Federal Reserve Bank of Atlanta

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Three Individually Reasonable Decisions, One Unintended Consequence, and a Solution

Notes from the Vault

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- The Federal Reserve now pays interest on reserves held by banks, but cannot by law pay interest on reserves held by the government sponsored enterprises (GSEs).
- GSEs earn some interest on reserves by selling the reserves to banks, but the rates earned by the GSEs are far below rates received by the banks.
- The result is that banks earn risk-free profits at the expense both of the GSEs and of the U.S Treasury, given the Treasury's relationship with Fannie Mae and Freddie Mac, the two largest GSEs.
- A solution would be to allow the Federal Reserve to pay interest on reserves to GSEs so long as Treasury effectively owns the GSEs' marginal profits and losses.

The combination of three reasonable policy decisions is having the unintended consequence of incenting banks to earn risk-free profits at the expense of the U.S. Treasury. The three policies are: 1) the decision to allow the Federal Reserve to pay interest on reserves (IOR) held by banks, which has the effect of reducing Federal Reserve payments to the Treasury; 2) the simultaneous decision to forbid the Federal Reserve from paying interest on reserves held by the government sponsored enterprises (GSEs), and 3) the subsequent decision to put Fannie Mae and Freddie Mac (F&F) into Federal Housing Finance Agency conservatorship, with the U.S. Treasury promising to pay whatever it takes to keep F&F from having negative capital.

While each of these policies can be justified, the unintended consequence is certainly not good public policy. F&F are selling funds to banks at the federal funds rate of approximately 0.10 percent per year (10 basis points), which the banks then hold as reserves at the Federal Reserve while receiving the current interest on reserves (IOR) rate of 25 basis points per year. Given that the U.S. Treasury effectively owns the marginal profits of the Federal Reserve and the marginal losses of the GSEs, the net result is that banks' arbitrage profit comes at the expense of the Treasury. A recent announcement by the Federal Reserve Bank of New York allowing F&F to reduce their excess reserves via reverse repos provides at least a partial remedy. A complete remedy would be to allow the Federal Reserve to pay interest on F&F reserves so long as the U.S. Treasury effectively owns the marginal profits of these GSEs.

Three individually reasonable decisions
Each one of the three decisions leading to the situation with the Treasury providing banks with arbitrage profits was well-justified on its individual merits. The Federal Reserve was long prohibited from paying interest on bank reserves, which had the effect of boosting Federal Reserve net income. Because the Federal Reserve pays almost all its profits to the U.S. Treasury as interest on Federal Reserve notes, the Treasury was the ultimate beneficiary.

However, economists for a long time argued that the inability of the Federal Reserve to pay IOR effectively acted as a tax on bank deposits that distorted financial markets. In part due to these criticisms, the Financial Services Regulatory Relief Act of 2006 authorized IOR starting in 2011. Then the Emergency Economic Stabilization Act of 2008 moved the starting date for IOR up to October 1, 2008, to give the Federal Reserve another monetary policy tool. IOR has figured prominently in Federal Reserve discussions of the tools that will be used to prevent the recent expansion of reserves from turning into a huge increase in the money supply (M1 and M2) and the rate of price inflation.

When Congress authorized IOR, it explicitly excluded GSEs such as F&F. One argument for this decision was that F&F do not take deposits. Another argument why IOR should not be paid is that F&F are privately owned companies that already benefit from a variety of government privileges and subsidies not available to other nondepository private corporations, including their ability to have any deposits at the Federal Reserve. The payment of interest on GSE reserves at the Federal Reserve would only expand the subsidy provided to these private corporations.

However, F&F's status as private corporations changed in September 2008 when the two GSEs were put into conservatorship and the U.S. Treasury agreed to purchase senior preferred stock in an amount sufficient to keep F&F's capital from becoming negative. As a result of these purchase agreements, the U.S. Treasury has bought $154 billion in F&F preferred stock since 2008. In effect, the U.S. Treasury currently owns the losses and will own any of the future profits or losses of F&F for the indefinite future.

An unintended consquence
The combination of Fed remittances to the Treasury on Fed profits and de facto government ownership of F&F profits and losses implies that Treasury should be largely indifferent as to whether the Fed pays IOR to F&F per se. On the one hand, the fact that the Fed currently does not pay interest to F&F boosts Fed profits and raises payments to the Treasury, but at the cost of increasing F&F losses and thereby increasing the cost of Treasury support to the two GSEs. On the other hand, if the Federal Reserve were paying interest to F&F, the Fed would pay less to the Treasury, but then F&F would report lower losses and request less Treasury support.

What does matter to Treasury is the fact that F&F responds to the Fed's not paying them IOR by selling their reserves at interest rates well below IOR, and those reserves are held by banks that do earn IOR. Treasury's losses when F&F sell their reserves at rates below IOR is most easily illustrated in those cases in which the two sell reserves in the federal funds market to banks that are earning IOR. This exercise lets the participating banks, including branches of foreign banks, earn risk-free profits because there is no credit risk on reserve holdings and no liquidity risk on matched overnight funding and investment. The transaction boosts F&F profits by the rate paid on fed funds but lowers Fed profits by the rate paid on reserves, so the entire profit comes at the expense of the U.S. Treasury. The story becomes more complicated when F&F engage in other transactions to earn interest on their short-term liquidity portfolio, such as investing in very short term Treasurys. However, Treasury still takes a loss to the extent that F&F are earning a rate below the IOR paid to the banks that ultimately hold the reserves.

An estimate of the current cost to the U.S. Treasury is approximately $96 million (see the table), but this amount could increase as the Federal Reserve tightens monetary policy by raising IOR. Assuming that F&F continue to sell the same amount of funds, the cost could be as high as $160 million for every 25-basis-point increase in rates, under the extreme assumption that the federal funds rate received by F&F does not increase.

Financially astute readers may ask why the spread is so large. Shouldn't competition between banks force up the rate bid on F&F federal funds sold until it reached the point where banks profits were almost zero? The answer to that question is that F&F face credit risk in selling funds, so they limit both the set of banks to whom they will sell funds and the amount they sell to any individual bank. The result has been that F&F have had more funds to sell than the sum of the bank credit lines. Thus, the banks can bid for the funds at rates far below the interest rate they earn without fear that another bank will bid the funds away at a higher rate.

A solution

The decision that Congress made in 2006 to exclude the GSEs from IOR is now having the unanticipated effect of subsidizing some banks at the Treasury's expense. The Federal Reserve Bank of New York recently took a step that may help reduce this subsidy, by allowing GSEs to participate in reverse repurchase transactions with the New York Fed. Such transactions provide another way for the Federal Reserve to prevent the large volume of existing reserves from turning into rapid growth of money supply (M1 or M2). In effect, F&F could receive interest on their reserves by entering into a reverse repurchase transaction with the New York Fed. The operational mechanics of the reverse repurchase transactions program are currently being tested on a small scale, but under the right circumstances, this program could largely eliminate the unintended subsidy of banks by reducing F&F's sales to the banks.

An alternative proposal that would eliminate the entire subsidy would be for Congress to allow the Federal Reserve to pay IOR to F&F so long as the Treasury effectively owns the profits and losses of the GSEs. This approach would eliminate the incentive for F&F to sell reserves. Such a decision may have other unintended consequences that should be identified and evaluated. But at least in the short run, paying interest on reserves to Fannie Mae and Freddie Mac looks like a winner for the U.S. Treasury.

Data sources: Fannie Mae 10Q (2011 Q1), Freddie Mac 10Q (2011 Q1),
federal funds effective (historical data), interest on reserves

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