CBS timeseries

## Usage

```
get_ts(id, ts_code, refresh = FALSE, raw_cbs_dir = "raw_cbs_data",
      include_meta = FALSE, min_year = NULL, frequencies = NULL, download,
      base_url = NULL, download_all_keys = FALSE)
```

**Arguments**

id	table id
ts_code	a ts_code object. This object can be created and modified with function <code>edit_ts_code</code> , which starts a Shiny app.
refresh	should the data in directory raw_cbs_dir be refreshed? If TRUE, the data are always downloaded from the CBS website. Otherwise the data will only be downloaded if the correspondings files in directory raw_cbs_dir are missing or not complete (missing dimension keys). The default is FALSE. Note that data may also be downloaded when new keys are selected in the timeseries coding.
raw_cbs_dir	directory where the raw downloaded data are stored.
include_meta	include meta data
min_year	the minimum year of the returned timeseries. Data for years before min_year are disregarded. Specify NULL or NA to not impose a minimum year
frequencies	a character string specifying the frequencies of the returned timeseries. Specify "Y", "H", "Q" or "M" for annual, semi-annual, quarterly or monthly series, respectively. It is possible to specify a combination of these characters, e.g. "YQ" for annual and quarterly series. Another example: to retrieve annual, quarterly and monthly series simultaneously, specify "YQM". The function returns a list with a component for each specified frequency.
download	This argument overrules argument refresh. If FALSE, then data all never downloaded again. You will get an error if the files in directory raw_cbs_dir are missing or not complete (missing dimension keys). If TRUE then data are always downloaded.
base_url	optionally specify a different server. Useful for third party data services implementing the same protocol.
download_all_keys	This option specifies how to download data. By default, for each table dimension (excluding the topic) only the selected keys in the timeseries coding are downloaded. Although this can significantly reduce downloading time, this approach has the disadvantage that it is necessary to download the data again when a new dimension key is selected in the timeseries coding. To prevent that, use argument download_all_keys = TRUE, then all keys are downloaded for each dimension.

**Value**

a list with class `table_ts`, with the following components

Y	Annual timeseries (if present)
H	Semi-annual timeseries (if present)
Q	Quarterly timeseries (if present)
M	Monthly timeseries (if present)
ts_names	A data frame with an overview of the timeseries names
meta	Meta data, only if argument include_meta is TRUE

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update_tables	<i>Update tables</i>
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### Description

This function updates one or more tables in a `ts_code` object. The function downloads the latest meta data from the CBS website and tries to find matching keys or titles in the old and new table. The function creates a match report in directory `match_reoport` for each table and dimension. The match report is an Excel file with a name composed of the table id and dimension, e.g. `81810NED_Topic.xlsx`. This function is still experimental and you should always check the results carefully.

### Usage

```
update_tables(ts_code, ids, base_url = NULL)
```

### Arguments

<code>ts_code</code>	a <code>ts_code</code> object. This object can be created and modified with function <a href="#">edit_ts_code</a> , which starts a Shiny app
<code>ids</code>	ids of tables to be updated
<code>base_url</code>	optionally specify a different server. Useful for third party data services implementing the same protocol.

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<code>write_table_ts_xlsx</code>	<i>Writes the timeseries returned by function <a href="#">get_ts</a> to an Excel file.</i>
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### Description

Writes the timeseries returned by function [get\\_ts](#) to an Excel file.

### Usage

```
write_table_ts_xlsx(x, file, rowwise = TRUE, ...)
```

### Arguments

<code>x</code>	the <code>table_ts</code> object returned by function <a href="#">get_ts</a>
<code>file</code>	a filename
<code>rowwise</code>	a logical value: should the timeseries be written rowwise?
<code>...</code>	other arguments passed to <a href="#">write_ts_xlsx</a>

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