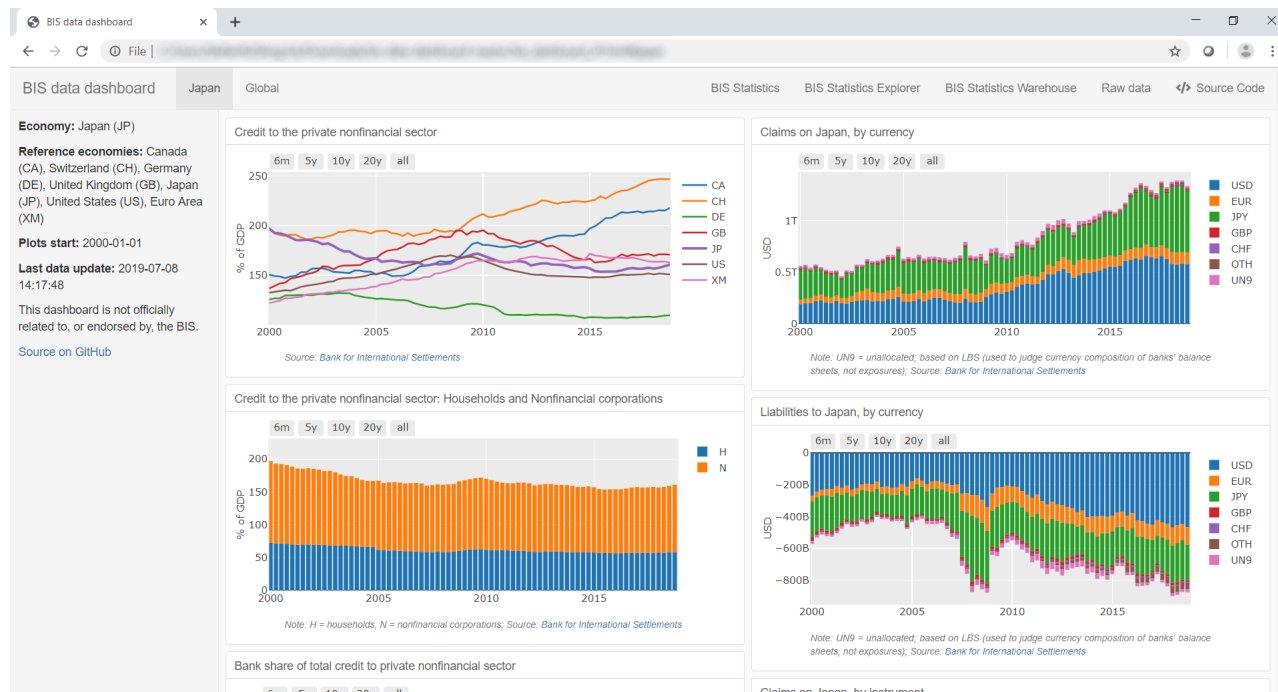# Create a BIS data dashboard using rmarkdown and flexdashboard

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Sometimes I need to get a quick overview of a large amount of data for a specific economy, and the task of extracting the relevant information separately from different data sets can be tedious. This is particularly true in cases where I have custom charts I want to replicate for a new economy, which for me tends to happen especially with data from the Bank for International Settlements (BIS). So when I recently came across the BIS package for R, which provides an R interface to access BIS data, I thought what better time than to automate some of this using R markdown and flexdashboard.



The code uses the BIS R package to download raw data from the BIS, which is then subsetted and reshaped for a user-specified country and fed to a function to generate the interactive plotly objects which populate the R markdown-based flexdashboard. To follow this through,

see the installation instructions below.

Download source code:

- bis_dashboard.Rmd

- bis_helper_functions.R

- refresh_bis_data.R

# How to use the code

1. Grab a copy of bis_dashboard.Rmd, bis_helper_functions.R,
   refresh_bis_data.R and save the files in a folder of your choice.
   Open R and set that folder as your working directory.

   ```
   setwd("/home/user/path/to/bisdashboard")
   ```

2. Source the file `refresh_bis_data.R` to download raw data from the
   BIS and save it in a local `.RData` file. This file will function as a
   local cache to avoid unnecessary calls to the BIS's servers. You will
   need to run this command again every time you wish to update for
   the latest data.

   ```
   source("refresh_bis_data.R")
   ```

3. Once you have the data, call rmarkdown's `render()` function to
   create a dashboard for an economy of your choice, identified by
   ISO 2-character code, e.g. "JP" for Japan.

   ```
   rmarkdown::render("bis_dashboard.Rmd", params = list(ctr = "JP"),
   output_file = "bis_dashboard_JP.html")
   ```

4. When this is complete, open the HTML file produced by
   rmarkdown ( `bis_dashboard_JP.html` in the above example). Note
   that the file may take a moment to load, depending on the amount
   of data to display.

Examples: Dashboards for the

- United States

- Japan

- United Kingdom

- Euro area

The dashboard will give you a set of charts for a user-specified economy as well as the global economy. The presentation is fairly self-explanatory, but sticks to the BIS's abbreviation format for concepts and identifiers in order to work well on small screens. By default, exchange rate data are based on nominal effective exchange rates (which cover fewer countries but longer history), bank liabilities are shown with a negative sign, and domestic debt securities are calculated as the difference between total and international debt securities (as some economies do not report them separately). However, the code is easily adapted for other use cases.

## Disclaimer

This dashboard is not officially related to, or endorsed by, the BIS. The code comes with no warranty.

## More information

- R Markdown tutorial

- flexdashboard for R

- BIS R package on GitHub

- [BIS Statistics](#)

- [BIS Statistics Explorer](#)

- [BIS Statistics Warehouse](#)