Capital Idea #10

A new way to measure unconventional monetary policy

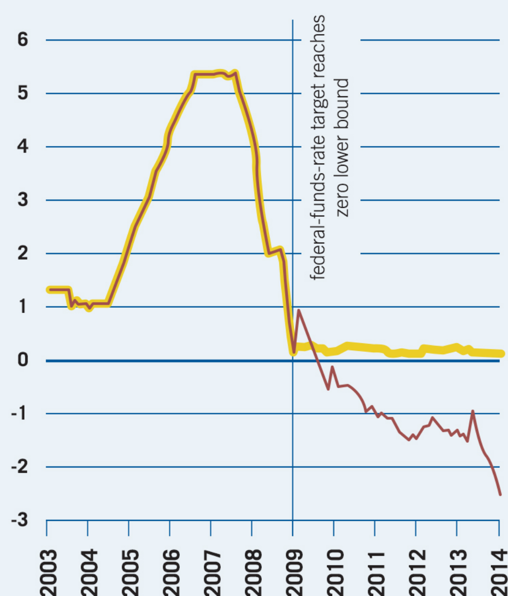
Substituting the 'shadow' rate for the federal funds rate helps economists better understand how Fed intervention at the zero lower bound affects the economy

- At the height of the Great Recession, the US Federal Reserve pushed the federal funds rate to near zero and then took extraordinary steps to further spark economic growth, such as buying $3 trillion-worth of bonds. It's been difficult to gauge if these policies have worked, partly because economic models usually rely on the federal funds rate, which can't fall below zero despite additional monetary stimulus.
- To measure the effectiveness of the Fed's unconventional policies, Chicago Booth's **Jing Cynthia Wu** and University of California, San Diego, graduate student Fan Dora Xia constructed a "shadow" federal funds rate, which, unlike the official rate, can move into negative territory (see chart).
- By substituting Wu and Xia's estimated shadow rate for the effective federal funds rate when it's at zero, economists can integrate decades of historic data with numbers from the Great Recession.
- Using the shadow rate, Wu and Xia argue that if the Fed had not intervened once the federal funds rate hit zero, the unemployment rate in December 2013 would have been one percentage point higher than observed.

Going below the zero bound

Effective and shadow federal funds rate, %

Wu-Xia shadow federal funds rate
Effective federal funds rate



Source: Wu and Xia, 2014

The 'shadow' federal funds rate, unlike the official rate, can move into negative territory.

Jing Cynthia Wu and Fan Dora Xia,
"Measuring the Macroeconomic Impact of Monetary Policy at the Zero Lower Bound,"
Working paper, May 2014.

For more papers in this series, or to subscribe, email us at **capideas@ChicagoBooth.edu**.