

CRS Insights

How Will the Federal Reserve "Normalize" Monetary Policy After QE?

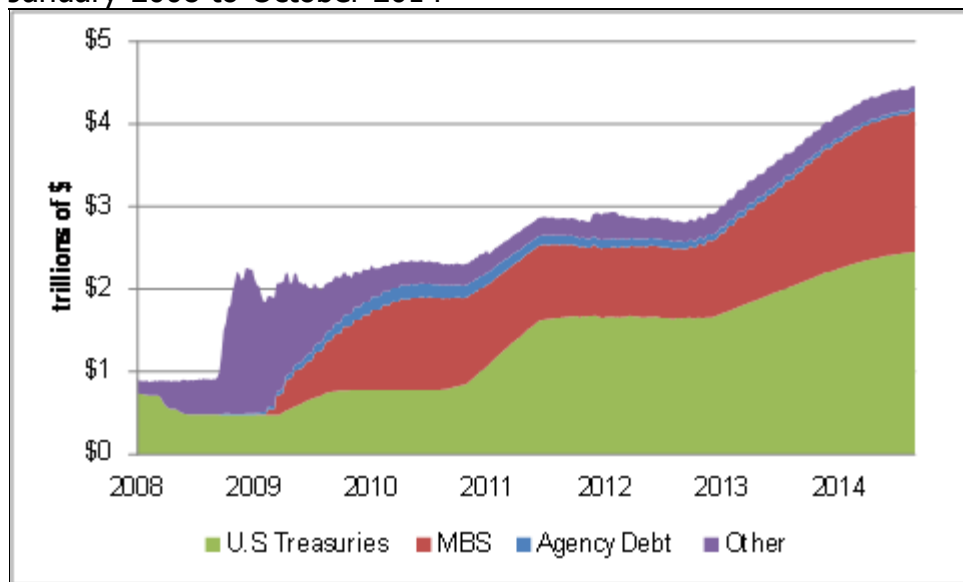
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October 30, 2014 (IN10170)

Since 2009, the Federal Reserve (Fed) has conducted three rounds of what it calls "Large Scale Asset Purchases," which is popularly referred to as "quantitative easing" (QE), in an effort to reduce long-term interest rates. Under QE, the Fed purchased U.S. Treasury securities, mortgage-backed securities (MBS) guaranteed by government-sponsored enterprises (GSEs) and government agencies, and debt issued by GSEs. On October 29, 2014, the Fed [announced](#) that because of "substantial improvement in the outlook for the labor market ... (and) sufficient underlying strength in the broader economy," it would no longer make large scale asset purchases. In total, the Fed now holds almost \$2.5 trillion of Treasury securities and \$1.7 trillion of MBS. The Fed's balance sheet increased by \$2.5 trillion over three rounds of QE, making it about five times larger than it was before the crisis, as shown in [Figure 1](#). QE increased both the asset and liability sides of the Fed's balance sheet. The increase in the liability side was primarily manifested in an increase in bank reserves held at the Fed, from about \$46 billion in August 2008 to \$2.8 trillion by October 2014.

Figure 1. Assets Held by the Federal Reserve

January 2008 to October 2014



Source: Federal Reserve, H.4.1 data release.

Notes: MBS = mortgage-backed securities.

With QE concluded, attention has turned to the Fed's "exit strategy" from QE and zero interest rates. The Fed laid out its plans to ["normalize"](#) monetary policy in a September 2014 statement. It plans to continue implementing monetary policy by targeting the federal funds rate. But because QE has flooded the market with excess bank reserves, the Fed cannot effectively alter the federal funds rate in the way that it did before the crisis (by altering reserve levels). In other words, in the presence of more than \$2 trillion in bank reserves, the market-clearing federal funds rate is close to zero.

The most straightforward way to normalize monetary policy would be to remove excess reserves by shrinking the balance sheet through asset sales. In its normalization statement, the Fed ruled out MBS sales and indicated that it does not intend to sell Treasury securities in the near term. Instead, it plans eventual and gradual reductions in the balance sheet by ceasing to "roll over" securities as they mature. However, it plans to continue to roll over maturing securities until sometime after it has raised

the federal funds rate, which is expected sometime in 2015. The Fed intends to ultimately reduce the balance sheet to the point where it holds "no more securities than necessary to implement monetary policy efficiently," which Chair Yellen [stated](#) might not occur until the end of the decade. At that point, it plans to hold primarily Treasury securities.

Large asset sales could be destabilizing because the Fed's purchases of Treasury securities and agency MBS have been large relative to net issuance since 2013. [Table 1](#) illustrates that, in 2013 and the first half of 2014, the Fed purchased more MBS than were issued on net, whereas all other investors were net sellers of MBS.

Table 1. Treasury Securities and MBS: Issuance and Fed Purchases Since 2009

(billions of \$; percentage)

	2009	2010	2011	2012	2013	2014
Treasury Securities						
Net Purchases by Fed	\$300.8	\$244.9	\$642.0	\$2.7	\$542.6	\$404.6
Net Issuance	\$1,443.7	\$1,579.6	\$1,066.8	\$1,140.6	\$759.5	\$528.7
Ratio of Net Purchases to Net Issuance	20.8%	15.5%	60.2%	0.2%	71.4%	76.5%
GSE/Agency MBS						
Net Purchases by Fed	\$908.4	\$83.8	-\$154.5	\$89.0	\$563.5	\$347.5
Net Issuance	\$458.3	\$186.9	\$165.3	\$132.2	\$132.4	\$52.6
Ratio of Net Purchases to Net Issuance	198.2%	44.8%	n/a	67.3%	425.6%	660.6%

Source: CRS calculations based on Federal Reserve, *Financial Accounts of the United States*, September 18, 2014, Tables F. 108, F. 209, F. 210.

Note: 2014 data are for first two quarters, annualized.

Instead of selling securities, the Fed plans to increase market interest rates by raising the rate it pays banks on reserves held at the Fed and by entering into reverse repurchase agreements (reverse repos) on a larger scale. By manipulating two rates that are close substitutes, the Fed believes it can control the federal funds rate.

In 2008, Congress granted the Fed the [authority](#) to pay interest on reserves. Because banks can earn interest on excess reserves by lending them in the federal funds market or depositing them at the Fed, raising the interest rate on bank reserves should also raise the federal funds rate. In this way, the Fed can lock up excess liquidity to avoid potential inflationary effects, because reserves kept at the Fed cannot be put to use by banks, thereby affecting the economy.

Reverse repos are another tool for draining liquidity from the system and influencing short-term market rates. Indeed, the repo market is one of the largest short-term lending markets, in which banks and other financial institutions are active borrowers and lenders of funds. In a reverse repo, the Fed temporarily borrows cash from a private financial entity in exchange for collateral. The reverse repo drains liquidity from the financial system by transferring cash from market participants to the Fed. The Fed has long conducted open market operations through the repo market, but since 2013 it has engaged in a much larger volume of reverse repos with a broader range of non-bank counterparties through a newly created [facility](#) (which has raised some [concerns](#)). The Normalization Statement indicated that reverse repos will be limited in size (the current limit is \$300 billion per day in aggregate

and \$30 billion per counterparty) and will be phased out after normalization is completed.

The income the Fed earns from its securities exceeds its expenses, and its net income is mostly remitted to the Treasury, which uses it to reduce the budget deficit. QE more than doubled the Fed's net income and remittances to Treasury. Annual remittances rose from \$35 billion in 2007 to above \$75 billion since 2010. However, normalization is likely to reduce future remittances because of the costs associated with paying interest on bank reserves and reverse repos.