

Handout for April 2024 Newsletter

Teaching About the Economics of Monetary Policy Rules in FRED®

Purpose.

1. Create a time series plot of the federal funds rate in the United States.
2. Customize the graph to show the guidance for the federal funds rate provided by a Taylor rule.
3. Describe and discuss the patterns of the federal funds rate and the Taylor rule data.

Pedagogical Rationale. This assignment requires that you first search for data and plot them into a time series graph. Next, you will customize the graph by adding other series and applying a formula. Lastly, you will describe and discuss patterns in the plotted data. 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 “Effective Federal Funds Rate.”
2. Select “Monthly, Percent, Not Seasonally Adjusted.”
3. Click on the orange “EDIT GRAPH” button and select the “ADD Line” tab.
4. Search for and add the data series “Consumer Price Index for All Urban Consumers: All Items, Index1982-1984=100, Seasonally Adjusted” to the graph.
5. Change the units of the LINE 2 series to “Percent Change from Year Ago.”
6. Customize the data of the LINE 2 series by adding “Civilian Unemployment Rate, Percent, Seasonally Adjusted.” Make sure the units for this series are “Percent.”
7. Further customize the data of the LINE 2 series by adding “Noncyclical Rate of Unemployment, Percent, Not Seasonally Adjusted.” Make sure the units for this series are “Percent.”
8. Complete the customization of the data of the LINE 2 series by entering the formula “ $1 + (1.5 * a) - (1 * (b - c))$ ” and selecting “Apply.”
9. Select line colors accessible to your users.
10. Change the date range of the graph to start at “2007-11-01” and end at “2024-01-01.”

Writing Prompts. Answer the following questions:

1. Which is higher: the federal funds interest rate or the guidance provided by the Taylor rule? Consider the following three periods separately: 2007 to 2011, 2012 to 2019, and 2021 to 2023.
2. Explain the likely limitations of using a Taylor rule to guide monetary policy during recessions such as the 2007-2009 and the 2020 recessions.

Note: This Taylor rule is built following the description included in the Federal Reserve Bank of San Francisco *Economic Letter* 2010-18 “[The Fed’s Exit Strategy for Monetary Policy](#)” by Glenn Rudebusch (June 14, 2010).