

SPEECH

## The Outlook, Policy Choices and Our Mandate

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The deep recession that ended in June 2009 has been followed by a very tepid recovery. Economic activity has grown—but only slowly from levels far below the productive capacity of the economy. With demand growth barely keeping pace with firms’ ability to increase productivity, job creation has been too weak to significantly reduce unemployment, which stands today at 9.6 percent. And, as is typical in such circumstances of considerable slack, the rate of inflation has declined.

Viewed through the lens of the Federal Reserve’s dual mandate—the pursuit of the highest level of employment consistent with price stability, the current situation is wholly unsatisfactory. Given the outlook that the upturn appears likely to strengthen only gradually, it will likely be several years before employment and inflation return to levels consistent with the Federal Reserve’s dual mandate.

Today, I will discuss why the recovery has been disappointing and highlight some of the issues facing the Federal Reserve and monetary policy, echoing some of the themes laid out by Chairman Bernanke in his Jackson Hole speech in late August. As always, what I am going to say reflects my own views and does not necessarily reflect the views of the Federal Open Market Committee and the Federal Reserve System.

In recent quarters the pace of growth has been disappointing even relative to our modest expectations at the start of the year. After rising at about a 3.25 percent annual rate during the second half of 2009, there has been a progressive slowing—to a 2.75 percent annual rate during the first half of the year and, very likely, to an even slower rate in the third quarter.

The factors responsible for the failure of the recovery to pick up speed include: (1) the gradual petering out of the contribution from the swing in inventories from rapid liquidation during the first half of 2009 to a modest increase in the second quarter of 2010; 2) the sluggish recovery in consumer spending; and 3) the continued weakness in housing. Normally, at this stage of recovery, the handoff from growth led by inventory accumulation to growth led by private final demand would have been more fully accomplished. This handoff has been delayed because households have been paying down their debts—a process known as deleveraging. In addition, many businesses have been reluctant to hire. This has limited income growth. Slow income growth, and along with caution in the face of economic uncertainty, has also restrained spending.

Although so-called “soft-patches” are quite common during the early stages of an economic expansion, this soft patch is a bit different. First, it looks like it will last somewhat longer because the deleveraging process is not yet complete. Second, the current weakness is somewhat more concerning because it is occurring at a time that the central bank has already cut interest rates to near zero.

In fact, this failure of the recovery to “catch fire” has occurred despite aggressive monetary and fiscal policy steps to stimulate the economy. On the monetary policy side, short-term interest rates have been nearly zero for a year and a half; the Fed purchased \$1.7 trillion of long-term assets, and the proceeds from maturing securities are being reinvested to keep the balance sheet from shrinking unduly. On the fiscal side, a series of measures has provided support to a broad range of activities.

The sluggish nature of the recovery in the face of very substantial stimulus reflects the dynamics at work during the expansion that preceded it. Beginning around 2003, underwriting standards for residential mortgages were significantly relaxed, leading to a sharp rise in household borrowing and in home prices. The two trends were inextricably linked. The rise in home prices helped to support additional demand for credit as households used the collateral represented by their homes to borrow large sums of money via home equity lines of credit and second mortgages. Chart 1 illustrates how the growing proportion of nonprime first mortgage loans helped fuel the sharp rise in home prices.

As home prices rose and the stock market performed strongly, household net worth rose sharply. Households responded by borrowing more and saving less. After all, why save when the rise in home prices was adding to your wealth and the housing equity created by the rise in home prices could be easily tapped for funds as needed? The use of home equity as a source for funds to support consumption is evident in the fact that the homeowners' equity as a share of home values was essentially flat over this period (Chart 2). This indicates that homeowners were borrowing against their accumulated gains. The surge in home prices pushed up the ratio of household net worth to disposable income to nearly 640 percent and the personal saving fell below 2 percent (Chart 3).

The surge in home prices was fueled by products and practices in the financial sector that led to a rapid and unsustainable buildup of leverage and an underpricing of risk during this period. These dynamics in turn provided the fuel that caused house prices and consumer spending to rise much faster than income. As shown in Chart 4, the share of GDP accounted for by consumption and residential investment climbed to a peak of 76 percent in 2005 from 71 percent in the mid-1990s.

The boom, of course, was unsustainable. The progressive easing of underwriting standards that was needed to support housing demand could only persist as long as housing prices were rising rapidly. But for home prices to rise rapidly, underwriting standards had to be progressively relaxed in order to generate more buyers. When home prices began to slip beginning in 2006, the dynamic swung into reverse. The collateral values supporting borrowing and spending began to fall.

As banks' and other financial intermediaries' credit losses began to mount, credit availability became impaired and this exacerbated the downward pressure on home prices and on borrowing and spending. Not only did households that had overextended themselves have to cut back; others also retrenched because they were also affected by declines in wealth and heightened uncertainty about the economic outlook and their job prospects.

It is not surprising that the workout from the excesses of this type of boom would take a long time. Just as it took several years for the boom to begin and run its course, so it would take years, not months, for households and financial intermediaries to adjust their balance sheets and behavior to the new environment. Households had to raise their saving rates in order to rebuild their balance sheets. Financial intermediaries had to replenish their capital to replace losses via loan charge-offs and other credit impairments. Both adjustments would need to occur before the economy could grow rapidly.

With this in mind, the key questions are: 1) Where are we in the adjustment process, and 2) what, if anything, can monetary policy do to facilitate a smoother adjustment and more rapid progress toward our dual mandate objectives?

In terms of the adjustment process, starting on the household side, most signs point to significant progress. For example, the revisions to the national income and product accounts announced in July revealed substantial upward revisions to the personal saving rate (Chart 5). The current saving rate is broadly consistent with the historical relationship between personal saving and the household net worth-to-income ratio. Of course, part of this story depends on the stabilization of household net worth, which had earlier fallen sharply due to declines in both home and equity prices. Although household net worth dropped significantly again in the second quarter according to the Flow of Funds accounts, the subsequent rise in the U.S. equity market is likely to have reversed that decline. Meanwhile, housing price declines have moderated substantially, helped, in part, by the fact that the low level of mortgage rates combined with the sharp drop in house prices has resulted in a substantial improvement in affordability (Chart 6).

Households have retrenched in terms of their borrowing and this has helped push down the household debt-to-income ratio sharply from its peak in 2007. Another factor behind the fall in the debt-to-income ratio has been credit losses and debt forgiveness. Since 2007, charge-offs have reduced household debt outstanding by over \$880 billion.

Some argue that the decline in the household debt-to-income ratio must go much further before the deleveraging process can be complete. After all, the household debt-to-income ratio is still far above the level reached as late as 2002, before the surge in household borrowing began. Some even argue that household debt-to-income ratios must fall back to the level of the 1980s. I think that this is an overly pessimistic view for a simple reason—both household debt and household financial assets have been rising faster than income growth on a secular basis since the 1950s. Focusing just on debt misses what is happening on the other side of the balance sheet (Chart 7). One reason why both household assets and debt have been rising faster than income is due to greater financial intermediation. For instance, tax incentives encourage people to fund their 401(K) pension plans rather than pay down mortgage debt as they get older.

The notion that the household adjustment process is well advanced is also supported by other data, as well. For example, the share of after-tax income devoted to servicing debts, as well as paying property taxes and homeowners insurance or rent, has declined sharply over the past two years and is now back to levels that prevailed in the late 1990s (Chart 8). In addition to the declining stock of debt, households have been able to refinance outstanding debt at lower interest rates.

Moreover, mortgage delinquency rates, even in the most serious category, have started to fall, and data that tracks changes in the proportion of borrowers who are delinquent and then become current versus becoming even more delinquent is encouraging (Charts 9 and 10). Finally, the less serious delinquencies for credit card, auto and student loans have been trending lower, though not the more serious delinquencies (Chart 11). Of course, these recent improvements have come in the context of the stabilization

in unemployment and house prices. To ensure that the more favorable trends in household balance sheets continue, the economic environment needs to become more supportive.

We should recognize that there is still considerable uncertainty about the level of the saving rate and configuration of household balance sheets that will prevail in the coming years. It is possible that households now perceive the world to be a riskier place than they did before and will want to have more “rainy day” funds. More saving may also be needed to meet higher downpayment requirements for home purchases. Thus, while we may be far along in the adjustment process, it is difficult to judge just how much further we have to go.

Turning now to the issue of credit availability, there is no question that credit conditions are still tight. There are a number of impediments: 1) Financial institutions—many of which still face balance sheet problems of their own—have tightened underwriting standards and, 2) a decline in property prices has cut collateral values and made the refinancing of many residential and commercial mortgages difficult.

On the banking side, there is considerable differentiation across the industry in terms of health. The largest banks in the United States are generally in much improved health following the Supervisory Capital Assessment Program (SCAP) in 2009, which led to substantial additional equity raising. For smaller banks, the situation is more mixed. According to the FDIC, as of June 30, 2010, 829 of the nation’s 7,830 commercial banks and savings institutions remain on the FDIC’s problem institution list.

But overall, the situation is one in which credit availability is slowly improving. According to the Federal Reserve’s Senior Loan Officers Survey, the percentage of banks reporting that they were tightening credit standards across a wide range of lending categories peaked in late 2008. The most recent data indicate that virtually no banks are tightening standards, and a number of banks have begun to relax credit terms (Chart 12).

In addition to households, the small-business sector is another area that has seen a contraction in credit. Focus groups and surveys conducted by the Federal Reserve System suggest this contraction is the result of three distinct factors—a decline in demand for credit, a tightening of lending standards, and a weakening of credit quality due to lower collateral values and cash flows.<sup>1</sup> Which is the most important is difficult to discern.

However, surveys of small-business owners indicate that much of the weakness in lending to this sector reflects lack of demand. The National Federation of Independent Business (NFIB) Small Business Optimism Index, for instance, asks respondents to indicate their single most important problem from a standard list. For some time now, the response “poor sales” has been the most frequently cited problem. In contrast, relatively few respondents cite “financial and interest rates” as the most important problem (Chart 13). A caveat to this is that credit constraints could be inhibiting the formation of new small businesses—something that surveys of existing firms would not capture.

Although credit availability has begun to improve, the decline in collateral values remains a significant impediment. For example, housing prices have declined so far that nearly one quarter of homes are now worth less than the value of the mortgages that finance them. Lacking sufficient collateral value, such homeowners cannot take advantage of the fact that conforming mortgage rates are at their lowest level in history and refinance their mortgages. Overall, the desire to rebuild wealth through savings and the limits on credit availability to households has acted to restrain consumer spending, keeping the recovery tepid.

To some degree, this adjustment is unavoidable, as the economy had reached unsustainable levels of consumption and housing demand. However, the fact that many of these adjustments are inevitable does not rule out a role for monetary policy to support economic activity. Very low interest rates can help smooth the adjustment process by supporting asset valuations, including making housing more affordable and by allowing some borrowers to reduce debt interest payments.

Beyond this direct role in smoothing the deleveraging process—to the extent that monetary policy can “cut off the tail” of the distribution of potential adverse economic outcomes, making a truly disastrous outcome less likely—it can help encourage those households and businesses with money to spend to do so.

Today’s low and falling rate of inflation—at a time when interest rates are near zero—is a problem that is slowing the adjustment process. Currently, by most measures, inflation is below the level that members of the Federal Open Market Committee (FOMC) view as consistent with price stability. Although the Federal Reserve has no formal numerical inflation target, it is noteworthy that the long-run inflation forecasts of the FOMC members cluster around 1.75 percent to 2 percent for the personal consumption expenditures (PCE) deflator. This compares with a 1.5 percent year-over-year rate for the PCE deflator and 1.4 percent rate for the core PCE deflator, which excludes food and energy prices.

Low and falling inflation is a problem for several reasons. First, low and declining inflation makes it harder to accomplish needed balance sheet adjustments. That is because, all other things being equal, lower inflation means slower nominal income growth. Slower nominal income growth, in turn, means that less of the needed adjustment in household debt-to-income ratios will come from rising incomes. This puts more of the adjustment burden on paying down debt.

Second, and even more importantly, low and falling inflation can cause inflation expectations to decline. This is important because inflation expectations are an important factor that influences actual future inflation. Moreover, when inflation expectations

decline, the expected real cost of credit increases—a subject I will return to in a moment.

So what could the Federal Reserve do? As I see it, there are two potentially complementary avenues. First, we could take steps to make our current highly accommodative stance of monetary policy more effective in stimulating economic activity by providing additional guidance about what we are trying to achieve today and in the future. Second, we could find ways to increase the amount of stimulus we currently provide via our balance sheet.

Turning to the first issue, clear communication about objectives and intent is an important element of effective monetary policy. For example, communicating clearly our intention to return inflation to more normal levels can help keep inflation expectations well anchored around levels consistent with our inflation goals. As the central bank, we and we alone can control inflation—if not precisely in the short run, then over the medium term. By clarifying our intentions, we can reduce the risk of further disinflation—or even an outright debt-deflation spiral that would make it still more difficult to accomplish the necessary balance-sheet adjustments.

Clear communication on the part of a central bank is important at all times, but it is even more critical when the federal funds rate is at or near its effective lower bound. In this environment, a decline in inflation expectations that drives up the real interest rate and thereby increases the real cost of credit cannot be offset by simply lowering the federal funds rate. Thus, in a very direct sense, a fall in inflation expectations when the target interest rate is at the zero bound represents a de facto tightening of monetary policy and of financial conditions. Such a tightening would clearly be highly undesirable at a moment when unemployment is too high, inflation is too low and the economy has only moderate forward momentum.

In this situation, the FOMC must be clear and resolute in its commitment to its price stability objective. This is why the most recent FOMC statement clearly stated that underlying inflation was running somewhat below levels consistent with the dual mandate.

There are a range of options we could pursue if we judged it worthwhile to go even further in communicating our objectives and intent. We could be even more explicit with regard to the inflation rate that the Committee views as compatible with price stability, for instance, by stating an explicit inflation objective as is common practice in other advanced economies. This could help anchor inflation expectations at the desired rate. It would also clarify the extent to which the current level of inflation falls short of that rate.

If we were to go down this path, it would be important to note that any provision of more information on our inflation objective would not be a signal that the inflation element of the dual mandate had become more important than the full employment objective. Instead, it would principally reflect the fact that inflation being “too low” (just like inflation being “too high”) is an impediment to achieving the full employment objective of the dual mandate.

If we judged it desirable, we could go still further and provide more guidance on how monetary policy would react to deviations from any stated inflation objective. One possibility would be to keep track of inflation shortfalls when the federal funds rate is constrained by the zero bound, as is the case today. For example, if inflation in 2011 were a 0.5 percentage point below the Fed’s inflation objective, the Fed might aim to offset this miss by an additional 0.5 percentage point rise in the price level in future years.

In the current environment, such an approach would have some advantages as well as some disadvantages. When there is a large amount of slack in the economy, the Federal Reserve might not easily be able to hit an inflation objective soon. But, the central bank could plausibly promise to make up the difference later on. Indeed, the further the Fed fell behind its inflation objective in the near term, the more inflation would need to increase in order to push the actual path of prices up to the path consistent with price stability over the long run. To the extent this policy was more credible, it might do a better job keeping inflation expectations from falling. This might make monetary policy more stimulative and, thus, might help the FOMC achieve its objectives more quickly.

However, such an approach would only work well if people understood how it would operate and formed their expectations of future inflation accordingly. And there could also be significant costs. For example, if people mistakenly concluded that the Fed was tinkering with its long-run inflation objective, this could lead to greater uncertainty about future inflation. This might lead to higher risk premia and higher nominal interest rates that would undermine the effectiveness of such a policy to stimulate the economy.

In addition to communication strategies, the Federal Reserve has a second set of tools, namely the ability to expand its balance sheet to stimulate activity and move inflation toward desired levels—either by purchasing medium and long-term Treasuries or agency mortgage-backed securities. Such purchases of long-duration assets pull down the level of long-term interest rates by removing duration from private-sector hands, who respond by purchasing other long-dated assets.

Two interesting questions pertain to balance sheet expansion: (1) How much would the Fed have to purchase to have a given impact on the level of long-term interest rates and economic activity, and, (2) what constraints exist in terms of limits to balance-sheet expansion, and what are the costs involved that could impede efforts to meet the dual mandate now or in the future? The questions demand serious consideration prior to any decision to expand the balance sheet further.

With respect to the first question, some simple calculations based on recent experience suggest that \$500 billion of purchases would provide about as much stimulus as a reduction in the federal funds rate of between half a point and three quarters of a point. But this estimate is sensitive to how long market participants expected the Fed to hold on to these assets.

More broadly, the clearer and more credible the framework governing purchases, the greater the likelihood that market participants would act in a manner that helped the Fed achieve its objectives. In particular, the more confident market participants are in the Fed's ability to exit when the time is right, the more effective its purchases will be in stimulating the economy.

Suppose the Fed was indeed successful in reducing long-term interest rates further—what then? Some claim that lower rates would have no effect on economic activity—that the Fed would be “pushing on a string.” This is too dark a view. Although the responsiveness of demand to reductions in interest rates is probably lower in a world in which balance sheet constraints are important, the responsiveness is not zero. I believe that it remains significant.

Even in today's challenging circumstances, lower long-term rates would support the economy through a number of channels. Lower long-term rates would support the value of assets, including houses and equities and household net worth. Lower long-term rates would make housing more affordable and support consumption by enabling households to refinance their mortgages at lower rates. This would increase the amount of income left over for other spending. Of course, this channel can be made more powerful to the extent that further progress can be made in efficient mortgage debt restructurings that allow households with negative equity in their homes to take advantage of the drop in mortgage rates. In addition, lower long-term rates would reduce the cost of capital for businesses, thereby fostering higher levels of capital spending for any given economic outlook.

In considering the limits to balance sheet expansion, there are two constraints—one major and one more minor. The first constraint is the risk that the balance sheet expansion might cause inflation expectations to become unanchored, leading to higher risk premia. This risk is presumably greater in a period in which budget deficits are high, as they are today.

If exit concerns were to rise as purchases increased, then a rise in inflation risk premia would offset at least some of the expected fall in interest rates. In contrast, the more credible the ultimate exit strategy, the less likely it is that inflation risk premia would go up and the more effective purchases would be in lowering long-term rates. Also, the more credible the ultimate exit plan, the more confident investors would be about the Fed's willingness to do what is needed to accomplish its objectives. This is important because it would help stabilize longer-run inflation expectations at levels consistent with the dual mandate.

The FOMC should be able to assure investors that it has both the means and the will to exit when—but not before—the time is right. That is because the Federal Reserve has the tools to control financial conditions and credit creation even with an expanded balance sheet. Payment of interest on reserves allows us to control short-term rates with even a large amount of excess reserves outstanding. In addition, we can drain excess reserves in several ways. We have developed term deposit accounts and the ability to conduct reverse repurchase operations with a large number of counterparties that would allow us to drain a large volume of reserves. Also, when the time is right, the Fed can always sell assets. Such asset sales would lead to a rise in longer-term rates and this would have a contractionary effect on the demand for credit.

I am very mindful of concerns here and abroad that balance sheet expansion could be interpreted as a policy of monetizing the federal debt. However, I regard this view to be fundamentally mistaken. It misses the point of what would be motivating the Federal Reserve. The FOMC would only engage in large-scale asset purchases in order to push the economy more rapidly toward the dual mandate goals of full employment and price stability. Once these goals were accomplished, there would be no basis for further purchases regardless of the government's fiscal position because additional purchases would not be consistent with this mandate.

The second constraint is that further balance sheet expansion would increase the Federal Reserve's interest rate risk by raising the maturity mismatch between its assets and liabilities. Recall that the bulk of the Fed's liabilities are overnight reserves and the bulk of its assets are longer-term Treasuries, agency and agency MBS securities. The bigger the balance sheet becomes, the more a future rise in interest rates will squeeze the Federal Reserve's net interest margin.

Some worry that this exposure to higher short-term rates could conceivably affect the Federal Reserve's monetary policy credibility in the future. Some market participants might worry that the Federal Reserve could become reluctant to raise short-term rates in a timely way because this would constrain the amount of revenue that it would earn and remit to the Treasury. I am confident there is nothing to worry about on this score.

Even if the Federal Reserve was not obliged to act in keeping with its dual mandate—which it is—with its assets skewed toward longer-duration securities, the Federal Reserve would have every incentive to ensure price stability over the long term.

It is true that the larger the size of the balance sheet, the more likely it is that the Fed would ultimately sell assets back into the market, potentially at prices that could result in losses. Although some fear that such losses could compromise the Federal Reserve's independence, there is no reason why this should be the case, providing we stick closely to our mandate at all times.

To date, the Fed's actions in responding to the crisis have resulted in abnormally large profits that might reasonably be set against

any subsequent losses. But much more importantly, our dual mandate does not state that we should do what is necessary to promote full employment and price stability only at times when we are virtually certain that in doing so we will make a profit. It directs us to promote full employment and price stability at all times. Profits and losses in any given year are much less important than getting the U.S. economy back to the highest level of employment consistent with price stability.

In making our assessments about next steps, we need to be a bit humble about our capacity to forecast how market participants would respond to our actions. We do not control their behavior nor have much historical experience that we can draw on to easily assess how they are likely to behave. Even viewpoints that turned out to be incorrect could persist for a long time and generate adverse consequences. It is not enough for us to be right in theory. We also have to be convincing in practice and in explaining why concerns we think are misplaced are indeed unwarranted.

As Chairman Bernanke indicated at Jackson Hole, the FOMC's decision with respect to providing additional accommodation will be made by weighing the costs against the benefits. This is a dynamic process, which depends on the evolution of the economic outlook and our own ability to learn how to become more effective in improving the cost/benefit trade-offs.

And, at its last meeting in September, the FOMC said it is "prepared to provide additional accommodation if needed to support the economic recovery and to return inflation, over time, to levels consistent with its mandate."

Currently, my assessment is that both the current levels of unemployment and inflation and the timeframe over which they are likely to return to levels consistent with our mandate are unacceptable. In addition, the longer this situation prevails and the U.S. economy is stuck with the current level of slack and disinflationary pressure, the greater the likelihood that a further shock could push us still further from our dual mandate objectives and closer to outright deflation.

We have tools that can provide additional stimulus at costs that do not appear to be prohibitive. Thus, I conclude that further action is likely to be warranted unless the economic outlook evolves in a way that makes me more confident that we will see better outcomes for both employment and inflation before too long.

Thank you for your kind attention. I would be happy to take a few questions.

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<sup>1</sup>Chairman Ben S. Bernanke, Addendum: Addressing the Financing Needs of Small Businesses, Monetary Policy Report to Congress, July 21, 2010.

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