The FRED® Blog

Visualizing the Fed's new monetary policy tools

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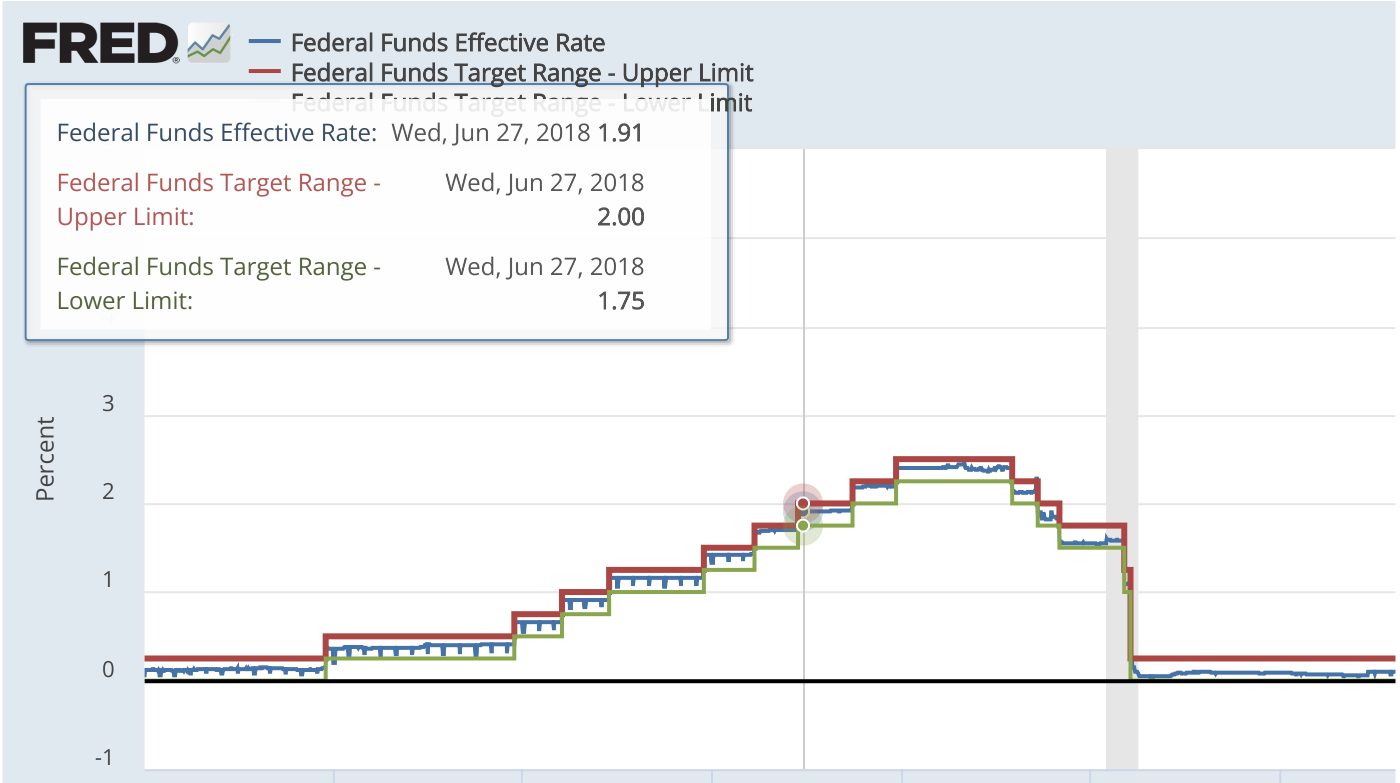

First, let’s introduce some of the monetary policy terms we’ll be using here:

- Federal Open Market Committee (**FOMC**): The seven members of the Board of Governors; the president of the Federal Reserve Bank of New York; and, on a rotating basis, the presidents of four other Reserve Banks. Nonvoting Reserve Bank presidents also participate in deliberations and discussion.
- Federal funds rate (**FFR**): The interest rate at which depository institutions and Federal Home Loan Banks borrow and lend reserve balances to each other overnight.
- Interest on reserve balances (**IORB**): Interest paid on reserves that banks hold in their accounts at a Federal Reserve Bank.
- Overnight reverse repurchase agreement (**ON RRP**): An overnight transaction in which the Federal Reserve sells a security to an eligible counterparty and simultaneously agrees to buy the security back the next day.

The FOMC sets the stance of monetary policy by adjusting the target range for the FFR. To ensure the target range is transmitted to market interest rates, the FOMC uses the IORB as the primary tool and the ON RRP facility as the supplemental tool. The graph above shows that the Fed has successfully transmitted its desired policy stance to financial markets: The effective FFR has been within the upper and lower limits of the target range set by the FOMC—that is, the blue line stayed between the red and green lines.

Let’s look at these two “administered” rates* that the FOMC has used to steer the FFR within the target range:

1. Banks earn **interest on reserve balances (IORB)** on the funds they place in their reserve accounts at the Fed. Because the IORB rate serves as a reservation rate for banks, and banks can arbitrage the difference between IORB and other short-term rates, it is an effective tool for guiding the FFR.**
2. The Fed offers a broad set of large financial institutions the opportunity to deposit funds at the Fed overnight (with a security held as collateral) in the **overnight reverse repurchase agreement (ON RRP)** facility. Many of these financial institutions do not have access to interest on reserves. The Fed announces the capacity of the facility and an offering rate. Institutions then place bids that include the amount of their deposit and the minimum interest rate they would receive from the Fed. As long as the total amount of funds that institutions bid is less than the Fed’s set capacity, institutions’ full bid amounts are placed in the facility and the funds earn the ON RRP offering rate. However, if there is more demand than capacity, the Fed sorts the bids by their rates, lowest to highest, and awards funds to institutions in that order. The bid rate for the last institution to be accepted into the facility (once capacity is reached) becomes the award rate for all institutions. The Fed has set a large capacity, though, and the ON RRP offering rate has been the award rate in all auctions to date. As with the IORB rate, institutions use the ON RRP offering rate to help them arbitrage other short-term rates. Because it is set below the IORB rate, it serves as a supplementary rate and acts like a floor for the FFR.

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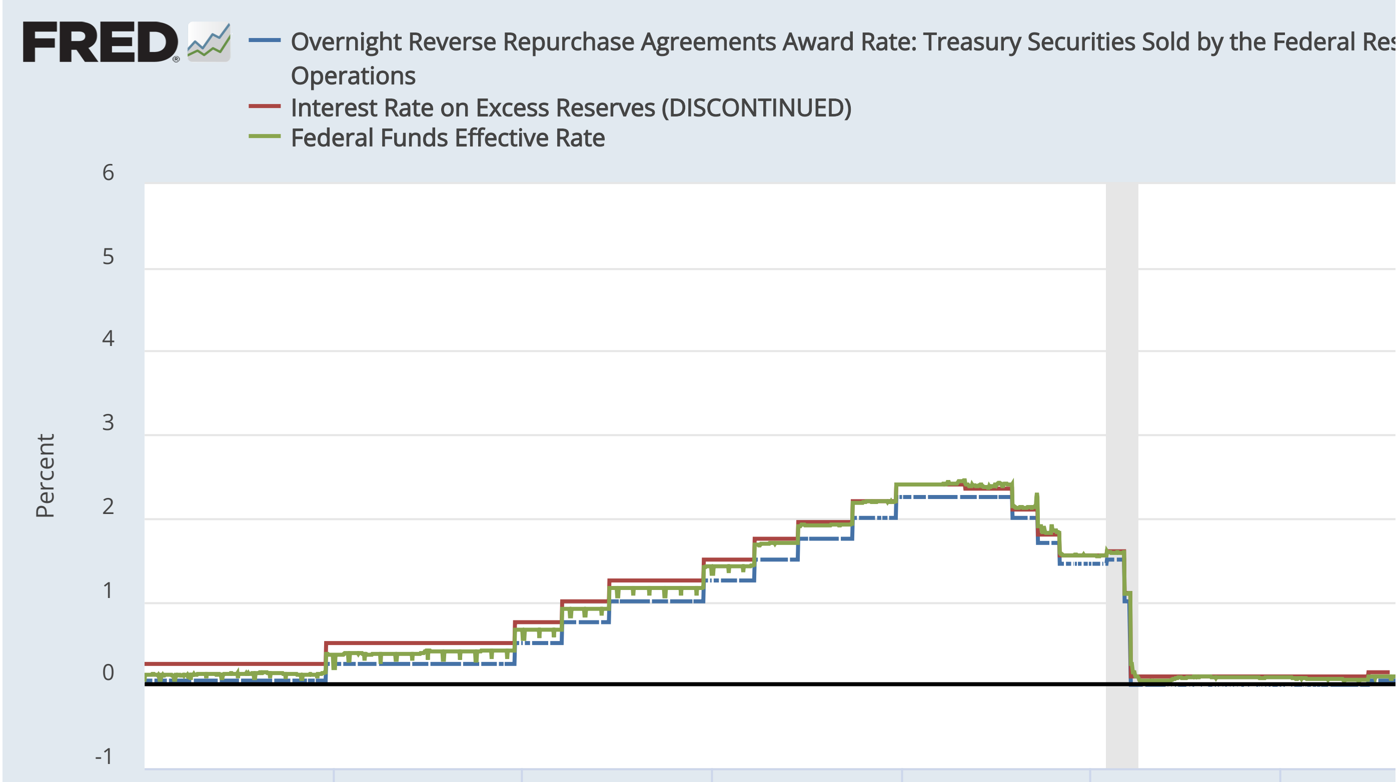
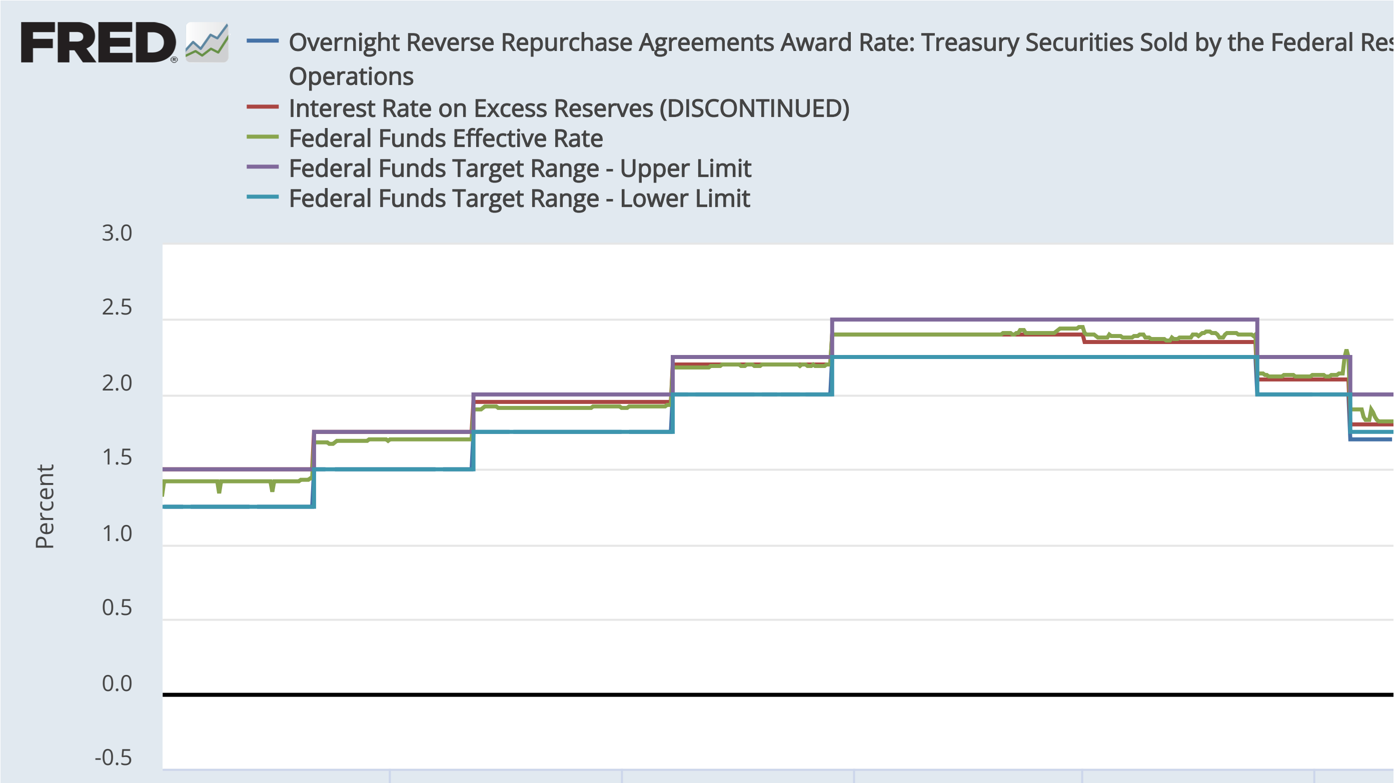


The graph above shows the Fed’s new implementation tools in action. After the Great Financial Crisis, the Fed held the target range for the FFR at 0 to 25 basis points until December 16, 2015 (a date known as “liftoff”). Since then, the FOMC has adjusted the target range up and down several times, including a recent return to the range of 0 to 25 basis points on March 15, 2020, in response to the economic effects of the COVID-19 pandemic. When the FOMC moved the target range, the administered rates were also adjusted, and the FFR (green line) moved simultaneously.

The Fed determined the appropriate IORB rate (red line) and ON RRP offering (and, hence, award) rate (blue line) to keep the FFR in the target range. Over time, the administered rates have been adjusted relative to the range and relative to each other over time. The settings of the Fed’s administered rates are always determined to keep the FFR within the target range. For example, at liftoff, the IORB rate was set at the top of the range and the ON RRP offering (award) rate at the bottom of the range. But, over time, as market pressures moved the FFR toward the top of the target range, the Fed moved the IORB rate a bit lower and within the target range. This is visible in the next graph: Before June 16, 2018, the IROB rate (labeled as "interest rate on excess reserves") is not visible because it lies beneath the upper limit of the federal funds target range. As the Fed lowered the IORB rate to move the FFR toward the middle of the target range, the IORB rate becomes visible and the FFR moves down in the range. The Fed has made two similar adjustments, moving the IORB rate lower relative to the upper limit of the target range. The ON RRP offering rate, acting as a floor, has remained at the bottom of the range over most of this period, with the award rate being a touch below the lower limit a few times.



The Fed's toolbox includes two other tools that support effective policy implementation. The discount rate acts a ceiling for the FFR because banks should not be willing to pay more for funds than the rate at which they can borrow from Fed. And, the Fed conducts open market operations – while no longer the primary tool for adjusting the FFR, the Fed uses open market operations periodically to ensure that the reserves in the banking system remain ample.

For more information, see The Fed's New Monetary Policy Tools.

*An "administered" rate is an interest rate set by a central authority, such as the Fed, as opposed to an interest rate determined in a market.

**These data are listed in FRED as "interest rate on excess reserves." Since the Fed decided to reduce reserve requirements to zero percent, it has indicated it may change the name to better reflect current use of the tool.

How this graph was created: **First graph**: Search for and select "Federal Funds Target Range – Upper Limit," "Federal Funds Rate – Lower Limit," and "Effective Federal Funds Rate (daily)" and click "Add to Graph." From the "Edit Graph" panel, use the "Add Line" option to search for "Interest Rate on Excess Reserves" and then select "Add data series." Adjust the date range to January 1, 2015, to the current date. **Second graph**: Search for and select "Overnight Reverse Repurchase Agreements Award Rate: Treasury Securities Sold by the Federal Reserve in the Temporary Open Market Operations," "Interest Rate on Excess Reserves," and "Effective Federal Funds Rate (daily)." Adjust the date range to January 1, 2015, to the current date. **Third graph**: Start with the second graph, search for and select "Federal Funds Target Range – Upper Limit," and "Federal Funds Rate – Lower Limit" and "Effective Federal Funds Rate (daily)." Adjust the date range to January 1, 2018, to June 30, 2020. In all cases, adjust the colors to your liking with the color palette in the "Edit Graph" panel's "Format" tab.

Suggested by Scott Wolla and Jane Ihrig.
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