

# Where the Newly Created Money Went

Monetary expansion has led banks to park huge excess reserves at the Fed — for now

BY DAVID A. PRICE

In response to the financial crisis of 2007-2008 and the recession of 2007-2009, the Fed has carried out an unprecedented monetary expansion by purchasing a variety of financial assets in large amounts, especially Treasury bonds and mortgage-backed securities. The monetary base, the total of bank reserves and currency, has more than tripled from June 2008 to March 2013.

Where, then, is the inflation? While the prices of some goods have increased, the general level of prices has remained stable; average inflation in 2012 was 2.1 percent, according to the Bureau of Labor Statistics. Given the magnitude of the monetary expansion that has taken place, why are we not swimming around in money like Scrooge McDuck?

The seemingly missing money can be found, for the time being, in an accounting entry at the Fed known as “excess reserves.” This figure refers to the amount of reserves that banks and other depository institutions keep at the Fed beyond the level of reserves that they are required to maintain there. Before the financial crisis and recession, banks tended to hold a minimal amount of excess reserves. In the time since, however, excess reserves have skyrocketed 850-fold: from about \$2 billion in mid-2008 to about \$1.7 trillion in March of this year.

The significance of high excess reserves is that banks can draw them down to make loans, which in turn creates deposits — money — in the broader economy. Thus, if the

Fed does not manage high excess reserves properly, they create the potential for high inflation. The \$1.7 trillion dollar question is, can the Fed do it?

## Interest on Reserves to the Rescue

The Fed gained the ability to control the outflow of excess reserves in October 2008, when it received the authority to pay interest on both excess reserves and required reserves. Interest on reserves, or IOR, enables the Fed to make it more attractive to banks to leave their reserves parked than to lend them out. In effect, the Fed can use IOR to keep the velocity of money low.

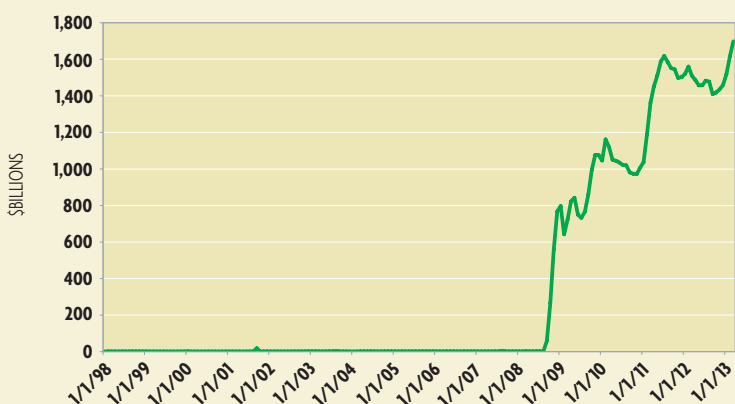
IOR is a *MacGyver*-like adaptation of a tool that had been meant for other purposes. It was originally conceived as a way to eliminate the implicit tax that banks paid through maintaining required reserves without earning interest, a tax that economists viewed as distortionary. Milton Friedman had advocated it for this reason as early as 1959. IOR was also intended to free banks of the burden of moving their excess reserves each day from noninterest-paying reserves into interest-paying sweep accounts.

In the Financial Services Regulatory Relief Act of 2006, Congress authorized the Fed to begin paying IOR on Oct. 1, 2011. In May of 2008, however, in the midst of the financial crisis, the Fed asked Congress to move up the effective date. During the crisis, the Fed had been carrying out emergency lending to financial institutions on a large scale. The Fed neutralized this process in monetary terms by “sterilizing” the money that it was creating; that is, as it created money, it sold the same amount of Treasury bonds from its holdings to absorb an equal amount of money. (Technically, the New York Fed, acting on behalf of the Federal Reserve System, would sell the bonds and the reserve account of the trading counterparty would be debited, causing those reserves to, in effect, disappear.) The Fed was selling off its supply of Treasury securities quickly, however, and it was foreseeable that it would run out of sufficient Treasuries with which to sterilize its lending.

“The Fed had sold so many securities that most of those left in its portfolio were encumbered in one way or another,” says Alexander Wolman, a Richmond Fed economist who co-authored a 2012 working paper on excess reserves with colleague Huberto Ennis. “Given that the Fed wanted to continue expanding its credit programs without lowering market interest rates, the answer was to start paying interest on reserves.”

Congress granted the Fed’s request in the Emergency Economic Stabilization Act of 2008, allowing it to begin paying IOR on October 1 of that year at its discretion. The Fed announced on October 6 that it would start doing so a few days later “in light of the current severe strains in financial markets.” In addition to the longstanding efficiency rationales for IOR, the Fed explained, “Paying interest on excess balances will permit the Federal Reserve to expand its balance sheet as necessary to provide sufficient liquidity to support financial stability while implementing the

Excess Reserves



SOURCE: Federal Reserve Economic Data (Federal Reserve Bank of St. Louis)

monetary policy that is appropriate in light of the System's macroeconomic objectives of maximum employment and price stability."

### A Question of Timing

If banks believe that they can earn more by reducing their excess reserves, and if they appear likely to use their excess reserves to expand their activities faster than the economy is growing, the Fed can avoid the torrent of money simply by raising the interest rate that it pays on reserves. That is why high excess reserves do not necessarily set the stage for high inflation.

But is there a risk of the Fed getting the timing wrong? If it doesn't act quickly enough to raise IOR, or if it doesn't raise the rate enough, an unwanted rise in inflation or inflationary expectations could be the result.

For some economists, the likelihood of such a sequence of events is remote. "The FOMC [Federal Open Market Committee] meets every six weeks," says Stephen Williamson of Washington University in St. Louis. "You're not going to have a huge inflation instantaneously. They can head it off if they're willing to tighten at the appropriate time."

Ennis and Wolman of the Richmond Fed suggest, however, that high excess reserves create a greater timing challenge for the Fed than it normally faces. "Absent the excess reserves, banks would have to raise funds to make new loans," Wolman says. "People argue about whether the large quantity of reserves materially changes the sensitivity of the economy to the Fed messing up."

The issue is that with high excess reserves on tap, banks can increase lending quickly — "without having to sell assets, raise deposits, or issue securities," Ennis and Wolman wrote. Thus, they suggested, high excess reserves mean that an expansion can take place more quickly, perhaps before the Fed is ready to act on signals that it is happening.

Philadelphia Fed President Charles Plosser has also expressed reservations about the potential effect of high excess reserves, together with the scale of the Fed's balance sheet, in a speech in November. "It is difficult to identify the appropriate moment to begin tightening policy, even in the best of times," he said.

Indeed, the Fed's historical track record in that regard has reflected that in practice, the timing of monetary policy is an art as well as a science, and one that is conducted by human beings. For example, in a 2010 working paper, Andrew Levin of the Fed and John Taylor of Stanford University looked at the Fed's record in responding to

inflation from 1965 to 1980, and found that "policy fell behind the curve by allowing a pickup in inflation before tightening belatedly." To be sure, however, the Fed today is more watchful of inflation than during that era.

In addition to the question of whether the Fed would know when to act, some see a question of whether the Fed would have the will to do so — and whether Congress would permit it. These observers are concerned that the Fed might consider the effect that rising interest rates would have on the cost of servicing the federal debt. Moreover, they are concerned that the Fed might be reluctant to raise rates when the time comes because as interest rates go up, the prices of assets held by the Fed will go down; the Fed, in turn, would experience significant losses.

"They've acquired long-maturity assets, and will acquire more, at very high prices, so there will be a capital loss on long-term bonds when the short-term interest rates go up," says Williamson. "That will not look good politically."

Increasing IOR would also reduce the Fed's remittances to the Treasury. At the end of each fiscal year, the Fed in effect turns over its unspent income to the taxpayers. The more interest that the Fed pays to banks, the less it has left over. A paper by five economists with the Fed's Board of Governors, released in January, found that the Fed's remittances to the Treasury have grown along with the growth of its assets, reaching nearly \$90 billion in 2012, but projected that those payments may fall to zero for several years when the Fed increases interest rates and begins selling assets.

While the Fed is independent of Congress and the Executive Branch in setting monetary policy, there is concern that losses on the Fed's balance sheet or a temporary halt in remittances could create political conditions in which the Fed's independence may be curtailed.

Finally, as the amounts of IOR payments increase, those unappropriated payments to the banks might also be viewed as politically problematic in their own right. If the Fed were to raise the rate from its current 0.25 percent to 2.25 percent, for example, then at the present level of reserves, it would be paying the banks some \$38.2 billion per year — up from zero in September 2008, and a far cry from the \$359 million that the Congressional Budget Office forecast when Congress first approved the payments in 2006.

Yet the Fed's political independence has been tested before. Even those economists who are concerned about the potential for an inflationary scenario from the management of excess reserves agree that it is far from a foregone conclusion.

Wolman notes, "All we're saying is, 'Let's be careful.'" **EF**

### READINGS

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