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Studies in Applied Economics

HOW TO FIX THE FED

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Johns Hopkins Institute for Applied Economics,
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About the Series

The *Studies in Applied Economics* series is under the general direction of Prof. Steve H. Hanke, Co-Director of the Institute for Applied Economics, Global Health and the Study of Business Enterprise (hanke@jhu.edu).

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Summary

Requiring taxes to be paid in domestic money provides a valuable characteristic for a state's money. In the case of a state's fiat money, it is the foundation for money demand and hence to the development of a financial system built around state money. Except for relatively highly taxed countries, where taxes may encourage tax avoidance and holding bank deposits, the level of taxation is a positive factor boosting financial development. Granger causality tests for 65 countries over the past half-century test the relationship between money and government finance. Except for the low-income countries, where there are only five with adequate data, the causal relationship between taxation and money demand is generally supported in the 60 countries making up the three higher income groups.

How to *Fix* the Fed

*The ineffectiveness of the U.S.
central bank's credit policy.*

BY JOHN A. TATOM

Congressman Jeb Hensarling (R-TX) introduced the Financial CHOICE Act to reform the Federal Reserve in late 2016 and is expected to resubmit it early in the new session of Congress. Its key monetary policy focus is on imposing a monetary rule on the operation of the Fed. This is a worthwhile effort, like its many other admirable features, but it does not address the Fed's asset powers or its new ability to pay excessive interest on reserves, which over the past eight years have allowed the Fed to inflate its balance sheet, and to do so without little effect on monetary aggregates. Just as the Fed caused the Great Recession by stagnant growth of its monetary base, its expanded powers since late 2008 allowed it to prolong the recession and stifle the recovery and expansion while appearing to provide explosive stimulus. The Fed focused on expanding its credit and expanding its lender-of-last-resort function while restraining the growth of monetary aggregates and bank credit. The Fed has not acted in such a counterproductive manner since October 1931, when it raised the discount rate in the midst of the Great Depression. Without a focus on money, adherence to an interest rate rule will not be effective in achieving low inflation and monetary stability.

The seeming paradox of U.S. monetary policy is that the Federal Reserve's ballooning balance sheet has been accompanied by recession, financial crisis, a tepid recovery, and restrained inflation, not evidence of historic monetary policy stimulus. The resolution of this puzzle is the shift

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of the Fed to a focus on its own credit creation, which it largely sterilized using sizeable above-market and questionable subsidies to banks for holding excess reserves, with the indirect result that money often has grown at a recessionary pace despite the explosion of Fed credit.

Fed assets are about five times larger now than the \$894 billion registered at the end of 2007 when the recession began, rising \$3.6 trillion since then. Until 2008, Fed actions that changed its credit supply (Reserve Bank Credit) also changed its monetary base, the base for the nation's money stock. Beginning in late 2008, however, the Fed was able to separate credit creation and money creation. Instead of a five-fold increase, the Fed's effective monetary base, the monetary base excluding bank excess reserves, rose only 86.4 percent, or at a 7.3 percent annual rate since the end of 2007, only slightly faster than the 7 percent rate over the previous thirty years. This is not the extremely inflationary pace suggested by many analysts who have focused on the huge increase in the Fed's balance sheet. But disturbingly, there have been episodes of unusually slow growth in the Fed's effective monetary base that explained the onset of recession, its depth and length, and the weak recovery.

The Fed separated the expansion of Fed credit from money by introducing relatively high, subsidized interest on excess reserves. This made it possible for the Fed to buy trillions of dollars of high-risk securities, including some \$1.7 trillion of mortgage-backed securities, and to induce banks to hold the receipts from those sales as excess reserves instead of expanding bank lending and checkable deposits.

THE ORIGINS FOR PAYING INTEREST ON RESERVES

Fed payment of interest on reserves was authorized by Congress in 2006 to begin in the fall of 2011. The announced purpose was to reduce a bank practice of sweeping business checkable deposits overnight into money market deposit accounts to avoid required reserves. In the face of the financial crisis, Congress shifted the date to October 1, 2008, with the Emergency Economic Stabilization Act of 2008. Ironically, the Fed ceased monitoring or reporting these sweep balances in March 2013. Apparently this rationale was no longer germane.

Paying interest on required reserves was long advocated by economists because reserve requirements act as a tax on banks. Milton Friedman was a strong advocate of paying interest on required reserves in order to remove banks' incentives to create products that can avoid the reserve tax or other schemes to avoid the inefficiency of the reserve tax. The appropriate rate for the Fed to pay is the risk-free rate on a comparable duration asset. And this is exactly what Congress allowed the Fed to pay. The

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overnight rate on a one-day Treasury bill would be the closest comparable rate, though it has less liquidity than reserves at the Fed. The closest widely published rate is the four-week Treasury bill rate and it is the rate used here. From the outset, the Fed has not only paid an excessive interest rate on required reserves, but it also has paid the same rate on excess reserves, which are voluntarily held for their superior in-kind benefits, such a greater liquidity and lower transaction costs.

There is no economic justification for paying interest on excess reserves. Excess reserves are not required by law and offer attractive benefits that other short-term riskless assets do not. For example, excess reserves are more liquid than Treasury bills because they are "immediately available funds," the kind of funds that attracted many large investment banks to obtain a bank charter at the peak of the financial crisis so they could have direct access to Fed lending of such funds. Excess reserves also come with an unlimited duration option at no cost, another serious disadvantage over a Treasury bill.

From 2009 to November 2015, when the interest rate on excess reserves was 0.25 percent, the yield on four-week Treasury securities, which probably overstates the more appropriately comparable one-day rate on Treasury bills, averaged six basis points, far below the 25-basis-point interest rate on reserves, resulting in a 19-basis-point subsidy. In the first ten months of 2016, following the Fed's December 2015 increase in the interest rate on reserves to 50 basis

points, the four-week Treasury securities rate rose to an average of 23 basis points, resulting in a 27-basis-point subsidy. In January 2017, following the mid-December 2016 increase in the interest rate on reserves to 75 basis points, the comparable rate on Treasury securities rose to

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an average of 49 basis points, keeping the average subsidy rate nearly unchanged at 26 basis points. As the demand for credit increases and upward pressures on Treasury bill rates grow, the Fed will be forced to increase the interest rate on excess reserves much more to avoid strongly inflationary reductions in excess reserves that cannot be offset by other measures to soak up excess reserves, such as the new arrangements for reverse repurchase agreements, term deposits of depository institutions, or other arrangements with the U.S. Treasury to boost their balances held at the Fed, instead of at banks.

From October 2008 through January 2017, the Fed paid banks an estimated \$44.7 billion of taxpayer money for holding excess reserves (\$43.2 billion) and for the subsidy for holding required reserves (\$1.1 billion), in addition to the \$0.5 billion required to compensate banks for the loss of the four-week Treasury yield for holding required reserves. All estimates here are based on data from the Federal Reserve Board of Governors' Statistical Releases and from the Federal Reserve Bank of Saint Louis FRED database; figures may not add due to rounding.

Another perspective is that the Fed has been paying about one hundred times as much interest on reserves as would be required by the tax-efficiency argument. For the given reserve structure in October 2016 to January 2017, the 25-basis-point increase on December 15, 2016, to 75 basis points, raised the annual subsidy to \$15.2 billion per year, three times what it would have been if the 25 basis points paid from October 2008 to December 2015 had continued. The total subsidy to banks is accelerating rapidly due to the small increases in the interest rate on reserves

(and federal funds rate at the end of 2015 and 2016). Three more 25-basis-point increases in the Fed's interest rate on reserves in 2017, currently widely anticipated, will put the interest rate on reserves up to 1.5 percent and double the current annual subsidy cost to \$30.4 billion, virtually all a gift to large and mostly foreign banks.

Some economists argue that paying interest on excess reserves has no effect on the economy and that excess reserves simply replace Treasury bill holdings at banks. Of course, banks never held such massive quantities of Treasury bills. And the cost to the Treasury of an equal amount of T-bills would be far less because more than half of interest payments to banks have been in excess of comparable Treasury rates. More importantly, these payments have other deleterious effects on the financial system and the economy that would not occur if Treasury bills had been issued instead of excess reserves.

THE INEFFECTIVENESS OF FED CREDIT POLICY

A large Fed balance sheet and substantial excess reserves have no monetary policy advantage for the Fed. The Fed creates money. It does not require a large balance sheet to intervene in a crisis. Excess bank reserves do not affect bank insolvency, the principal regulatory concern; they only change the composition of bank assets. A large balance sheet that does not expand the effective monetary base cannot stimulate the economy.

When the Fed acquires assets, it normally increases its monetary base, the money stock, and monetary credit. But when banks sterilize the asset purchases by inducing banks to equally increase excess reserves, no money or credit is created. To the extent that banks increased their excess reserves, the money stock and stimulus to spending, output, employment, and inflation expanded far less than the Fed's balance sheet expansion suggested to many analysts.

More importantly, increasing Fed credit without changing the Fed's effective monetary base does not change the total credit created through money creation. It simply replaces bank credit on bank balance sheets with excess reserves. Bank credit, the lifeblood of risk-based lending that promotes economic growth, is reduced while Fed credit expands. A high level of bank reserves induced by central bank policy is called financial repression because it reduces the size and efficiency of the private financial system and retards its contribution to economic growth. In most financially repressive countries, the central bank represses the banking system and private economy by imposing mandatory and relatively high reserve requirements that foster larger central bank and bank holdings of government debt and relatively low (often politically targeted) bank lending to the private sector. In the U.S. case, this is done by the Fed's creation of effective subsidies for banks to hold

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relatively large excess reserves. Bank excess reserves today exceed 160 percent of all of the checkable deposits in the nation's banking system.

Incredibly, Fed officials have stewed for years over the weakness of commercial bank credit. While Fed credit expanded nearly five-fold, commercial bank credit grew at only a 2.6 percent annual rate from September 2008, just prior to the beginning of interest on reserves, to the end of the Fed's third quantitative easing program in October 2014. This anemic rate was less than one-third of the 9.3 percent pace in the previous comparable six-year period. This slow credit growth was an inevitable consequence of Fed policy to subsidize bank holding of excess reserves, but the Fed blamed the dismal lending on banks' unwillingness to lend. In the two years since QE3 ended, along with excess reserve growth, bank credit has accelerated to a 7.7 percent rate. Given the effective monetary base and money, an increase in Fed credit (and equal rise in excess reserves) is offset by an equal decline in bank credit. The Fed seems to have no recognition that its own credit actions, matched by massive growth in bank excess reserves, depressed bank credit by over \$2 trillion.

WHAT CAN BE DONE?

The Fed could repair its balance sheet and boost bank credit simply by reversing past actions. Since the last recession began, the Fed has accumulated about \$3.5 trillion of securities; 77 percent of bank receipts from these Fed purchases were added to excess reserves. Simply ending the subsidized interest on excess reserves would allow the Fed to sell the \$2.7 trillion of its securities held at the peak of excess reserves in August 2014 and incur a matching decline in banks' excess reserves. Such an operation would have no effect on the effective monetary base, monetary aggregates, or total credit created in the money creation process. Fed credit and excess reserves would contract by \$2.7 trillion, but commercial bank credit would rise by an equal amount. This is precisely where risky assets should be held if banks are to promote growth and if the Fed is to get out of the credit allocation business.

There is a widespread view that reducing the interest rate on excess reserves to zero would be extremely disruptive to the financial system, perhaps even recessionary. The problem with that view is that it ignores the fact that the past build-up in assets and excess reserves that would be reversed also has had no effect on the effective monetary base or monetary aggregates. Thus, by itself, it had no effect on GDP, output, employment, or inflation; and its rapid reversal would similarly have no direct effects. The periodically weak growth in the effective monetary base and the financial repression at banks of course did deepen and extend the recession, and weaken the recovery. Reversing the build-up of the Fed's assets and excess reserves would remove the distortions of the Fed and banks' balance sheets, boost risk-taking and private investment, and in turn boost economic growth.

The Fed responded to the financial crisis by developing more than a dozen new financing and liquidity facilities available to a variety of institutions that had never before had access to the Fed. Most of these facilities were unnecessary or ineffective and have expired, but the authority to resurrect them remains. The two newest programs, the

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Overnight Reverse Repurchase Facility and term deposits at the Fed, are responses to the risks created by the build-up in excess reserves. Eliminating interest on excess reserves as proposed above could eliminate excess reserves and their unintended effects, as well as the case for these two programs. The Fed could eliminate all of the remaining innovations it adopted during the financial crisis, but such actions would not eliminate their ability to resurrect them.

Congress could take a major step in fixing the Fed's problems by eliminating the Fed's authority to pay interest on excess reserves and a subsidy rate on required reserves. It could also remove the open-ended authority for the Fed to take on emergency lending powers that by their nature reduce the Fed's focus on monetary policy and financial stability. Only Congress can put an end to the mission creep that lies behind the Fed's ineffectiveness and its failure to pursue its traditional goals. ◆