

**Embargoed until:**  
**12:00 p.m CDT**  
**June 11, 2008**

## **Remarks on the U.S. Economy**

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Macroeconomics Advisers Quarterly Outlook Meeting  
St. Louis, Missouri  
June 11, 2008

\*I appreciate assistance and comments provided by my colleagues at the Federal Reserve Bank of St. Louis. Robert H. Rasche, Senior Vice President and Director of Research, and Marcela M. Williams, Special Research Assistant to the President, provided assistance. I take full responsibility for errors. The views expressed are mine and do not necessarily reflect official positions of the Federal Reserve System.

## **Remarks on the U.S. Economy<sup>1</sup>**

### **Introduction**

As many of you know, I joined the Federal Open Market Committee at a difficult juncture for the Committee and for the American economy. Growth in real gross domestic product, one of our best measures of overall health in the economy, has been sluggish. Financial markets have been struggling to return to normal operation since the current turmoil began in earnest 10 months ago. In addition, the housing sector has been extraordinarily weak for some time, with prices falling and sales of both new and existing homes on the decline. The Federal Reserve has responded to this situation by instituting an array of new lending facilities and sharply lowering interest rates through the fall of 2007 and into the first several months of 2008.

Today I will talk about these and related developments in the context of medium- and longer-term objectives for monetary policy. My sense is that the U.S. economy will be able to post stronger growth in the second half of this year despite the ongoing financial turmoil, the drag from the housing sector, and rising energy prices. Meanwhile, inflation is becoming a more pressing concern as both inflation and inflation expectations are moving higher.

Let me say before I continue that any views expressed here are my own and do not necessarily reflect the official views of the Federal Open Market Committee or the Federal Reserve System.

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<sup>1</sup> Portions of this speech were delivered as “A Perspective on the U.S. Economy,” in Rogers, Ark, on June 4, 2008, and “Remarks on the U.S. Economy and the State of the Housing Sector,” in Madison, Wis., on June 6, 2008.

## **The Objectives of Monetary Policy**

Over the past two decades, much has been said about the benefits of transparency and accountability in the conduct of monetary policy. Much has been achieved, both in the United States and abroad, to reach these goals. I applaud these developments, and I believe that progress in this direction can and should continue. Consistent with these principles, in my role as the newest participant on the FOMC, I want to talk for a few moments about my fundamental beliefs on the appropriate objectives of monetary policy.

One of the guiding principles from contemporary economic theory is that monetary policy should be conducted in a systematic and predictable fashion. The expectations of economic actors are critically important for the nature of equilibrium in the economy. Private sector expectations evolve in part according to the outlook for future policy itself and the implications of that policy for the path of the economy. This view, once considered radical, is now widely accepted in academia and by monetary policymakers around the world.

Systematic monetary policy must start with a clear statement of the ultimate policy objectives. The Federal Reserve is commonly characterized as striving to foster price stability along with maximum sustainable employment. Other central banks, including the European Central Bank (ECB) and the Reserve Bank of New Zealand, for example, are charged with a single mandate: to maintain price stability. In the 1960s, the dual mandate was perceived to require a policy trade-off. Under the then-prevailing Phillips curve hypothesis, lower inflation could be achieved only at a cost of higher unemployment. Today, the consensus view is that there is no long-run tradeoff between

inflation and unemployment. Indeed, a succession of Fed Chairmen—Paul Volcker, Alan Greenspan, and Ben Bernanke—have emphasized the complementarity of the two objectives: namely, that price stability is a precondition for maximum sustainable employment.<sup>2</sup> I agree with this perspective.

Moreover, I have been very impressed during my 18-year career as a Fed economist considering the contrast in the behavior of the U.S. economy between high-inflation and low-inflation eras. Between 1965 and 1984, U.S. inflation rose to double-digit levels before falling again. Since 1984, inflation has remained under better control. The earlier era was associated not only with higher and more variable inflation, but also with a relatively volatile real economy. The more recent era has been associated with lower and less variable inflation and a substantially less volatile real economy. In the recent macroeconomics literature, this has been called the “great moderation.” I think that an important part of the volatility reduction is due to a monetary policy better-focused on price stability since 1984.<sup>3</sup> The volatility reduction—a reduction in the level of uncertainty faced by economic actors—is no small matter. It has meant a lot to businesses and households in our nation: long periods of growth punctuated by just two mild recessions since the mid-1980s.

In contemporary discussions, the term “price stability” has come to mean something other than “stable prices.” In the late 19<sup>th</sup> and early 20<sup>th</sup> centuries, price stability meant that variations in the general level of prices would be transitory and the price index would revert to a mean. In recent policy discussions, however, price stability

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<sup>2</sup> See, for example, Ben S. Bernanke, “The Benefits of Price Stability,” February 24, 2006. <[www.federalreserve.gov/newsevents/speech/bernanke20060224a.htm](http://www.federalreserve.gov/newsevents/speech/bernanke20060224a.htm)>.

<sup>3</sup> For a discussion of this possibility, see John B. Taylor, “Monetary Policy and the Long Boom,” April 16, 1998. <<http://research.stlouisfed.org/publications/review/98/11/9811jt.pdf>>.

generally is interpreted as a small positive rate of inflation. If there is ongoing inflation, the level of prices does not revert to a constant, but trends upward. I am willing to accept this latter definition of price stability because there may be theoretical and practical reasons to believe that the best price indexes we have available are subject to upward biases. While I am not a big fan of the upward-bias argument—after all, the best-available adjustments are already made to the indexes—I admit that I do not have better measures myself. My preferred definition of price stability is that trend inflation, correctly measured, is zero. In practice, this likely converts into a trend in measured inflation on the order of  $\frac{1}{2}$  to  $1\frac{1}{2}$  percent, depending on the particular price index referenced.

A sustained era of price stability requires that central banks create and maintain an environment in which financial market participants and the general public hold the expectation that future inflation will remain low and stable. This commitment is an implicit contract between the central bank and the public, and it should not be taken lightly. Such a commitment is frequently characterized as having an “anchor for inflation expectations.” Some central banks have established such an anchor for the economy by announcing an explicit numeric inflation target. The FOMC has chosen not to announce such a quantitative guideline, although many past and current participants on the Committee have expressed individual preferences or “comfort zones” about ranges of inflation that they personally feel are appropriate objectives for policy.

Even absent an explicit numeric inflation objective, the FOMC has achieved a nominal anchor for the economy over the past 25 years. The Committee accomplished this the old-fashioned way—the Fed earned credibility for the expectation of low and

stable trend inflation based on the successful outcome of about 25 years of policy history. The Volcker disinflation in the early 1980s succeeded in stabilizing inflation around 4 percent per annum. After a mild and short-lived inflation breakout in the late 1980s, the Greenspan Fed produced a declining trend in inflation throughout the 1990s and into the first few years of the 21<sup>st</sup> century.

Despite this past success, it is my judgment that at the present time inflation expectations are fragile. By some measures, inflation has trended up in recent years. In the decade from 1994 through 2003, the annual headline personal consumption expenditures (PCE) inflation rate was less than 2.0 percent for five of the years, and was never above 2.5 percent. Despite all that happened during that decade, it was credible to believe that the target for inflation was around 2.0 percent. Indeed, the average annual headline PCE inflation rate was 1.86 percent. In contrast, in the past four years, the annual headline PCE inflation rate has consistently been above 2.5 percent; and, in the past six months, readings for headline PCE inflation measured from one year earlier have all been in excess of 3.0 percent. The step-up since 2004 has been due, in large part, to the rapid increase in energy and other commodity prices during these years. Still, one would expect that policy can be designed to deliver actual inflation rates near target over periods as long as four or five years.

Inflation expectations have remained remarkably stable, but not at the 1.86 percent headline PCE inflation rate established during the decade from 1994 to 2003. Recent market-based measures calculated from Treasury inflation-protected securities spreads indicate an implied five-year forward inflation rate of about 2.5 percent. One might wonder how long inflation expectations can remain stable in this range. My sense

is that actual headline inflation in excess of 3.0 percent coupled with inflation expectations near 2.5 percent will not be compatible for long. If inflation remains elevated, inflation expectations will begin to move higher. Market participants, businesses, and consumers will come to view higher inflation as part of the economic landscape, in part because of doubts about the Fed's ability and willingness to keep inflation contained. These expectations, if allowed to persist, will then feed into the equilibrium of the economy and will be difficult to reverse. In short, credibility is much easier to keep than it is to recover.

A breakdown in inflation expectations has not occurred yet, to be sure, but the risk is real. It is possible that a breakdown could happen over a very short horizon. Indeed, in the May 2008 University of Michigan/Reuters survey, the 12-month-ahead median expected inflation rate jumped to 5.2 percent (from 4.8 percent) and 25 percent of respondents reported expecting inflation in excess of 10 percent over the next 12 months! Most likely these extraordinary readings were driven in part by recent exceptional increases in certain commodities prices, especially gasoline. Still, the five-year-ahead median expected inflation in the survey has drifted up to 3.3 percent.

Despite these worrisome numbers, I think that the Fed can contain the potential for inflation expectations to drift higher. It is rule number one in modern central banking that inflation and inflation expectations be kept under control. Let me repeat that: It is rule number one in modern central banking that inflation and inflation expectations be kept under control. After a 10-month period in which the dominant policy concern has rightly been the state of financial markets, policy can begin to address pressing inflationary concerns during the remainder of the year. While it is too early to say that

the financial market turmoil has completely abated, the Fed's new lending facilities combined with an environment of low interest rates have gone some distance to return markets to more normal operation.

### **Some Implications for the Current Policy Environment**

In August of last year, the FOMC took the first of a sequence of policy actions that reduced the target for the federal funds rate 325 basis points, from 5.25 percent to 2 percent. The initial actions were motivated by turmoil in credit markets. By the end of last year, evidence of slowing economic growth emerged. By early this spring, many commentators and some economic forecasters were predicting that the economy was in or about to enter a recession. The most recent Blue Chip consensus forecast projects positive growth in real GDP for each quarter in 2008, though the projected growth in the second quarter is close to zero. The most recent quarter-by-quarter outlook from the Survey of Professional Forecasters is very similar to the Blue Chip consensus. Within the past month, consistent with some stronger-than-expected economic data, forecasters have generally backed off substantially in their estimates of the probability that the economy is now in or will soon enter a recession.

Why have forecasts become more optimistic through the spring? I think it is because financial market turmoil is waning. A financial crisis is, naturally, a time of great uncertainty, as market participants are all wondering what will happen next. Forecasters have to take into account the possibility that the crisis will worsen to the point that a great deal of harm is done to U.S. financial markets. My sense is that, during the first several months of this year, some forecasts were putting a high probability on

such an outcome. They were putting non-negligible weight on the prospect of the economy switching to an equilibrium in which financial intermediation activity would be sharply curtailed. Now, however, it seems that such a prospect is more remote. As the probability of severe damage to the financial system recedes, the likelihood of a measurable contraction in growth this year has lessened. These conditions complicate the inflation outlook, in which significant economic slack had been seen as helping to keep inflation in check.

Despite these complications for the inflation outlook, my view is that policy is appropriately calibrated at this time, given the current economic environment and the outlook for the next 18 months. I see several reasons why maintaining the current policy is a good option for now.

First, while the economy is clearly sluggish now, the FOMC has already reduced the target federal funds rate by 325 basis points. These policy actions were preemptive and involved more aggressive rate cuts than in previous episodes, such as 1990-91 or 2001. The rate reductions were based on forecasts that economic activity would slow in the face of contracting housing activity and substantial turmoil in financial markets. Growth has indeed been slow, at least for the first half of 2008, but that cannot now be justification for further rate reductions. Surprises to forecasts of economic activity, if any, have been to the upside. Acting preemptively means that patience is required when circumstances play out in a way that is consistent with the forecast. Further action in the absence of substantial forecast errors would be double counting: in effect, reacting twice to the same concern.

Second, the full impact of monetary policy actions is not realized immediately. It is likely that additional stimulus to economic activity from the monetary policy actions taken in January and March will peak in the second half of 2008. In addition, there is a fiscal stimulus program in place that may shift some spending into the second and third quarters of this year. Any additional monetary policy actions must be judged by their expected impacts in light of current forecasts of the evolution of the economy. The best judgment, as incorporated in current forecasts, is that the pace of economic activity will begin to strengthen in the second half of 2008 and throughout 2009.

Third, at the current federal funds rate target of 2 percent, real interest rates are quite low by historical standards. Short-term real rates—computed by subtracting near-term forecasts of headline inflation from nominal rates—are significantly negative. Three- to six-month-ahead headline CPI inflation forecasts exceed 3 percent; some forecasts for this period exceed 3.5 percent. Three-month Treasury bill rates are less than 2 percent. Even when evaluated against forecasts of core inflation rates, these yields are zero to slightly negative in real terms. Five-year inflation-indexed Treasury note yields are essentially zero.

In short, the Fed has created a low-interest-rate environment that should allow the economy to continue to adjust to the drag from the housing sector and the aftermath of financial market turmoil.

### **Headline versus Core Inflation**

Let me turn now to make a few comments on the issue of core versus headline inflation. Since July 2004, the FOMC has focused on inflation measured by the core

PCE price index in the semiannual Monetary Policy Reports. I think everyone in this room is aware of the fact that, for most of the time since 2003, headline inflation has exceeded core inflation. According to core PCE measures of the price level, prices are about 11 percent higher than they were in the beginning of 2003. But according to the headline PCE measures, prices are about 15 percent higher than they were in 2003. Unfortunately for all of us, we face the headline prices, not just the core prices. Many are asking, What are the relative merits of focusing on core rather than headline inflation?<sup>4</sup>

Core measures of inflation defined as excluding food prices have been constructed by the BLS at least since 1957. Core measures of inflation excluding both food and energy prices have been published since 1977. The rationale for these measures is not well documented, but it is likely that the original intent was to better reveal underlying inflation trends. Historically, real food prices have exhibited large transitory movements. Some of the major changes in real energy prices in the 1970s and mid-1980s also proved transitory. Under these conditions, a focus on core measures gave policymakers a clearer indication of changes in the trend of inflation that was subject to policy control. Much of the volatility of these prices originated with supply shocks in particular markets: droughts, crop failures, abundant harvests, OPEC boycotts, political disturbances in major oil-producing countries, and the collapse of the world oil market. Supply disturbances of this sort do not produce the persistent spreads between headline and core inflation measures that have been observed over the past five years.

I believe that consideration has to be given to the hypothesis that different forces have driven the relative prices of food and energy in the recent past—namely, shifts in

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<sup>4</sup> For a discussion of this issue, see Mark Wynne, “Core Inflation: A Review of Some Conceptual Issues,” Federal Reserve Bank of St. Louis *Review*, May/June 2008, 90(3, Part II), pp. 205-28.

demand in world markets. These forces are likely to persist for some time. In particular, I have in mind rapid increases in standards of living in large emerging-market economies. Associated with these increases in living standards are higher consumption of calories and higher consumption of energy and thus increasing demand in the global markets for these products. With low short-run elasticity of supply for food and energy production, these trends in demand generate trends in relative prices.

The best forecast is that China, in particular, will continue to grow at a rapid rate for the next decade. Longer-run elasticities of supply for agricultural products are likely substantially larger than short-run elasticities, and hence the recent trend in relative prices of food may be expected to moderate. Trends in relative energy prices may moderate with the emergence of new technologies. Nevertheless, a plausible case can be made that current trends in these relative prices will persist and that, therefore, headline measures of inflation will remain above core measures.

Should policymakers take into consideration persistent differences in headline and core measures of inflation? I believe that consistency requires attention to such differences in the formulation of policy. Unless there are compelling reasons to do otherwise, policy has to focus on the prices actually faced by households and businesses.<sup>5</sup> Persistent and substantial trends in other relative prices are not factored out in measuring overall inflation trends. The relative prices of computers, communications equipment, and consumer electronics, for instance, have been falling for decades. However, no one

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<sup>5</sup> One recent analysis of this issue is by Bodenstein, Erceg, and Guerrieri (2007), which provides some support for focusing on core inflation when energy prices are volatile. I think this is a good example of the type of research required, but I also think that conclusions in this area will be sensitive to the details of the model used and that the possibility of a relative price trend has to be addressed.

to my knowledge has argued that we are understating the fundamental trend in inflation because our core measures do not exclude these items.

Let me stress that I do not have an answer to this question, but I think it has become an important concern for the FOMC. Again, what is new here is relative price trends in food and energy that may plausibly be expected to persist for some time. If it were just a matter of the food and energy components being volatile, I think a theoretical case could be made that these prices contain too much noise and so should be ignored in day-to-day policy decisions. Historically, the ex-food and energy calculation seems to have worked well, even though arbitrarily ignoring certain prices is not very elegant. With relative price trends, the ad hoc approach to this question is becoming increasingly untenable.

### **Conclusions**

In conclusion, I appreciate having this opportunity to share with all of you some of my thoughts on the current state of the U.S. economy. While these are challenging times for monetary policymakers, I am cautiously optimistic that we can move into the second half of 2008 on firmer footing with reduced financial market turmoil, reduced drag from the housing sector, more rapid economic growth, and a renewed effort on keeping inflation low and stable.

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