

## Handout for October 2019 Newsletter

### Monetary Policy in FRED®

#### Purpose.

1. Create a plot of the monetary base, the consumer price index, and excess reserves.
2. Change the graph's date range to show figures since January 2002.
3. Change the base period of the consumer price index to December 2007.
4. Describe and discuss patterns in the evolution of the monetary base and consumer prices over time.

**Pedagogical Rationale.** This assignment requires that you first search for data and plot them into a graph. Next, you will add other series, customize the data by applying a formula, and change the date range in the graph. Lastly, you will describe and discuss patterns in the evolution of the data series. These tasks will develop your proficiency in searching for, transforming, and interpreting data.

**Grading.** Your grade will be determined by (a) how precisely you complete the search and transformation data tasks and (b) how accurately you interpret the data.

#### Steps to Search for and Transform the Data.

1. Access <https://fred.stlouisfed.org/> and search for "St. Louis Adjusted Monetary Base (AMBSL)"
2. Select "Billions of Dollars, Monthly, Seasonally Adjusted" by clicking on the box to the left of the series name.
3. Plot the data series by clicking on "Add to Graph."
4. Click on the "EDIT GRAPH" orange button and select the "ADD LINE" tab.
5. Search for "Consumer Price Index for All Urban Consumers: All Items (CPIAUCSL)."
6. Select "Index 1982-1984=100, Seasonally Adjusted" and click on "Add data series."
7. Select "Units: Index (Scale value to 100 for chosen date)" and under "Select a date that will equal 100 for your custom index:" click on "U.S. recession: Select a recession > 2007-12-01 Start."
8. Customize the data by typing the formula " $a*0.85$ " and click on "Apply."
9. Click on the "EDIT GRAPH" orange button and select the "ADD LINE" tab.
10. Search for "Excess Reserves of Depository Institutions (EXCSRESNS)," select "Millions of Dollars, Not Seasonally Adjusted," and click on "Add data series."
11. Click on the "EDIT GRAPH" orange button and select the "EDIT LINE 3" tab.
12. Select "Units: Millions of Dollars."
13. Customize the data by typing the formula " $a/1000$ " and click on "Apply."
14. Change the data range by typing "2002-01-01" as the start date of the graph.

**Writing Prompts.** Answer the following questions:

1. Consider the quantity theory of money. Briefly describe the relationship between the money supply and the price level.
2. Compare the evolution of the monetary base and the consumer price index before and after 2008. Do the data reflect the quantity theory of money?
3. Consider the fact that the Federal Reserve started paying interest on excess reserves in October 2008. Explain how that policy impacted the evolution of the consumer price index.