

# Are Large Excess Reserves a Problem for the Fed?

BY JOHN A. WEINBERG

During the financial crisis of 2007-2008 and the Great Recession, the Federal Reserve undertook a number of extraordinary actions to bolster the economy. These included large-scale purchases of assets like U.S. Treasuries and mortgage-backed securities, which increased the Fed's balance sheet from roughly \$900 billion in 2007 to \$4.5 trillion today.

A direct consequence of those purchases was an increase in the monetary base of the economy, which is composed of currency and bank reserves. When the Fed purchases assets, it adds reserves to the banking system. Federal Reserve member banks are required to hold some fraction of their deposits in reserve at the Fed, but they have historically held little more than this minimum. As a result of the Fed's crisis measures, however, excess reserves held by banks have grown from about \$2 billion in 2008 to \$2.5 trillion today.

This increase in the monetary base represents the potential for an enormous increase in broader monetary aggregates — which include bank deposits held by households and businesses — if banks were to use some or all of their excess reserves to support new lending. If this were to happen, we would also eventually expect to see a significant uptick in inflation, the result of “too many dollars chasing too few goods.” But, at least so far, that is not what we have observed. For the last several years, inflation has been stable below 2 percent. That is, not only has inflation not risen, but it has been stubbornly running below the Fed's longer-term inflation goal. Why would this be the case?

The answer could lie partly in the Fed's ability to pay interest on reserves. Economic fundamentals determine the demand for bank credit as well as the ultimate supply of funds from the economy's savers. These conditions influence the profitability to banks of extending credit. A factor that banks consider when deciding how much lending to supply to households and businesses is the return they could earn on the same money by holding it as a reserve balance at the Fed. The fact that the expansion in bank reserves has not been accompanied by an unusually large expansion of bank lending could suggest that the interest rate paid on reserves has been viewed as a good alternative for much of the last seven years. In other words, banks have been content to keep a lot of their funds parked at the Fed.

But that view could shift if economic conditions change. If economic growth increased and the Fed did not increase interest on reserves to match, it could become relatively more profitable for banks to issue loans. In this situation, the unprecedented amount of reserves held by banks has the

potential to both shrink the window for monetary policymakers to react and increase the inflationary consequences of not acting in time.

In the past, when the demand for loans increased, banks needed to acquire additional funds to make those loans. This higher demand for funds would tend to bid up the federal funds rate, signaling to Fed policymakers to either raise their target for that rate or increase the supply of reserves to offset demand if they wanted to keep rates the same. But in the current environment, the banking system already has a large supply of reserves with which to support loans, meaning the Fed might not get the same signal to increase rates before prices begin rising.

Further complicating matters is the fact that the natural rate of interest — the interest rate compatible with a stable price level at a given moment in time — is not directly observable. Economists, such as Thomas Laubach of the Federal Reserve Board of Governors and John Williams, president of the San Francisco Fed, have attempted to estimate a range for the natural rate using economic data. And recently, my Richmond Fed colleagues Thomas Lubik and Christian Matthes suggested an alternative measure of the natural interest rate. Both measures suggest that the current real interest rate may already be below the natural rate, but they are also both subject to a degree of uncertainty, making it difficult for the Fed to set its interest rate target based solely on such estimates.

This uncertainty adds to the risk associated with a high level of excess reserves. And for any given level of the natural real interest rate, there may be some upper limit to the amount of excess reserves the banking system can support without raising the price level. According to research by Richmond Fed economist Huberto Ennis, at some point banks would need to raise more capital to accommodate large reserve balances, which would raise the price level.

So, how much should policymakers worry about excess reserves? On the one hand, the factors discussed here suggest some cause for concern. On the other hand, the Fed has a good track record of targeting the appropriate rates in the two decades prior to the Great Recession (the period known as the Great Moderation), and the current low levels of inflation suggest that the Fed has largely continued that record. At the very least, monetary policymakers should be especially vigilant when operating in an environment of large excess reserves. **EF**

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