

# BBKI Readme

July 5, 2022

This document outlines the steps required to run the BBKI, which the Federal Reserve Bank of Chicago stopped publishing following the July 5, 2022, release. For more information on the index, see [chicagofed.org/bbki](https://chicagofed.org/bbki).

## 1 Manual Installations

*Note:* The folder containing this readme file is the root directory for running the BBKI. All path references are relative to this location.

- Purchase and install **Matlab**: While several versions of Matlab can be used, there are differences across versions that may prevent the code from running. We use Matlab 2019a to run the BBKI. More information on Matlab is available online at [mathworks.com](https://mathworks.com)
- Purchase and install **Haver Analytics**: Necessary databases include BCI, CBDB, CPIDATA, EEI, EMPL, IP, IP02, LABOR, PPI, PPIR, PREALTOR, RAILSHAR, REALTOR, SURVEYS, SURVEYW, USECON, USENERGY, USINT, USNA, and WEEKLY. More information on Haver can be found online at [haver.com](https://haver.com)
- Manually download **MFSS** and add package to Matlab: Matlab toolbox for mixed frequency state space models. Can be downloaded online at [github.com](https://github.com).

## 2 Setup

After completing the steps in the *Manual Installations* section, complete the setup by running `setup.m`. This does two things:

1. Downloads and saves `cbd` in the `getCBD` function: Matlab toolbox designed for time series data management. Can be downloaded online at [github.com](https://github.com).
2. Downloads and saves `sax13` in the `getCensusProgram` function: Seasonal adjustment software available for download from the [Census Bureau's website](#).

*Note:* If you experience issues when running the automated downloads, look through the two functions listed above and manually download the necessary files.

At this point, you should be fully setup to run the BBKI. These steps do *not* need to be repeated.

### 3 Running the model

The driver file for the BBKI is called `run_BBKM GDP.m`. Broadly, this file does three things:

First, it loads all of the data using the data specification file, `data_dictionary.xlsx`. Note that there are two sheets in this Excel file, 490 and 500. Haver temporarily suspended the Architectural Billings Index from the `surveys` database. These series may be posted again in the future, in which case you should use the 500 sheet. Otherwise, use the 490 sheet (the default), which excludes these ten series.<sup>1</sup>

Second, it estimates the model in the `model_BBK_Irregular` function.

Lastly, it saves the output to two Excel files and stores the updated model parameters:

1. `bbki-data-series.xlsx.xlsx`: Contains the monthly and quarterly indexes.
2. `bbki-data-series-contributions.xlsx.xlsx`: Contains contributions for each data series.
3. `latestModelRun.mat`: Contains updated parameter estimates used to kick off the next run.

More detailed information can be found in the comments of the code.

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<sup>1</sup>Dropping these series does not change the overall results of the model.