

6

THE NEED FOR A CLEAR AND CREDIBLE EXIT STRATEGY

John B. Taylor

THE FED IS NOW OPERATING a completely unprecedented policy regime. While there is disagreement about the appropriateness of the extraordinary measures that constitute this regime, few disagree that, at some time, the Fed should exit from it and return to traditional monetary policy: controlling money growth and adjusting the short-term interest rate to keep inflation low and the economy stable. In my view, the financial crisis was caused, prolonged, and worsened by the Fed's departure from traditional monetary policy—even if some of the recent actions have been useful as a means of cleaning up the damage (see Taylor 2009a). Hence, it is essential that the Fed develop and clarify a credible exit strategy from the current policy to the type of regime that delivered good economic performance for several decades. Here I discuss some principles that underlie such an exit strategy.

EXPLODING RESERVES

To understand the magnitude of the problem, first consider the extraordinary increase in reserve balances at the Fed, as shown in Figure 1. Reserve balances, or deposits at the Fed, are the key component—along with currency—of base money or central bank money, which the Federal Reserve is responsible for controlling and which ultimately brings about changes in the broader money supply measures. The blue line shows the sharp increase in reserve balances, which began in mid September 2008. For the week ending September 10, banks and other depository institutions held \$8 billion in reserve balances at the Fed. By the week ending December 31, 2008, they held \$848 billion. The Fed had increased the supply of reserve balances by 100-fold in just sixteen weeks.

Note also how large this increase is compared with the then-extraordinary increase in reserves around the time of 9/11, when there was physical damage to the financial markets. Then there was a clear increase in the demand for reserves, and the Fed beautifully supplied them. I remember this event well, because I was working in the U.S. Treasury at the time and Don Kohn came over and kindly shared the reserves data with me. We sat and looked at that amazing increase, and I said things like, “Wow, you guys did a terrific job” and we went on and on for about an hour. We had never seen anything like it before. That huge increase now looks like a little blip compared with where the Fed is today.

The current increase in reserves is not due to an increase in demand for reserves as on 9/11. It came about as a direct result of the Fed's decision to purchase securities and make loans to certain sectors and financial institutions. More specifically, the

Fed financed these securities purchases and loans by creating reserve balances—creating money. That is why I used the term *mondustrual* policy when I was asked to examine and explain this complex combination of monetary policy and industrial policy to those not familiar with monetary matters or with the details of the Fed's balance sheet (see Taylor 2009b).¹ Later the Federal Reserve labeled this policy credit easing (see Bernanke 2009), but perhaps a more specific term, such as *selective* credit easing, would be a better description, because expansion of the Fed's balance sheet always leads to credit easing in some form.

The Fed can obtain additional funds to finance its purchases of securities and lending in three other ways. The U.S. Treasury can borrow the funds and deposit them at the Fed. Or the Fed can borrow the funds itself by issuing debt. The Fed can also adjust the composition of its own portfolio, by selling shorter term government securities to make room for more private securities, loans, or longer term government securities.

For the first thirteen months of the financial crisis, until the week of September 10, 2008, the Fed adjusted the composition of its portfolio by selling government securities and using the funds to increase loans to depository institutions through its Term Auction Facility, to provide loans to investment banks through its Primary Dealer Credit Facility, or to purchase private assets such as those in the Bear Stearns intervention. By simply adjusting its asset portfolio, it kept reserve balances from increasing. However, starting in September, the Fed apparently decided it did not have enough government securities left in its portfolio to sell without interfering with its operations or disrupting

1. A list of the major private securities and loan programs is found Table 1, which is drawn from Taylor (2009b).

other programs. Hence, the Fed resorted to the money creation to finance its purchases and loans. In addition, the Treasury borrowed and deposited funds at the Fed. For this purpose the Fed created a special account where the Treasury deposited the funds; that account has now diminished, and reserve creation has had the main financing role.

Figure 1 shows that the actual level of reserve balances came down early this year, but has increased again and now exceeds the level reached at the end of 2008. The decrease came about during the period when some facilities—such as discount

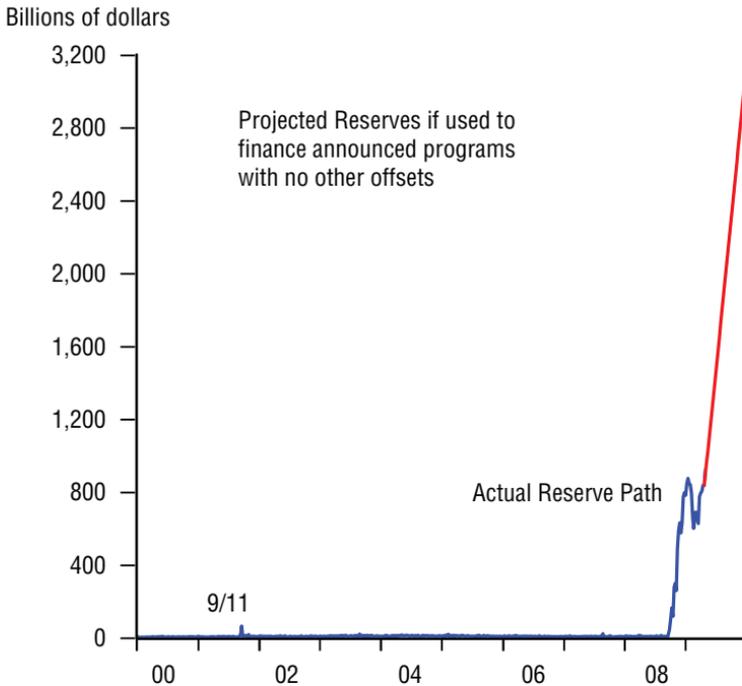


FIGURE 1. Reserve Balances: Actual and Implied

The blue line shows the actual path and the red line shows the implied future path based on policies announced by the Federal Reserve and the actual balance sheet as of April 22.

window borrowings and loans to primary dealers—were drawn down while new ones—such as mortgage-backed securities purchases—were slowly being put into operation.

Figure 1 also shows the implied increase in reserve balances (red line) if the currently announced additional purchases are to be financed by creating reserve balances and there is no other offset. This is not a forecast but rather an implication of the practice of continuing to finance by money creation the purchases of the size already announced. The large increase to around \$3 trillion is due to the recently announced plans to expand the purchases of securities backed by consumer and business loans as well as the program to buy longer term Treasury securities.

THE EXPLOSION DROVE THE FEDERAL FUNDS RATE DOWN TO ZERO

It is important to understand that the policy of increasing reserves by large amounts as shown in Figure 1 started when the federal funds interest rate target was still 2 percent, well above zero. This is demonstrated in Figure 2, which shows the start on the increase in reserves and the effective federal funds rate that was trading in the market. Some say that the reason for the explosion of reserves was that the interest rate was already at zero and could not go lower; thus the Fed had to resort to these other measures. But this is obviously incorrect.

The decline in the federal funds rate to zero followed the expansion of reserves. Indeed, judging by the timing in Figure 2, the decline in the interest rate toward the zero percent lower bound was likely caused by the expansion in reserves rather than the expansion being the inevitable result of the interest rate being at zero. The FOMC decision to lower the target for

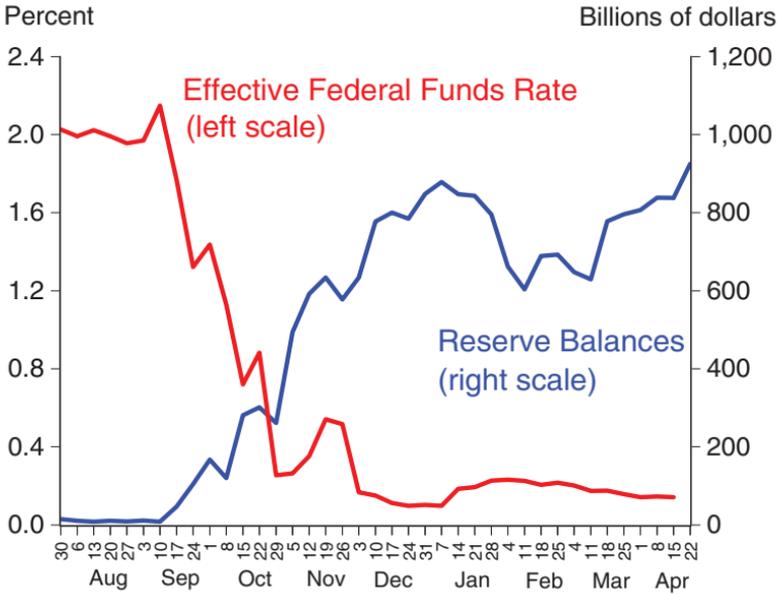


FIGURE 2. The Federal Funds Rate and Reserve Balances

the federal funds rate followed the declines in the effective federal funds rate in the market, essentially ratifying them. Clearly the increase in reserves did not start because the interest rate was at zero, but rather because of the need to finance securities purchases and loans.

REVERSING THE EXPLOSION SHOULD BE THE CENTERPIECE OF THE EXIT STRATEGY

For these reasons, reversing the increase in reserve balances should be a key part of the exit strategy to a traditional monetary policy in which a positive interest rate can be adjusted

in order to maintain inflation and output stability. By adjusting reserve balances, the Trading Desk at the New York Fed affects the federal funds rate, a process I originally learned from visiting Peter Fisher and his staff at the New York Fed when he was head of the Trading Desk. By adjusting reserves, the Trading Desk moves the funds rate to where the Federal Open Market Committee wants it to be. The process is complicated because other factors also affect the federal funds rate, including expectations of future monetary actions, other short-term interest rates, and unpredictable changes in other factors supplying reserves. In fact, at the start of the crisis, the volatility of the effective funds rate increased.

In any case, assuming that the federal funds market continues to work as it has in the past, the Fed will have to bring reserve balances back down to where they were when the interest rate was last positive if it is again to have a significantly positive federal funds rate.² For example, if the Fed wants to have a 2 percent federal funds rate, the experience last fall suggests that it will likely have to bring the level of reserves back to what they were before the explosion in September 2008. And this means going to the lower blue line in Figure 1. In other words, assuming the Fed increases reserves by the amount shown in the red line in Figure 1, it will have to remove around three trillion dollars from the balance sheet. Before considering the difficulties in doing this, and whether there are alternatives, let us consider the timing and preparation for the exit.

2. I consider the issue of paying interest on reserves below.

DETERMINING WHEN TO EXIT

One way to determine when to exit is to use standard monetary policy rules. If such rules are to characterize policy after the exit from the current regime (as they did during the period of good economic performance in the 1980s and 1990s), then they can serve as a natural guideline for exiting. For example, if policy rules say that the interest rate should be raised above zero at a particular date, or a particular time interval, then that is when the Fed should exit.

One could use the Taylor rule for this purpose. Indeed, Don Kohn mentioned the Taylor rule in this context during the discussion at the Workshop on March 30, thereby informally suggesting that it might be used this way. He also mentioned that this rule called for a minus 5 percent interest rate, which implies that a positive interest rate is still pretty far off.

However, as I see it, the Taylor rule does not generate a minus 5 percent interest rate at this time. The Taylor rule says that the interest rate should be one and a half times the inflation rate plus a half times the GDP gap plus one. Whether you average a broad-based GDP inflation index over the past year, as I originally suggested, or whether you use core inflation rates, the inflation rate is not less than 1 percent at this time. It looks closer to 2 percent. The GDP gap seems to be around minus 4 percent. If you plug those numbers into the rule, you get $1\frac{1}{2}$ times 2, plus $\frac{1}{2}$ times -4 , plus 1, which equals 2 percent. This result is not even negative, let alone minus 5 percent. And if you want to take a lower inflation rate, say 1 percent, or a somewhat bigger GDP gap, you can bring that down to close to zero, but you still don't see minus 5 percent. So this type of index does not give much basis for assuming we have

a long way to go before the Fed has to raise the rate. We don't know what will happen in the future, but it is not so clear that the Fed has a long time before interest rates have to be higher. Some in the markets are already expecting rate increases next year, but time will tell.

PREPARING TO EXIT

Until the time comes to begin raising interest rates, there are several actions the Fed can take to be prepared. Some of these actions help put the FOMC in the mode of a monetary authority even though it is not voting to adjust the interest rate.

1. Focus on the Quantity of Reserves or Other Aggregates

Decisions about monetary policy can start to shift to quantities like the quantity of money or reserves rather than have those quantities solely determined by the selective credit decisions. A traditional monetary policy framework of the kind discussed widely before interest rate guidelines became popular was to focus on the level or the growth rate of the quantity of a monetary aggregate. The decisions would be about what is the appropriate growth rate of money for dealing with the recession and helping the recovery from recession. If an increase in money growth is called for, then monetary policy would bring this about by open market operations. An increase in base money would then increase the growth rate of a monetary aggregate. Of course, this is not the type of policy that is in place at this time. Rather, policy is driven by intervention into particular markets with the amount of base money growth determined by the amount of this intervention. The

increase in M1 or M2 is determined by that reserve growth and by how much banks decide to hold as excess reserves. So far the banks have held a large amount of the increase in reserves, though there has been a marked increase in the growth rate of currency, demand deposits, and M1.

Currently the only broad quantitative statement by the Federal Open Market Committee is that it will keep the size of its balance sheet “at a high level for some time” (see minutes of the January 27–28 meeting in FOMC 2009). That seems too vague. Does it mean the scenario like the red line in Figure 1? Or does it mean that reserves will stay where they are now? Instead, or in conjunction with its credit decisions, the FOMC could give ranges for the growth of reserve balances, base money, and even broader monetary aggregates. The Federal Reserve staff could study the impact of various growth rates for the quantity of reserve balances or the money supply, and the FOMC could discuss and vote on these quantities, until it is time for the interest rate to go above zero. Right now we do not know the intent of the Fed or even what the contingency plan is for reversing the explosion in reserves.

There are other reasons to focus more on the level or the growth rate of money, even central bank money. The enormous increase in reserves is viewed by many as inflationary. With the economy in a recession, inflation is not now a problem, but at some time the Federal Reserve will have to remove these reserves or we will have a big inflation. Recall that increases in money growth affect inflation with a long lag. The question is whether the Fed will be able to reduce the reserves in time and whether people will expect the Fed to do so. If reserves get to the level shown by the red line in Figure 1, it will

have to sell a huge amount of securities backed by consumer credit, mortgages, student loans, and auto loans. This will be difficult to do politically.

2. Close Down Some of the New Credit Facilities Now

Another preparatory step would be start closing down some loan or securities purchasing facilities. It is not clear how effective these interventions are, and they may be counterproductive. Certainly not all of them are working well, and some work better than others. Though the Federal Reserve has argued that all these actions are necessary because of the financial crisis and many in the financial markets agree, I have found that, for example, the Term Auction Facility had no noticeable impact on interest rate spreads. I have a concern that such actions prolonged the crisis by not addressing the fundamental problem of counterparty risk in the banks. At the least the Fed should increase its policy evaluation work in this area and create a priority list of which programs can be closed. Recently the Fed has started buying medium-term Treasuries to drive their rates down. Much of the initial announcement effect on rates has been lost already, and that is what most economic theories of the term structure tell us. Maybe the Fed could close that new facility down.

3. Improve Transparency

Another preparatory move is to be more transparent. I have urged more transparency about the Federal Reserve's balance sheet and its new operations, mentioning for example the need for daily data (see Taylor 2007, 2008). I am very encouraged that the Fed has created a web page to explain its new programs and its balance sheet. The Fed has also clarified some of

the line items such as “other Federal Reserve assets” which had contained loans to other central banks. And the Fed has published long-term inflation forecasts that are similar to inflation targets. The Joint Treasury-Fed statement of March 23, 2009, was also aimed at clarifying roles as well as the interaction between the Fed and the Treasury in these unusual times (see Treasury Department and Federal Reserve 2009).

But there is still more that can be done. Here are five suggestions:

- It would still be useful if daily, rather than only weekly, balance sheet data were provided. This is very important as the exit strategy begins, but even historical data with a month or two lag would be helpful.
- It also would be helpful to publish more detailed minutes of Federal Reserve Board meetings where decisions that affect the Fed's balance sheet or the quantity of reserves are made. There is no reason why these cannot be as detailed as the minutes of the FOMC meetings and released in a timely fashion.
- The Fed should release the results of their evaluation studies of the facilities.
- If the Fed does use a monetary policy rule to determine the time of exit, then it should be transparent about the rule.
- While the March 23 Joint Fed-Treasury statement provides clarity, it is missing a key phrase that was in the 1951 Accord between the Treasury and the Fed: the part pertaining to the *monetization of the debt*. The Accord announced on March 4, 1951, by the Secretary of the Treasury, the Chairman of the Fed, and the FOMC stated:

“The Treasury and the Federal Reserve System have reached full accord with respect to debt management and monetary policies to be pursued in furthering their common purpose to assure the successful financing of the Government’s requirements and, at the same time, to minimize monetization of the public debt.” With the large amount of borrowing by the Treasury now scheduled, a mention of the principle of avoiding monetization would be valuable.

ALTERNATIVES TO SELLING ASSETS?

Now let me briefly consider other ways that have been suggested to provide the Fed with the power to set the short-term interest rate without selling off \$3 trillion in assets.

1. Increasing the Interest Rate Paid on Reserves

One such suggestion is to continue to pay interest on reserves and to raise that interest rate once a higher federal funds rate is called for. One problem with this approach, however, is that it was tried last fall and did not work. When reserve balances increased last fall, the federal funds rate dropped to zero very fast even though interest was paid on reserves near the federal funds rate target set by the FOMC. This phenomenon surprised the Fed staff and many others. There have been several possible explanations, such as that banks did not want to be seen to be exploiting the obvious arbitrage opportunity, but none are fully satisfactory, and more study of that period is necessary before we can rely on this approach method.

Another problem with this approach is the large payments to the banks, which will be difficult to justify. To get an under-

standing for the magnitudes involved, consider this example. If reserve balances stay at \$3,000 billion and the equilibrium interest rate is 4 percent, then the Fed will be paying banks \$120 billion per year, year after year.

2. Absorbing Balances Through Fed or Treasury Borrowing

Another possibility is to take actions to absorb the reserves either by (i) issuing Federal Reserve debt or (ii) having the Treasury borrow and deposit funds at the Fed. The former was actually mentioned in the March 23 Joint Fed-Treasury statement and the latter has already been used, so these are not hypothetical suggestions. However, while these ideas do help with monetary base control, they raise worrisome independence issues for the Fed. The danger I see is that as the recovery begins, or after we are a couple of years into it, people may feel that it's not fast enough, or there is an unpleasant pause. Either could generate heavy pressure on the Fed to intervene in the mortgage market or in some other market. In fact, you could imagine that the Federal Reserve becomes the permanent selective credit agency, borrowing funds in one market and allocating it to other markets. Why would such interventions only take place in times of crisis? Why wouldn't future Fed officials use them to try to make economic expansions stronger or to assist certain sectors and industries for other reasons?

If we are to have a selective credit policy with the inherent credit risks involved, I believe it is more appropriate for the Treasury or some other agency of the executive branch to take it on with the approval of the Congress with the purposes stated and debated transparently. What justification is there for an independent government agency to engage in such a se-

lective credit policy? For the Federal Reserve to be taking on these responsibilities raises questions about its independence. The recent request by the Treasury for the Fed to assist in creating a Consumer and Business Loan Initiative is reminiscent of the request by Treasury for the Fed to help out in its borrowing operations before the Accord of 1951. Thus, giving the Fed the authority to borrow to finance these extraordinary measures has the potential to change the role of the central bank in ways that could be harmful. The success of monetary policy during the great moderation period of long expansions and mild recessions was not due to a lot of discretion but to following predictable policies and guidelines that worked.

For these reasons, the best exit strategy is to reduce the amount of reserve to levels consistent with a traditional interest rate rule without giving the Fed the authority to borrow for credit allocation purposes and without relying solely on paying interest on reserves. Now is the time to prepare for the strategy and to clarify as transparently as possible the guidelines under which it will operate.

REFERENCES

- Bernanke, Ben (2009), "The Crisis and the Policy Response," The Stamp Lecture, London School of Economics, London, England, Jan. 13.
- FOMC (2009), "Minutes of the Federal Open Market Committee," Washington, DC, Jan. 27-28, available at www.federalreserve.gov/monetarypolicy/files/fomcminutes20090128.pdf.
- Taylor, John B. (2007), "Housing and Monetary Policy" remarks presented at the Kansas City Federal Reserve Bank Conference in Jackson Hole, Wyoming, Aug. 31–Sept. 1.

- Taylor, John B. (2008), "Monetary Policy and the State of the Economy," Testimony before the Committee on Financial Services, U.S. House of Representatives, Feb. 26.
- Taylor, John B. (2009a), *Getting Off Track: How Government Actions and Interventions Caused, Prolonged, and Worsened the Financial Crisis*, Stanford, CA: Hoover Institution Press.
- Taylor, John B. (2009b), "The Need to Return to a Monetary Framework," Prepared for the National Association of Business Economics Panel, "Long-Run Economic Challenges: A Federal Reserve Perspective," San Francisco, Jan. 3 and forthcoming in *Business Economics*, Vol. 43, No 2.
- Treasury Department and Federal Reserve (2009), Joint Statement on "The Role of the Federal Reserve in Preserving Financial and Monetary Stability," press release issued Mar. 23, available at www.federalreserve.gov/newsevents/press/monetary/20090323b.htm.