Macroeconomic Dashboard Manual

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Bank of Namibia

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1 Overview

This manual gives an overview on how to update the data in this dashboard. There are some interactive features that are built into it, such as hovering your cursor over each graph if you want to see a statistic at a specific point in time. You can also click on a legend item if you want a specific variable to appear/disappear in each graph.

First, you should have **R** and **RStudio** installed on your computer. **R** is just a dependancy and **RStudio** is the program that you actually use. Here is how to download both programs

- Download and Install **R**

  - Click on this link if you're using **Windows**, or here if you're using a **Mac**.

- Download and Install **RStudio**

  - Click here for that. It will automatically detect whether you're using **Windows** or a **Mac**.

I have automated the entire **Commodities** & **South Africa** sections as well as the **VIX** panel so you don't have to update those, you just have to update the Namibian data in the **Excel** file that I've left in the **Data** sub-folder. You can add data to each time series and you don't have to update any of the code, I've programmed it in a flexible way. You also don't have to delete any of the data in each spreadsheet.

All that I would advise is that you don't change the order/names of any columns in **Excel** because I've used them exactly how they are throughout the code file. Also, when you add new data please use the exact same date format that I've used in a specific spreadsheet because the code is also dependant on that.

Here's a broad overview of how to update the dashboard.

- Update all of the Namibian Data in the **Excel** spreadsheet

  - This spreadsheet can be found in the **Data** sub-folder (**Namibia Dataset.xlsx**)

  - See instructions/overview for each spreadsheet in Section 2

- Once you've done that,

  - Open the **R** Dashboard File (it's named **Macroeconomic Dashboard.Rmd** in the root of the folder). This will open up in **RStudio**

  - You will see a **knit** button near the top left-hand side of your screen, just click on that. And then you will probably have to wait for +/- 1 min because there is quite a lot of code. You should see things loading at the bottom of your screen in the **Console** while this is happening.

  - Once it's loaded, the dashboard should pop up in **R**'s viewer, and the html file in the root of the folder (**Macroeconomic Dashboard.html**) has been updated to reflect the changes. That's the file that you can send out or view it in your browser.

2 Updating the Data

2.1 Commodities, South Africa Panel and VIX

I've used a plugin here so you don't have to update any data for this. It will automatically update whenever you knit the dashboard, all you need is an internet connection. The commodities, currencies and VIX will always plot daily data for the past year, and then SA Inflation + Industrial Production will plot monthly data for the last 4 years.[1]

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[1]For SA Inflation, there might be a time-lag of a few days from when Stats SA publish a new release to when it updates on the dashboard.

2.2 Domestic Inflation Panel

You just have to update the data in these spreadsheets

- **Namibia CPI**

- **Slate Account**

- **Inflation Components Forecast**

- **Short Term Models & Medium Term Models**

- **Pump Price**

Tables and Charts will automatically update once you've added new data and click **knit**. For example, with Namibia CPI I've programmed it to always read the last 49 rows (4 Years) in that spreadsheet. The rest is programmed using similar ways (for example if you see a graph that is monthly for the past year, I have programmed that graph to always take the last 13 rows in the excel spreadsheet.)

2.3 Domestic PSCE

You just have to update the data in these spreadsheets

- **PSCE - LineGraphs**

- **PSCE - BarCharts**

Tables and Charts will also automatically update from there. For example, the BarCharts are programmed to always take the last 3 rows (3 month forecast horizon). When you update the linegraphs spreadsheet, include the 6 months forecast in there.

2.4   BoP Panel

Update the following spreadsheets

- **Trade Bal - Current Account**

- **NEER-REER**

2.5   Financial Stability

Update the following spreadsheets

- **FS & NPL**

- **FNB House Price Index**

2.6   Economic Growth Panel

Update the following spreadsheets

- **Quarterly Real GDP**

- **Annual Growth Forecasts**

- **Output Gap**

2.7   Fiscal Outlook Panel

Update the following spreadsheets

- **Fiscal Stance**

- **DSA Projections**

3 Updating your version of R and all of the packages

I suggest that you should try to check for any updates on your version of R/the packages that I've embedded into the code about once every two or three months. This is just to make sure everything with your system runs smoothly. To do this, do the following,

- Go into the **Code** sub-folder and open the file that's named **Update R**

- The code script will open in your program, from here just follow the instructions I've left in the code script. Just run each line at a time by putting your cursor on a line of code and clicking on the **Run** button near the top of your screen

If there is something that doesn't work when you try and update the dashboard, feel free to let me know and I will help out!