

NEEDED: A FEDERAL RESERVE EXIT FROM PREFERENTIAL CREDIT ALLOCATION

Lawrence H. White

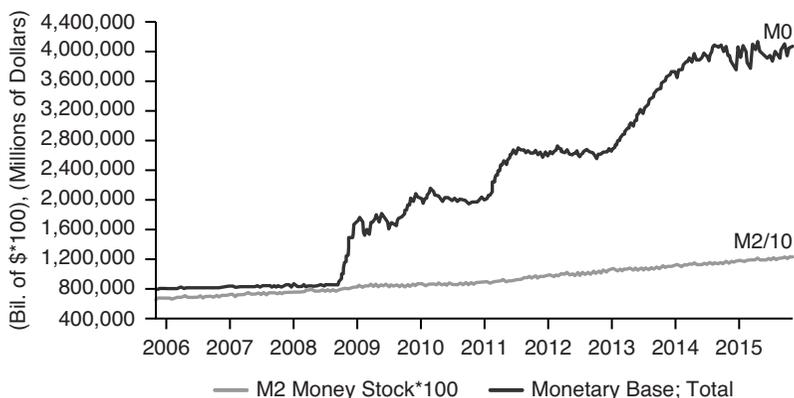
In September 2008, the Federal Reserve initiated a series of quantitative easing (QE) programs that dramatically transformed the Fed's balance sheet—in size, liability mix, and asset mix. The “exit strategy” questions now facing the Fed, and the dollar-using public who are its captive customers, are when and how to reverse those transformations.

On the liability side of the Fed's balance sheet, QE swelled the stock of base money (the subset of the Fed's liabilities consisting of currency held by the nonbank public plus depository institutions' reserves) more than four-fold. Contrasting October 2015 to August 2008, the base rose to \$4.06 trillion from \$0.85 trillion. The mix of Fed liabilities shifted as approximately \$2.6 trillion of the \$3.2 trillion in new base money was added to the reserve balances of depository institutions (the other \$0.6 trillion was added to currency held by the public). Total bank reserves have grown more than 50-fold, to \$2.7 trillion from a mere \$0.05 trillion. Only a tiny share of the added reserve holdings (about \$0.1 trillion) are accounted for by the growth in required reserves accompanying growth in commercial bank deposits held by the public; the bulk are voluntarily held as excess reserves (balances over and above legally required reserves against deposits). Excess reserves have risen to \$2.5 trillion and 62 percent

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Lawrence H. White is Professor of Economics at George Mason University. He thanks Scott Burns for research assistance and Leonidas Zalmanovitz for comments.

FIGURE 1
THE FED GREATLY EXPANDED THE MONETARY BASE (M0)
BUT KEPT M2 ON ITS PRE-CRISIS PATH



of the monetary base, from only \$0.002 trillion and close to zero percent (about two-tenths of 1 percent) pre-QE.¹

While the QE programs accelerated the monetary base (hereafter M0) at an unprecedented rate, Figure 1 shows that they did not accelerate the quantity of money held by the public as measured by the standard broad-money aggregate M2 (currency in circulation plus all bank deposits). During the pre-QE decade of September 1998–September 2008, the Fed expanded M0 at a compound rate of 5.99 percent per annum. The expansion rate jumped to 23.69 percent per annum during September 2008–September 2015. The growth rate of M2 has fluctuated a bit but hardly changed over the longer term: 6.3 percent per annum in the pre-QE decade and 6.6 percent since the beginning of QE. The fact that M2 has hardly budged from its established long-term path indicates that *quantitative easing was not a change in monetary policy*, in the sense that it was not used to alter the path of the standard broad monetary aggregate in a sustained way.²

¹Figures are from the St. Louis Fed's FRED database, series BOGMBASEM, TOTRESNS, REQRESNS, EXCSRENS, and author's calculations based on those figures.

²The growth rate of the alternative broad aggregate MZM meanwhile fell to 6.4 percent from 8.7 percent.

The growth rate of the M1 component of M2 (currency plus only checking deposits) did rise faster, to 11.5 percent per annum from 3.0 percent. But because M2 as a whole did not grow faster, this only indicates that households have reduced the share of their total bank deposits in savings (non-M1) accounts and increased the share in checking accounts. This shift can be explained primarily by households responding to a collapse in the spread between savings and checking account interest rates, both rates falling to near zero. The national average rate on three-month CDs, for example, tumbled to 16 basis points in September 2015 from 359 in September 2008, while the rate on interest checking declined far less, to 4 basis points from 20.³

Why didn't M2 grow faster? As money-and-banking textbooks tell us, the growth rate of M2 mirrors the growth of M0 when the commercial banking system sheds excess reserves by banks making loans and securities purchases such that system deposit liabilities grow in proportion to system reserves. After September 2008, however, banks began sitting on the additional reserves the Fed was creating. They did so largely because the Fed almost simultaneously—and not coincidentally—began paying interest on reserves in early October 2008. With a higher reward for holding reserves, banks began holding greater reserves in excess of legal requirements, which meant that the system began creating fewer deposit dollars per reserve dollar. The ratio of excess reserves to deposits rose from a fraction of 1 percent in September 2008, before QE began, to 24 percent today. This enabled M2 to continue along its pre-QE path despite the huge increase in M0.

The initiation of interest on excess reserves (hereafter IOER) and QE at the same time was no accident. The Fed chose to start paying IOER in order to neutralize the flood of excess reserves that QE1 and other Fed lending programs were creating. Fed spokesmen have at times described the rationale for initiating IOER as a move to counteract downward pressure on the federal funds rate (the overnight interest rate at which banks lend reserves to one another) from excess reserves (Dr. Econ 2013). Instead of trying to get rid of excess reserves by lending them and in the process driving the fed funds rate too low, banks would now be happy to hold the reserves.

³Figures from FRED and Bankrate.com. See McAndrews, Morgan, and Vickery (2012), who regress M2 and M1 on the one-year Treasury note rate among other variables.

This is a curious account given that the fed funds rate fell to near-zero anyway. A better explanation begins by noting that IOER, by getting banks to hold more reserves, has allowed the Fed to greatly expand its assets and consequently M0, while keeping M2 from ballooning. The combination of QE with IOER enables the Fed to finance a hugely expanded portfolio of assets without inflationary consequences, essentially by borrowing from the banking system. Without IOER, purchasing assets by expanding M0 also expands M2, which has inflationary consequences. At times, the Board of Governors has been almost frank about its policy, as for example in its original press release on October 6, 2008:

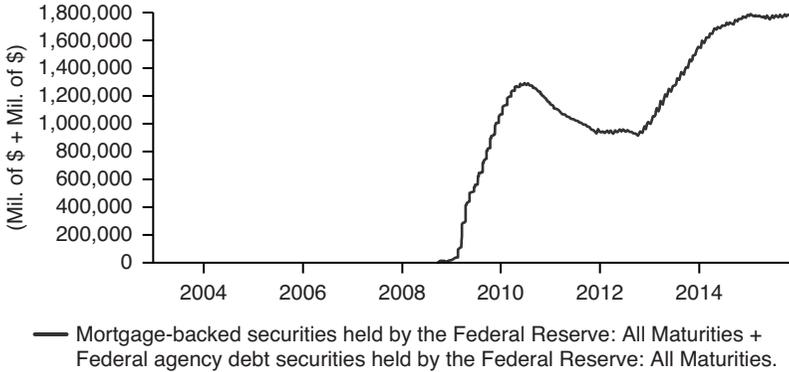
The payment of interest on excess reserves will permit the Federal Reserve to expand its balance sheet as necessary to provide the liquidity necessary to support financial stability while implementing the monetary policy that is appropriate in light of the System's macroeconomic objectives of maximum employment and price stability [Board of Governors 2008].

That is to say, it permits the Fed to expand its balance sheet as desired without corresponding expansion in M2 and the price level.

The Fed has also introduced another policy tool to allow it to keep an expanded balance sheet without corresponding expansion of monetary aggregates. In 2010, it began testing its Term Deposit Facility, whereby the Fed *borrow*s back reserve money from commercial banks for 21 days, paying the IOER rate plus 3 basis points. The term deposits are not counted as reserves, so M0 shrinks even though total Fed liabilities and the Fed's asset portfolio do not. In tests of the facility, the Fed has sterilized up to \$400 billion this way.

If not for monetary expansion, for what purpose did the Fed deem base expansion desirable? Why was the Fed so keen on purchasing trillions in assets? The reference in the above-quoted statement to providing liquidity is a red herring. The Fed could have provided all the liquidity it wanted simply by acquiring more of the same assets it already held, short- and medium-term Treasuries. Instead, as Figure 2 indicates, the Fed purchased and is now holding \$1.8 trillion in mortgage-backed securities (MBS) and housing agency debt securities (Fannie Mae, Freddie Mac, and the Federal Home Loan Banks), a drastic change from its near-zero holdings of such securities before 2008. These holdings can be seen only as part

FIGURE 2
 FEDERAL RESERVE SYSTEM HOLDINGS OF MBS PLUS
 FEDERAL AGENCY (FANNIE MAE, FREDDIE MAC, AND
 FEDERAL HOME LOAN BANKS) DEBT SECURITIES



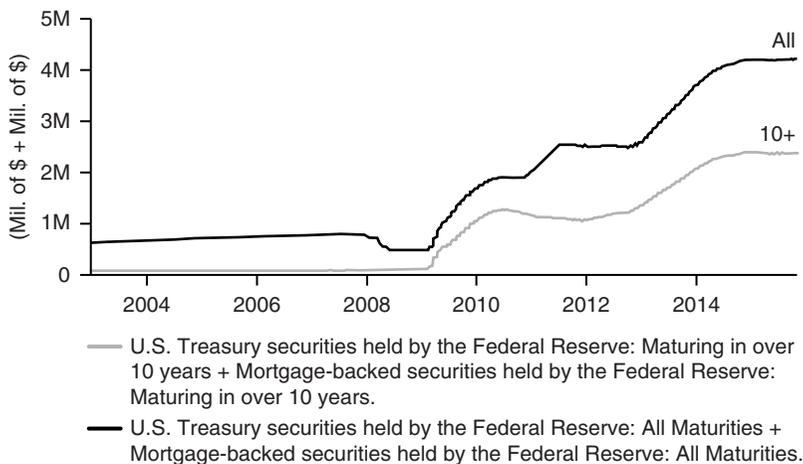
of an effort to raise MBS prices and cheapen housing finance relative to finance for other investments.

The bulk of the mortgage-backed securities the Fed holds have maturities of longer than 10 years. The Fed also purchased trillions in longer-term Treasuries (see Figure 3), again discarding its previous policy of concentrating on short- and medium-term Treasuries, in an effort to raise long-term bond prices and lower long-term interest rates relative to short rates, again to favor housing finance. By holding down longer-term Treasury rates, it hopes to hold down 15-year and 30-year mortgage rates. The Board of Governors' own website account of its "maturity extension program" puts it this way:

By reducing the supply of longer-term Treasury securities in the market, this action should put downward pressure on longer-term interest rates, including rates on financial assets that investors consider to be close substitutes for longer-term Treasury securities. . . . In response to the lower Treasury yields, interest rates on a range of instruments including home mortgages, corporate bonds, and loans to households and businesses will also likely be lower [Board of Governors 2013].⁴

⁴Loans to households and businesses, contrary to the suggestion made in the passage quoted, are seldom for 10 or more years at a fixed interest rate, so their rates are *unlikely* to be lowered much.

FIGURE 3
FEDERAL RESERVE SYSTEM HOLDINGS OF ALL SECURITIES
AND OF SECURITIES WITH MATURITIES OF 10+ YEARS

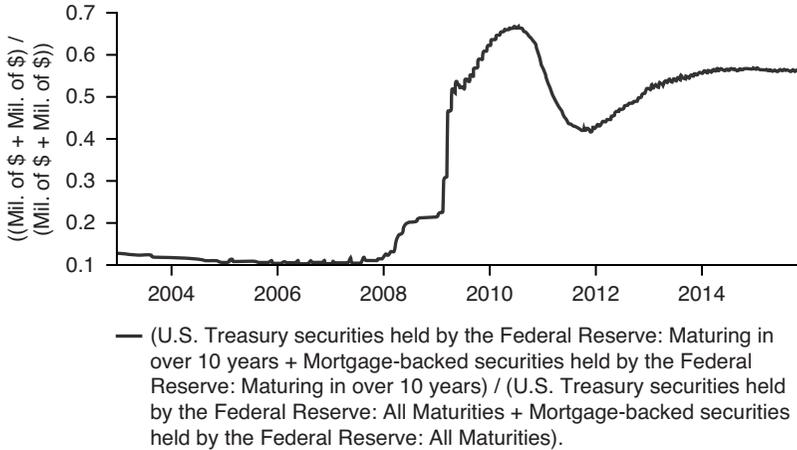


The Fed currently holds \$2.4 trillion in securities maturing in 10+ years, more than half of its entire \$4.2 trillion portfolio. As Figure 4 shows, using the same data as Figure 3 but in share-of-portfolio terms rather than dollar amounts, the share of the Fed’s portfolio in such long-term securities was only about 10 percent at the start of 2008.

There is also an unstated fiscal effect, intended or not, from the Fed’s move to longer maturities: the Fed enjoys higher interest earnings at the long end of the yield curve, which benefits the Treasury as the Fed rebates more dollars to the Treasury.⁵ For other financial institutions, borrowing short and lending long (without hedging the duration gap) is a risky strategy that endangers solvency, but the Fed’s insolvency risk is almost a nonissue. The Fed’s “liabilities” never have to be repaid in something it can’t create ad lib, and even the interest rate it pays on reserves is discretionary and could be cut to zero tomorrow (although, to be sure, the Fed does not want to cut the IOER rate given the inflationary

⁵This was quickly noticed by Willem Buiter (2009), who referred to Ben Bernanke as “the man who allowed the Fed to be turned into an off-budget, off-balance sheet subsidiary of the U.S. Treasury.”

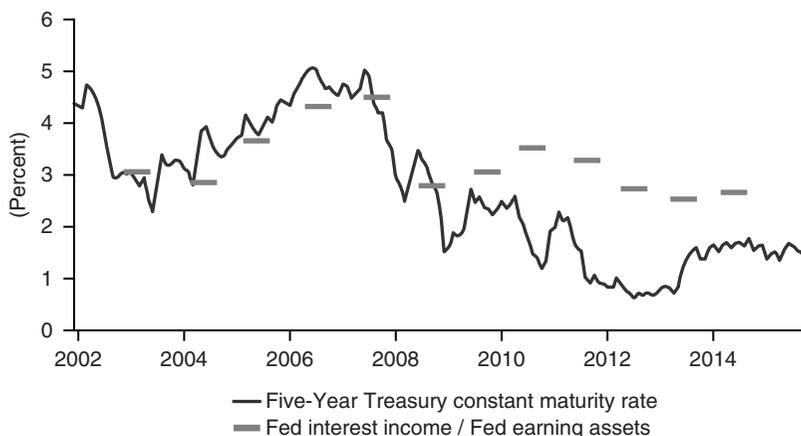
FIGURE 4
SHARE OF THE FED'S SECURITIES PORTFOLIO WITH
MATURITIES OF 10+ YEARS



consequences). The Fed, by enlarging its duration gap, does increase the risk that it would become insolvent on a mark-to-market basis should market interest rate rise sharply, but the Fed does not use mark-to-market accounting. As a San Francisco Fed official (Rudebusch 2011) explained when critics first began raising the concern: “The Fed values its securities at acquisition cost and registers capital gains and losses only when securities are sold. Such historical-cost accounting is . . . consistent with the buy-and-hold securities strategy the Fed has traditionally followed.” Even a technically insolvent Fed could easily cover its payroll expenses from its interest income.

The Fed's *Annual Report* shows that it received \$116.6 billion in interest income during 2014, for a 2.76 percent return on its \$4.22 trillion average asset portfolio. If, instead, the Fed had held its entire portfolio in one-year Treasuries yielding 12 basis points, its interest income would have been only \$5.1 billion, not enough to cover its \$6.9 billion in interest payments on bank reserves plus its operating expenses of \$1.9 billion. Its transfer to the Treasury, instead of \$96.9 billion, would have been negative. For five-year Treasuries, the yield during 2014 averaged about 164 basis points. The corresponding interest income from a Fed portfolio entirely of five-year Treasuries would have been \$69.2 billion, some \$47.4 billion shy of its

FIGURE 5
 BY LENGTHENING ITS PORTFOLIO AFTER 2009,
 THE FED KEPT ITS AVERAGE YIELD ABOVE THE DECLINING
 FIVE-YEAR T-BOND RATE



actual interest income.⁶ The actual median maturity of the Fed's securities throughout 2014 was more than 10 years.⁷ Figure 5 shows how the realized return on the Fed's portfolio roughly tracked the five-year bond rate up to 2008 but has risen well above it since then, indicating that the Fed has moved toward the higher yields available at the long end of the yield curve. Yields on 10-year Treasuries during 2014 were slightly below the 2.76 percent return that the Fed received. The Fed's realized portfolio rate of return matched the yield on a Treasury bond of about 11 years maturity.

The combination of QE + IOER, not a monetary policy, is best understood as a preferential credit allocation policy. Elsewhere (White 2015b), I have tried to spell out why allowing the Fed to conduct a preferential credit allocation policy is a bad idea. To summarize: credit allocation policy is a kind of central planning in which Federal Reserve officials, risking not their own money but that of

⁶The 2014 asset portfolio size is calculated as the simple mean of the figures reported on H.4.1 releases for Reserve Bank Credit at the beginning and end of 2014. The yield figures are the arithmetic means of monthly one-year and five-year Treasury constant maturity rates over the course of the year. Interest income and payments are from the Fed's 2014 Annual Report.

⁷Federal Reserve H.4.1 weekly releases, Table 2.

taxpayers, substitute their judgment for the financial market's about the right prices of various securities and the proper shares of the flow of funds that should go to specific segments of the financial market. When the Fed directs a larger share of credit to one favored sector (like housing), more promising sectors get smaller shares, a waste of scarce loanable funds on lower-payoff investments. Fed-directed allocation of funds to a declining industry throws good resources after bad. An increase in political credit allocation reduces economic growth not only by creating deadweight loss in this way, but by incentivizing socially unproductive lobbying efforts to be among the favored credit recipients.⁸ Especially if the Fed allocates funds to rescuing particular firms, it creates tremendous moral hazard and an environment ripe for cronyism.⁹

The importance of an exit strategy from the Fed's currently anomalous balance sheet is not only for the sake of ending an abnormal monetary policy, then, but also for the sake of ending an abnormal, inefficient, and dangerous credit allocation policy.

Monetary Policy Normalization

Seen in this light, the Fed's talk about "normalizing monetary policy" deliberately evades the equally important issue of ending preferential credit allocation. Ben Bernanke declared in June 2013 that "a strong majority now expects that the Committee will not sell agency mortgage-backed securities during the process of normalizing monetary policy."¹⁰ Chairwoman Yellen (2014) has similarly spoken about normalization only in terms of a return to fed funds targeting:

As was the case before the crisis, the Committee intends to adjust the stance of monetary policy during normalization,

⁸For example, in 2015, lobbyists for the Commonwealth of Puerto Rico promoted the idea that since the Federal Reserve has used its discretion to buy bad assets and save firms in the housing finance industry in the name of systemic stability, it could now use its discretion to buy up Puerto Rican bonds or otherwise extend credit to help Puerto Rico restructure its debt in the name of systemic stability (see Capitol Forum 2015, Jansen 2015).

⁹Thus Buiter (2009) offered a second apt indictment of Ben Bernanke: "He has, however, apparently decided to go down in history as the Federal Reserve chairman who presided over the creation of the biggest moral hazard machine ever."

¹⁰Quoted by Hummel (2014), who aptly comments that "these developments highlight the extent to which quantitative easing is converting the Fed into a financial central planner."

primarily through actions that influence the level of the federal funds rate. . . . The primary tool for moving the federal funds rate in to the target range will be the rate of interest paid on excess reserves or IOER. . . . The committee intends to use an overnight reverse repurchase agreement facility which . . . will help ensure that the federal funds rate remains in the target range.

She affirmed that the Fed's normalization plan does not include an end to the Fed's attempt to favor housing finance: "The Committee does not anticipate selling agency mortgage backed securities as part of the normalization process." The minutes of FOMC meetings during 2015 consistently repeated language to the same effect: "The Committee is maintaining its existing policy of reinvesting principal payments from its holdings of agency debt and agency mortgage-backed securities in agency mortgage-backed securities and of rolling over maturing Treasury securities at auction."

Yellen's reference to the FOMC's intention to use overnight reverse repurchase agreements alludes to a technical problem that the Fed faces in trying to return to pre-2008 fed funds targeting practices without reversing its QE asset purchases. The fed funds market for overnight loans of base money between financial institutions isn't what it was. Commercial banks awash with excess reserves do not need to borrow more for liquidity purposes. And they are not keen to lend reserves at anything less than the interest rate they currently receive from the Fed for holding them. Over the last four years, the effective daily fed funds rate has ranged between 4 and 19 basis points (it was 12 at the end of October 2015), whereas the IOER rate has consistently been above that range at 25 basis points. The volume of fed funds on loan in September and October 2015 was approximately \$50 billion, only one-eighth of the \$400 billion volume in September 2008.¹¹ Alfonso, Entz, and LeSueur (2013) find that Federal Home Loan Banks, not eligible for IOER, have done three-fourths to five-sixths of the shrunken volume of lending since IOER began. They speculate that the marginal borrowers hold the borrowed funds in their accounts at the Fed, earning the difference between IOER rate and the fed funds rate. If so, this suggests that the effective fed funds rate tracks below the IOER rate by the transaction cost (10 basis points or so) of carrying out the operation. With

¹¹FRED series FRPACBW027NBOG, Fed Funds and Reverse RPs with Banks, All Commercial Banks.

a basically horizontal demand curve, the low volume transacted reflects the limited supply from the Home Loan Banks.

In circumstances of excess reserve abundance, it isn't clear that raising the fed funds rate, assuming it can be done just by raising the IOER rate, would be relevant at the margin for broader credit market conditions. The Fed tacitly recognizes this problem when it proposes to conduct reverse repo transactions (selling securities with an agreement to repurchase the next day at a higher price, shrinking M0 overnight), and Term Deposit Facility borrowings from the banks, to make reserves scarcer. It is not known how large these transactions will need to be to make excess reserves scarce enough for commercial banks to start wanting to borrow appreciable sums at the fed funds rate. If they need to be \$2 trillion each night, say, that would involve relatively large transaction costs for the Fed.

The Fed's expressed preference for making reserves scarce by borrowing them back in large volumes, rather than simply selling off assets once and for all, shows again how devoted it is to maintaining its swollen portfolio of MBS.

What to Do

As Jeffrey Hummel (2014) notes, there is a "real danger" that the Fed feels "no real need to normalize its balance sheet and therefore may not do so." In that case, to remove the Fed from preferential credit allocation, Congress would have to require it to normalize. Declarations by FOMC officials that they will act according to self-adopted "guidelines" are not time consistent. Fed leadership will find ample good reasons to use preferential credit allocation when the time comes to offset weakening in housing finance or other perceived threats to financial stability. To paraphrase what Buiter (2009) has said about a former Treasury official and moral hazard, Fed officials address the issue of undoing the Fed's huge holdings of mortgage-backed securities only when they feel the need to defend their continued preferential credit allocation by declaring that "now is not the time to worry about it." On the contrary, the moment when sticking to a principle seems difficult is exactly the time to worry about the long-run consequences of breaching it.¹²

A straightforward way to separate the Fed from preferential credit allocation among sectors of the private economy, without major

¹²As I have argued at greater length (White 2010).

changes to the institutional status quo, is to require the Fed to hold only U.S. Treasury obligations on its balance sheet, as recommended by Marvin Goodfriend (2014). An alternative, as discussed by George Selgin (2012: 321), is to allow the Fed to purchase non-Treasury securities only according to prescribed “objective criteria, such as issuers’ (risk-adjusted) capital and private-agency security ratings.” The Fed’s purchases of mortgage-backed securities would have been barred by any reasonable set of such criteria.

A more thoroughgoing reform would be to alter the institutional status quo so as to end the Federal Reserve System and return its useful functions to the private sector. In previous work (White 2011, 2013, 2015a, 2015b), I have made the case for alternative arrangements based on a commodity standard with free banking.

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