

Exit Strategies and the Federal Reserve

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The past two years have been truly remarkable when it comes to U.S. monetary policy. The Federal Reserve has expanded its powers well beyond what almost anyone thought was possible just, and almost all measures of the stance of monetary policy are so far away from their usual values that they have reached unprecedented levels in the ninety-six-year history of the Federal Reserve.

Starting with interest rates, the federal funds rate has been close to zero since January of 2009. This had never happened in the data that we have since 1954. There is also a new interest rate that is directly set by the Federal Reserve, the interest on reserves. The Federal Reserve is now allowed, for the first time in history, to pay interest on the reserves that banks hold at the central bank.

Moving from interest rates to money, the most used measure of money supply (M1), which adds up currency in circulation with demand deposits at banks, has increased by 18.6 percent in the past twelve months. The sum of currency with bank reserves, often called the monetary base since it is directly controlled by the Federal Reserve, has risen by an even more extraordinary 102.3 percent. A naive version of monetarism, as the one taught in basic undergraduate textbooks, is based on two premises. First, that by controlling the monetary base, the Federal Reserve can control the money supply. Second, that a higher growth rate of the money supply will lead, perhaps with a lag, to higher inflation. The events of the last two years look like a monetarist's worst nightmare. The wide and unstable gap between the growth rates of the monetary base and money supply questions the first premise of monetarism. And, the large growth of outstanding money would lead a naive monetarist to expect massive inflation.

Another perspective on the extraordinary changes of the past two years comes from looking at the Federal Reserve's credits. Since the end of the Bretton Woods system, the Federal Reserve's assets have consisted mostly of Treasury-issued securities, plus marginal amounts of gold and foreign currency. A look at the Federal Reserve's balance sheet today shows instead a wide array of different securities, and the Treasury no longer accounts for even half of the Federal Reserve's credits. By buying commercial bonds, mortgage-backed securities and organizing bail-outs for Bear Stearns and AIG, the Federal Reserve now has credit relationships with an array of companies beyond traditional banks.

This chapter looks at where we go from here regarding monetary policy. Once the recession and the financial crisis are over, what will be the lasting effects of all of these changes in conducting monetary policy? In particular, this chapter asks, in turn, (i) whether the current situation is dangerous and how? (ii) Can the Federal Reserve get back to its old status quo? and (iii) Should it do it, or instead keep some of the changes for the future?

What are the Dangers of the Current Situation?

Whether because of the zero interest rates, or because of the unprecedentedly high stock of money outstanding, or even because of the credit extended in so many parts of the financial market,

current policy is as expansionary as it gets. The more pressing concern that this raises is that policy may be too expansionary, so inflation is about to go out of hand. If inflation is "always and everywhere a monetary phenomenon" in Milton Friedman's famous dictum, then such a large increase in the monetary base and in money in circulation should have us expecting a large surge in inflation.

However, there are some reasons to be skeptical. First, the most recent August numbers for year-on-year inflation are -1.4 percent for the overall Consumer Price Index, and 1.5 percent for the core index that excludes movements in food and energy, lower than the average in the last decade. Looking forward, average inflation expectations from the Survey of Professional Forecasters are 1.8 percent for next year, 2.15 percent annually for the next five years and 2.50 percent for the next decade. Looking at different surveys or at the inflation forecasts implicit in indexed bonds, there are at worst some very modest signs that there is inflation on the horizon.

Second, the Federal Reserve has given little sign that it will keep interest rates at zero if current inflation or its expected future values rise above their long-run averages. In spite of all of the changes in the Federal Reserve's actions, one thing that has not changed, at least publically, is its commitment to price stability. Even as inflation went negative, stoking fears of sustained deflation associated with an increase in unemployment like that during the Great Depression, no monetary policymakers suggested that its goal went beyond bringing inflation to its usual 2-3 percent implicit target.

Third, one key difference between the situation today and the history of the Federal Reserve is that with short-term interest rates close to zero, banks are close to indifferent between holding reserves or lending them out. The dramatic increase in the monetary base has come through an expansion in the reserves that banks voluntarily hold in their accounts at the Federal Reserve. Banks have not rushed to lend these out, and the ratio between bank reserves and demand deposits has gone up. Because of the zero interest rates, the usual money-multiplier process by which increases in reserves induce lending by banks, with the money coming back to banks in demand deposits and fueling further loans, has broken down. As a result, the central bank has lost control over the money supply. At the same time, the zero interest rates imply that this is not a concern for inflation. With interest rates at zero, households are also indifferent between holding cash or interest-bearing money-market accounts, bonds, and the like. Changes in the supply of money do not have to lead to changes in prices and inflation since people may just keep the money in their pockets.

If inflation is less obvious a concern than it might seem at first, then what about maximum employment, the other goal in the Federal Reserve's dual mandate? The U.S. economy has been going through a deep recession, by some measures the worst since the 1930s. As investment has plummeted, and people expect output to fall, the real interest rate should fall in order to stimulate demand, perhaps even to negative values. However, with inflation expectations stuck at around 1.8% for next year, and nominal interest rates at their lower bound of zero, the real interest rate cannot fall below -1.8 percent. The danger is that this is too high, and as a result the incentive to dis-save is not strong enough to encourage consumption and production today. By having the nominal interest rates close to their lowest possible values, the danger is that, if inflation expectations do not fall, then the real interest rate will be too high, deepening the recession.

Besides inflation and employment, there is a third danger lurking today. It is less direct than the previous two, but its effects are potentially more long lasting. It is the danger that the Federal Reserve loses its autonomy to pursue its goals. Many of the recent changes raise the fear that we may be heading down this path. It is now widely appreciated that the independence of central banks from pressures by the Treasury is one of the main accomplishments of the last twenty years, responsible for the decline in inflation all over the developed world. Losing this independence would have consequences beyond the current recession. By taking on private assets that are much riskier than government securities, the Federal Reserve runs the risk of suffering losses. If the funds to cover these losses come from the Treasury and are approved by Congress, it is hard to see how the Federal Reserve will be able to avoid interference from the administration in setting monetary policy.

Another danger to the Federal Reserve's autonomy comes from its wide set of credit policies. By intervening in many markets, the Federal Reserve has become an important agent in many markets, and has opened the door for future interventions. Financial market participants now have available to them a strategy that they did not have two years ago: to lobby the Federal Reserve to intervene and cover their losses. When the Federal Reserve dealt only with banks, and heavily regulated them in exchange for rare interventions, this problem may have been under control. Once the Federal Reserve entered credit transactions with so many other financial firms, there was no longer a natural barrier preventing them from trying to steer policy in ways that are profitable for them even if socially costly.

Can the Federal Reserve Quickly Return to its Traditional Role?

If it wants too, the Federal Reserve can unwind most if not all of the changes of the last two years. Interest rates are of course the easier, as nothing prevents the Federal Reserve from pursuing higher targets for the Federal Funds rate or from paying zero interest on reserves. The monetary base is also not difficult to contract back to its pre-crisis level, by selling the government bonds the Federal Reserve has on its balance sheet to banks debiting their reserves' account.

Unwinding its many credit programs requires less conventional policy actions. For many interventions, like the auction of funds to banks or the credits to money-market funds and primary dealers, just by letting the short-term contracts expire, the Federal Reserve can effectively eliminate them. Selling the holdings of commercial paper should also be relatively easy, as well as terminating the special liquidity-swap agreements with foreign central banks. Also straightforward would be to exchange some of the longer term government bonds that the Federal Reserve has been buying for Treasury securities of shorter maturities back to the pre-crisis maturity composition. This need not have any effect on private holdings of government securities, since if Treasury does the reserve purchases and sales, it becomes a matter of accounting between two branches of the U.S. government.

More complicated is the sale of the over \$600 billion of mortgage-backed securities that the Federal Reserve currently holds. While eventually the demand from investors for these securities may again appear, it is hard to guess when that will happen, under what terms, and what price. At the extreme, the Federal Reserve can just hold these securities and collect their payments when they mature. If the overall policy of trying to avoid large losses in the housing market is successful, then this

strategy is feasible and may at worst only involve some moderate losses. Unlike the other reversals described in the previous paragraph, it will take time though.

The most difficult actions to reverse are the acquisitions of assets and outstanding guarantees held following the bailouts of Bear Sterns and AIG. The Federal Reserve chairman has described these actions as very uncomfortable, and the absence of a clear way to exit them is part of this discomfort. Still, they account for only \$62 billion of the \$2064 billion assets that the Federal Reserve holds.

Should the Federal Reserve Reverse it's Actions, and which of the Recent Changes Should Persist?

Once the financial crisis is over, it is hard to find justification for the multiple interventions in credit markets. These come with the danger of capture by financial participants described above, and they bring no clear benefit to the Federal Reserve's dual mandate of maximum employment and price stability. Moreover, by intervening in some markets and not others for a prolonged period of time, the Federal Reserve would inevitably be interfering with incentives in those markets in inefficient ways.

Raising interest rates is less clearly a good thing. On the one hand, raising interest rates once the economy starts recovering is crucial to ensure that inflation remains low and under control. On the other hand, if real interest rates are too high today and this is contributing to a deeper recession, then the Federal Reserve should be trying to raise inflation expectations. One effective way of doing so is to keep interest rates at zero for some time, even beyond the trough of the crisis. Whether it is a good idea to pursue this more expansionary policy or not depends on whether the Federal Reserve is willing to accept higher inflation in exchange for less unemployment, a familiar dilemma for monetary policy. The Federal Reserve so far seems to favor the anti-inflation route given fears that once inflation gets even only a few percentage points above average, it will then be hard to bring inflation expectations down. The experience of the early 1980s in the United States provides some support for this view. At the same time, an unwillingness to accept higher inflation was one of the policy mistakes that contributed to prolonging the Great Depression and the Japanese slump of the 1990s.

Finally, the expansion of the monetary base from \$820 billion at the start of 2008 to \$1705 billion today is perhaps the main change that should not be reversed. As Milton Friedman observed long ago, it costs the government nothing to produce money in the form of reserves (they are just numbers on databases) and close to nothing to print currency. Yet, the liquidity they provide is socially useful. It is therefore optimal, from the perspective of society, to flood the economy with liquidity until everyone's demand for it is fully satiated. In practice, this can be accomplished if the opportunity cost of holding money is driven to zero, the famous Friedman rule. This cost is equal to the gap between the return on holding alternative short-term safe investments---like loans in the Federal Funds market or Treasury bills---and the return on holding money. Now that interest can be paid on reserves, it is possible to accomplish this by always setting that interest rate equal (or slightly below) the interest rate targeted in the Federal Funds market. The size of the money supply will then be whatever people happen to demand it to be now that liquidity is free. It may fluctuate, and even change abruptly over time, but as long as the two interest rates that the Federal Reserve now controls are set the same, this will be inconsequential for inflation.