

UNIVERSITY OF CHICAGO GRADUATE SCHOOL OF BUSINESS
DISTINGUISHED SPEAKER SERIES

Chicago, Illinois
March 7, 2006

.....

U.S. Economic Outlook

The latest economic headlines have generally been quite positive. Job growth has been solid in recent months. The unemployment rate has fallen to 4.7 percent, and manufacturing capacity utilization has risen a bit above its long-run average, so the bulk of our productive resources that were underutilized following the 2001 recession are now back at work. At the same time, core inflation remains contained.

Of course, there is one notable exception to the good news: low real GDP growth in the fourth quarter of 2005. Today, I will talk about what we at the Chicago Fed think these and other developments mean for the outlook for economic growth, inflation, and monetary policy in the U.S. I will also discuss a long-run issue facing policy makers: Should the Fed adopt explicit numerical inflation guidelines to help govern the conduct of monetary policy?

Outlook for economic growth

Let's start by reviewing recent developments. Typically, real GDP growth fluctuates a good deal from quarter to quarter. But the numbers we had seen since the last quarter of 2003 were all between 3.3 and 4.3 percent—what could be described as “shockingly boring.” Well, things got interesting last quarter: Real GDP growth was a surprisingly weak 1.6 percent. Much of this decline, however, reflects fluctuations in government spending, imports, and motor vehicle output that look to be temporary. Indeed, the most recent indicators are pretty positive: orders for nondefense capital equipment excluding aircraft surged in December and remained high in January; consumer spending has posted solid gains since October; and the data from the labor market have been strong. So I think that growth in output is rebounding from the low fourth-quarter number.

And looking beyond the near term fluctuations, I'd say that the outlook is good: Sound underlying economic fundamentals appear to be supporting self-sustaining economic growth. Importantly, the fourth quarter aside, the underlying trends in productivity—the ability of the economy to turn the hours that we work into the output that we produce—are quite solid.

Last month, the Federal Reserve Governors and Reserve Bank Presidents released their projections for the economy in our semiannual monetary policy report to Congress. The central tendency of these forecasts had real GDP increasing about 3½ percent in 2006 and in the 3 to 3½ percent range in 2007—close to many recent estimates for potential. The unemployment rate was expected to be in the 4¾ to 5 percent range in both years. With regard to inflation, the price index for personal consumption expenditures excluding food and energy was expected to increase about 2 percent this year and between 1¾ and 2 percent in 2007. Overall, this is a very favorable outlook, but of course, there are some risks.

One relates to home prices. Housing has been an area of strength throughout this business cycle, and we've seen strong increases in home prices. These higher valuations have increased homeowners' wealth, helping to facilitate more robust spending growth.

But many analysts warn that housing is overvalued. One way we can judge this is by looking at the price-to-rental ratio for housing; this is similar to using the price-dividend ratio to evaluate stocks. Nationally, the price-to-rental ratio has been rising sharply since the mid-1990s and currently is at its highest level ever. However, the price-to-rental ratio has risen only modestly in Chicago and most Midwestern cities; the largest increases have occurred in cities such as Miami, Phoenix, San Francisco, and Las Vegas. These differences highlight the local nature of housing markets. Indeed, even if there were large price declines in some cities, there probably would be little spillover to a more general drop in prices nationwide.

Furthermore, it's far from certain what will happen to home prices. Some of the increase in the price-to-rental ratio likely reflects real changes that have made housing more valuable relative to other investments. Financial innovations have improved the liquidity of housing investments, and the tax code has tilted even more favorably towards housing.

That said, we are seeing some softening in housing markets and more reports that home prices are increasing at a slower rate.

If housing does prove to be overvalued and home prices fall, residential construction would be adversely affected. Indeed, most forecasts for GDP that you currently see factor in some moderation in home price appreciation and residential investment. But history suggests that the impact on overall consumer spending would be more modest. Moreover, the changes in wealth and any related spending adjustments likely would be gradual. Depending on the configuration of other economic factors, such gradual changes would allow time for any appropriate recalibration of policy—if in fact one is needed.

Another risk to the outlook relates to energy prices. Crude oil prices have more than doubled since 2002. At the consumer level, not only are gasoline prices much higher than they were two or three years ago, but natural gas and home heating oil prices have also risen significantly. Given the large amount we spend on imported energy, oil and gas price increases represent a sizable transfer of income from U.S. consumers to foreign producers and can negatively affect economic growth.

So why haven't we seen a slowdown in U.S. economic growth over the past couple of years? First, solid productivity growth and accommodative monetary policy have offset some of the negative effect of rising oil prices. Second, the U.S. economy is less dependent on oil today. Twenty-five years ago, it took more than 15,000 BTUs of energy to produce one real dollar of GDP; in 2004, it took about 9,200 BTUs. And third, the increase in crude prices, after adjusting for inflation, is smaller than during the 1970s, and the level remains well below the peak reached in 1980 of \$86 per barrel in 2005 dollars. Of course, if prices move back up again noticeably, we could see some more troublesome effects on growth.

Outlook for inflation

In addition to being a risk to growth, rising energy prices are a risk to the outlook for inflation. When economists think about inflation, we like to look at so-called "core" measures, which strip out volatile food and energy prices. The readings on the core price index for personal consumer expenditures, the Fed's preferred measure of inflation, have stayed relatively low in recent months. Nonetheless, for most of the past year core PCE inflation has been running close to 2 percent, which is about the upper end of the range that I feel is consistent with price stability.

Even though core inflation does not include energy prices directly, businesses may pass through higher energy costs to the prices of their products, thus raising core inflation. Higher oil prices find their way into many products, some that you might not think of. To give one example, I've heard from a furniture manufacturer that increases in petrochemical prices have raised the cost of polyfoam used in sofas and chairs. He said, "This is the first time in 30 years that the stuffing costs more than the fabric."

However, suppose energy costs stabilize. Once businesses adjust their own prices to cover the higher costs, prices should not have to rise further, and inflation should return to its earlier rate. Thus, the energy price increases we have seen to date should just result in a one-time increase in prices and a temporary rise in the core inflation rate, not a sustained higher rate of core inflation. Indeed, this pattern can be seen in the slightly lower range for the FOMC's core PCE forecast in 2007 compared to 2006.

There are other concerns, however. First, with the unemployment rate currently at 4.7 percent and capacity utilization near its long-run average, it is important to ask how much slack remains in the economy. Many estimates place the natural rate of unemployment around 5 percent. While there is a great deal of uncertainty surrounding these estimates, an unemployment rate of 4.7 percent likely indicates a vibrant labor market in which more firms may begin to bid up wages to attract and retain workers.

Long periods of high resource utilization are often associated with rising costs and prices. For example, as recently as 2000, the unemployment rate fell to 4 percent and "Help Wanted" signs were everywhere. Businesses offered attractive wages to many workers, and these costs were passed along in the form of higher core consumer price inflation. We are not at that point yet. Increases in compensation have been relatively moderate, and strong trends in productivity have held back the rise in overall unit labor costs. Furthermore, manufacturers often tell me they have a great deal of flexibility to produce without generating cost pressures.

Still, given that the economy is operating close to potential, we need to be careful to monitor for the emergence of any economy-wide strains on resource utilization. Such strains would have the potential to increase inflationary pressures.

A second concern is if—for whatever reason—we indeed start to see a string of higher inflation numbers, then people may begin to expect permanently higher inflation. Such expectations could become self-fulfilling if businesses and households factor them into their spending and investing decisions. We could then have a sustained, higher rate of inflation. And this would have adverse effects on longer term economic performance. Fortunately, current financial market data and consumer surveys suggest that long-run inflation expectations remain contained. But, like resource utilization, these expectations warrant careful monitoring.

Policy discussion

In any event, it will take appropriate monetary policy to keep inflation and inflation expectations contained. As many of us on the FOMC have discussed, future policy action will depend on economic conditions and the outlook.

When the funds rate was very low, it was clear that the FOMC would need to remove the excess monetary policy accommodation at some point. The rate was far below any reasonable estimate of neutrality.

Conceptually, it's easiest to think about the neutral—or equilibrium—rate as being the rate consistent with an economy growing steadily along its potential growth path over a long period of time. One can make rough estimates of the neutral real rate by using historical averages of the real federal funds rates from comparable periods. To get a neutral nominal rate, you then add in a forecast of inflation. One can produce a range of estimates for the neutral nominal rate depending on the historical periods you choose and your inflation forecast. By such measures, we're currently in this neutral range.

Of course, we have to recognize that many factors can cause differences between the longer-run concept and what may be neutral policy over the short or medium term. For example, all else equal, stronger trends in productivity would raise the equilibrium real rate; in contrast, the increased willingness of foreigners to invest their savings in the U.S. would lower the rate.

But there is another very important point to emphasize. Even with the funds rate in the range of neutral, further changes in policy may be appropriate. The central tendency of the forecasts by FOMC members is that inflation will likely remain contained, and this is my view as well. Importantly, solid underlying trends in productivity should keep overall production costs in check. But, as I mentioned earlier, there are risks to the inflation outlook—namely, the potential for energy cost pass-through, pressures from increases in resource utilization, and rising inflationary expectations. And with inflation near the upper end of my comfort zone, an unexpected increase in inflation would be a serious concern, while a decline in inflation would be beneficial.

My views about policy will depend importantly on how various factors play out and affect the outlook for inflation and growth. In other words, monetary policy is conditional. As we've said many times, the FOMC will react to changes in economic prospects. Future policy is not predetermined, nor will it be a mechanical reaction to the next number on inflation or employment. Indeed, the next policy decision is much less certain now than it was when rates clearly were well below neutral. This increases the importance of economic conditionality in the policy decision.

As I've mentioned, a key factor we monitor closely is inflation expectations. If these expectations were to rise persistently, then policy clearly would have to be tightened further. Of course, other events could transpire that result in prospects for inflation expectations that would be consistent with a less-firm policy stance.

In the long term, inflation expectations are a function first and foremost of Fed credibility. Does the public believe that we will act to fulfill our commitment to achieving price stability? If this belief is widely held, then long-run inflationary expectations will be well anchored.

Questions regarding explicit numerical guidelines

Many commentators have argued that credibility can be enhanced if the central bank formally commits to pursue an explicit numerical guideline for inflation. Some say it's the best way to anchor inflationary expectations and to reduce policy uncertainty and risk premia to their appropriate levels.

In my remaining time I'd like to discuss this important question in some detail. Ben Bernanke, the new Chairman of the Federal Reserve, has long been a proponent of more explicit inflation guidelines. The FOMC clearly will be discussing this further, since there currently is no consensus within the Committee on the issue.

I am going to talk about some of the questions that I feel need studying before making a final determination.

The first issue is deciding what the number should be. Former Chairman Greenspan offered a nonexplicit definition of price stability: when businesses and households are not taking inflation into account in their economic decisions. How do we put a number on that? Recent history tells us this can be problematic. For example, in 1994, core CPI inflation was 2.8 percent. According to the minutes and transcripts, inflation was generally heading higher than most FOMC participants wanted. But that view was not universal. Many commentators thought an inflation rate of 3 percent was satisfactory and argued that the Fed shouldn't try to bring inflation down further.¹ Today I doubt many people would find 3 percent to be an acceptable point estimate for an inflation guideline, but there was a debate back then.

Even before we can give a number, we need to decide on a measure of inflation. And there are many of them to choose from: the consumer price index, the personal consumption expenditures index, and the GDP price index, to name only a few.²

When inflation rates are high, it typically doesn't matter which index is selected for the guideline, because all measures of inflation will be high and above the guideline. But when inflation is in the range of price stability, the choice of the index could matter. Seemingly small differences in measurement methods in principle mean that different indexes could send mixed signals to policy makers about the appropriate direction policy should take.

Also, as I mentioned earlier, the Fed thinks that the price index for personal consumption expenditures excluding food and energy is the best measure of underlying trends in consumer inflation. But does that mean it's the best index for a guideline? For example, the total CPI is used in many private contracts as well as the inflation adjustments in many tax and transfer programs. So should we be concerned about the CPI as well?

Another set of issues centers on the best way to specify the numerical guideline. Should it be a single hard number or should it be a range of inflation outcomes? The problem is to come up with something practical, yet still informative.

The advantage of a single number is that it's precise, so there is no question of how far you are from the guideline. Of course, actual inflation will inevitably fluctuate, and it's extremely unlikely that at any point in time inflation will be precisely at the guideline. So some proponents of inflation targeting prefer to specify a range of acceptable inflation outcomes. It's more feasible to achieve inflation rates within a range. Of course, this depends on how wide the range is. An incredibly wide one would be uninformative, so it's a nonstarter.

Under both systems, however, there are difficulties in communicating policy. In the first instance, it's communicating what kinds of small deviations from the single number we would be willing to ignore. In the second case, it's communicating what kinds of deviations within the range we would have to react to. We don't want to leave the public with the impression that there necessarily is a "zone of indifference" about inflation whenever it's in the guideline range. In either case, the difficult communications task would be to explain the role of economic conditions in determining why sometimes you act and other times you don't. I am sure that we will continue to be dealing with this in the coming months, even though we don't have an explicit guideline right now.

Furthermore, the policy prescription needs to include a time period for evaluating the inflation outcome against the inflation guideline. Empirical evidence indicates that monetary policy does not affect the trajectory of inflation before 1 year or, more likely, 2 years. So it's impractical to specify too short of a time period to reach the guideline. But if you pick a very long time period, say 10 to 20 years, it's doubtful that businesses and households would find it very useful for their financial planning. Many central banks that have guidelines refer to the time frame with the qualitative phrase: "over the medium term." But it is difficult to say precisely what this means—is it three years, or five, or ten? And is it even a constant time period?

There also is the issue of how our growth mandate interacts with a numerical guideline for inflation. As you may know, the Federal Reserve has a dual mandate: to foster not just price stability, but also maximum employment, which I associate with maximum sustainable growth. Now these are not independent: price stability is a prerequisite for achieving long-run sustainable growth. Structural features of the economy dictate the sustainable growth rate of GDP and the associated natural rate of unemployment. Some of these features include demographics and trends in productivity. The effects of these factors on sustainable growth and employment are difficult to measure accurately, can change over time, and, importantly, are not under the control of monetary policy. In the long run, inflation is a monetary phenomenon, but monetary policy cannot alter the natural rate of unemployment, and any influence that it has on the rate of sustainable growth is at most second order.

Still, monetary policy does influence the real economy in the short run, and the dual mandate puts equal weight on price stability and maximum employment. So how should policy act when there are short-run conflicts between the two goals? For example, suppose output is well below potential but inflation is high. Do we ease policy to stimulate growth or tighten policy to reduce inflation? And how long can we defer achieving one guideline at the expense of the other?

Finally, suppose a central bank successfully adopted a formal inflation guideline that respects the dual mandate, say by flexibly adjusting the time horizons for achieving the different guidelines. Would this policy look any different from current Fed policy?

Some academics who study inflation targeting central banks say no.³ They say that, effectively, the Federal Reserve does engage in a flexible version of inflation targeting. This is a bit puzzling since there are no announced explicit guidelines. Still, financial markets and the public do not seem to be bothered by the lack

of an explicit number for future inflationary expectations, and at the present time, inflationary expectations are well anchored. So our actual policy has successfully obtained one of the most important benefits ascribed to a regime based on formal guidelines.

Then what is it that distinguishes current policy from simple discretionary ones that have the potential to produce large inflations, like those in the 1970s? I think it's the fact that central bankers now know that, even without rigid rules or numerical guidelines, their actual approach to policy must be aimed at keeping inflation expectations anchored at a low level. As I noted, they see this as a prerequisite to achieving maximum sustainable growth over the long run. Central bankers also know that anchoring inflationary expectations sometimes requires preemptive policy tightening before the actual inflation numbers start to rise—moves that may prove unpopular with the public, but are necessary to keep inflation in check.

Conclusion

I've raised a lot of questions today concerning inflation guidelines. But a final point that I want to make is that this debate is going to be a healthy process. No matter what answers we come up with, we are going to learn more about the best ways to conduct monetary policy in our complicated and ever-changing economy. And as Chairman Bernanke has said, these discussions will take place with full consideration given to formulating such guidelines in the context of maintaining policy flexibility and respecting the Federal Reserve's dual mandate. He also said that he will propose further action only if a consensus can be developed among the members of the FOMC. Such consensus building is a hallmark—and, I think, a strength—of the Federal Reserve.

So, while I've heard people express concern about the changing of the guard at the Fed, I'm not concerned. I have very high regard for Ben Bernanke. And he is taking over a very strong institution. In the eleven years that I've been in the Federal Reserve System, the two things that strike me the most are the quality of the people and the collegial nature of the institution. This leads to sound economic analysis, healthy policy discussions, and well-thought-out decisions. I see no reason why that won't be the case in the future.

1. A sophisticated expression of this view was offered by George A. Akerlof, William T. Dickens, and George L. Perry, "The Macroeconomics of Low Inflation," *Brookings Papers on Economic Activity*, no. 1 (1996). It is based on the hypothesis that even though real wages determine purchasing power, workers have an extra aversion to seeing real wages lowered through a reduction in nominal wages. This results in nominal wages being sticky on the downside. These authors calibrate a model in which an inflation rate of 3 percent allows most realignments of real wages to occur without reducing nominal wages.
2. Most central banks that have targets use a consumer or retail index, and this has some grounding in economic theory since it is ultimately the well-being of consumers that matters for utility theory. For example, good business decisions among intermediate goods producers ultimately benefit consumers through their effect on final products and returns to investors who are also consumers.
3. See, for example, Marvin Goodfriend, "Inflation Targeting in the United States," NBER Working Paper no. 9981, September 2003.