Presentation to the California Chamber of Commerce San Francisco, CA By Janet L. Yellen, President and CEO of the Federal Reserve Bank of San Francisco For delivery Friday, December 2, 2005 11:00 AM Pacific, 2:00 Eastern

The U.S Economy: 2005 in Review and Prospects for 2006

Good morning, and thanks very much for inviting me today. I'm delighted to be here with you. As 2005 draws to a close, it's a good time to take a look back at the year that has passed and to think about what may lie ahead for the U.S. economy in 2006. In taking this retrospective and prospective approach, I'm going to organize my remarks around three broad topics. The first is employment and output growth. The second is inflation. Not surprisingly, energy prices factor significantly into developments in both realms and are relevant in shaping the risks going forward. My third and last topic is the conduct of monetary policy, and here I plan to touch on one of the legacies of Chairman Greenspan. As you no doubt know, at the end of January, he is stepping down after 18 years of distinguished service to the Federal Reserve and to the country, and Ben Bernanke will then, in all likelihood, have been confirmed by the Senate and will therefore be in a position to assume the Chairmanship. The Greenspan legacy I want to focus on is this: the public's increased confidence in the Fed's commitment to price stability, and the Fed's increased transparency about monetary policy. In particular, I will give you some of my thoughts about how greater central bank credibility and transparency enhance the conduct of monetary policy and the stability of the U.S. economy.

Looking back at 2005, clearly one of the most dramatic events was the one-two punch of Hurricanes Katrina and Rita. It goes without saying that the economic

consequences for the Gulf Coast region have been enormous. More than a million people have been displaced, thousands of businesses and jobs have been disrupted or destroyed, and the infrastructure—notably for energy—took a severe beating.

When the hurricanes hit at the end of August, the economy had been doing quite well. Over the preceding two years, monetary accommodation and robust productivity growth supported economic activity. Real GDP grew steadily at, or above, its potential or long-run sustainable pace, which is estimated at three to three and a quarter percent. This pattern continued even during the third quarter, when real GDP is estimated to have grown by four and a quarter percent. With this stretch of near or above-trend growth in economic activity, slack in resource use has gradually, but steadily, diminished—that is, jobs have increased by more than enough to absorb a growing workforce, and the unemployment rate has declined. Indeed, for October and November, unemployment came in at 5 percent, a number that's near conventional estimates consistent with socalled "full employment." At the same time, capacity utilization in American industry has risen—although, at 79 percent, it is still somewhat lower than its long-run average. Moreover, signs point to another robust performance in the fourth quarter, so growth for the last half of 2005 could well come in noticeably above the potential rate.

This positive performance suggests that the overall economy has been quite resilient in absorbing the impact of the storms. For 2006, it seems likely that this strength will continue in the first half, as rebuilding kicks in. Then, in the second half, a couple of factors are likely to cause economic growth to settle into a trend-like pattern. One of the factors is the winding down of the rebuilding effort. The other is the lagged effect of

monetary policy tightening; in other words, tighter financial conditions will have some dampening impact on interest-sensitive sectors, such as consumer durables and housing.

An important factor shaping the outlook, of course, is energy prices. Over the year and a half before the storms, energy prices had surged worldwide, with the price of oil nearly doubling and the price of natural gas rising by about two-thirds. Energy prices spiked following the storm, but they retreated fairly quickly. At this point, oil and wholesale and retail gasoline prices are actually *below* those prevailing before the storms, though they are still a good deal higher than they were a year and a half ago. Finally, natural gas prices have fallen substantially, but now are above pre-hurricane levels.

Of course, we normally would expect the year-and-a-half-old energy price surge to push down spending. This is because the additional amount that households are forced to spend for the same quantities of gasoline, natural gas, heating oil, and other energyintensive products tends to diminish their ability to spend on other goods and services. Likewise, firms feel the bite in narrower profit margins, which may crimp the amount they decide to spend on investment in plant and equipment.

Recent data suggest, however, that consumer spending has held up well so far. For example, although personal consumption expenditures were up only modestly in October, they were held down by a big drop in auto sales that probably reflected reduced sales incentives; outside of autos, personal consumption expenditures were robust, despite the surge in energy prices and plummeting confidence. Indicators of business spending and output also have held up well. It is possible that higher energy prices *have* had a negative impact on consumer spending, but the drag from this factor has been offset by other stimuli to spending such as rising home prices and growth in disposable income.

But for now, at least, it appears that the national economy has come through the twin shocks of the hurricanes and the year and a half long escalation in energy prices quite well. Concerns about downside risks to the economy seem much smaller than just a few months ago.

This is definitely good news, but uncertainties do remain—especially during a period like this, when the stance of monetary policy is changing. It's inherently difficult to judge the exact magnitude and timing of the effects of removing policy accommodation. Therefore, it will be very important to monitor this situation in the months ahead, particularly if, as seems likely, there is cooling in the housing market and other interest-sensitive sectors.

My focus so far has been on developments that relate to the Fed's objective of keeping the economy operating in the vicinity of full employment. However, like central banks worldwide, the Federal Reserve is also keenly focused on maintaining price stability. One particularly comprehensive measure of consumer prices that the Fed monitors closely is the index for personal consumption expenditures—the so-called PCE price index. Inflation in this measure has jumped to 3.3 percent over the last twelve months, reflecting large increases in energy prices. However, energy prices, like food prices, tend to be quite volatile. So a better measure of underlying inflation—one that tells us more about where inflation is likely to be in the longer run—is so-called core inflation, which excludes the energy and food components. Inflation by this measure is up by a much more moderate 1.8 percent over the twelve months ending in October.

I have previously enunciated that, in my view, core PCE inflation in a range of 1 to 2 percent constitutes an appropriate price stability objective for the Fed. Since 1.8

percent is in the upper portion of this comfort range, I'd be happier if this measure were somewhat lower. And, indeed, it <u>is</u> lower if we look over a shorter horizon. For the *six* months ending in October, core PCE inflation came in at 1.6 percent at an annual rate which is near the middle of my preferred range. This suggests to me that core inflation has been essentially compatible with the Fed's price stability objective, even in the face of a rather large oil shock that started well before Katrina.

Looking ahead, I'm generally fairly optimistic about the future for inflation, though I do think there are upside risks—mainly having to do with energy prices—that require vigilance by the FOMC in the period ahead. Let me start with the optimistic factors. First, productivity growth has remained quite strong, and growth in labor costs has remained modest so far. Second, although there is probably little if any slack in labor markets at this point in the cycle, the economy does not appear to have overshot full employment. Furthermore, there still appears to be a bit of unused capacity left in the industrial sector.

With regard to energy, it's certainly a good sign that—*so far*—higher energy prices have not been passed through to higher non-energy or core prices to a significant extent. I want to emphasize the "so far" part of that statement, because any sign of a more significant pass-though would be a concern for monetary policy. One need only think of the 1970s to know what I'm referring to. At that time, higher oil prices were associated with a wage-price spiral that pushed inflation into double-digit territory.

Naturally, much research has gone into analyzing what happened during that period, and I'm glad to report that the research suggests major differences between then and now. One of the key findings concerns the role that inflation expectations play in

generating the wage-price spiral. To sum up a great deal of literature very briefly, the idea is that under some circumstances inflation expectations can be like self-fulfilling prophecies. If people expect higher inflation, they will behave in the marketplace in ways that will actually generate higher inflation; for example, they will rush to make purchases thinking that tomorrow's price will be higher than today's. And they will tend to build higher expected inflation into wage bargaining; this raises costs to businesses, which, in turn, may get built into the prices of their products. Unwinding the inflationary spiral is, to put it mildly, not fun. In the early 1980s, the Fed had to do it by slamming hard on the brakes, and the costs were high—the economy went through a large double-dip recession, and the unemployment rate hit 10 percent in 1982.

What's different now? Since the early 1980s, the Fed has continued to work to lower the inflation rate with considerable success, so that over the last ten years core PCE inflation has averaged a moderate 1.7 percent. With this history of low inflation, it's natural that the public would expect inflation to *remain* in a low range. As economists express it, inflation expectations have become "well anchored" to price stability—most likely because people are confident that the Fed will act to limit any potential rise in inflation. This may account for research results suggesting that, during this period, energy price increases have generally not been passed through to core inflation.¹

We actually have some evidence on people's current inflation expectations. One source of information comes from responses to surveys about inflation expectations. A University of Michigan survey taken shortly after the hurricanes hit recorded a large jump in inflation expectations—*for the overall CPI*—over the next

¹ Bharat Trehan, "Oil Price Shocks and Inflation," *FRBSF Economic Letter*, Number 2005-28, October 28, 2005.

twelve months, and a smaller increase in expectations for the next ten years. But I would not read too much into this, since the near-term survey results reflect the impact of energy price developments; of course, the higher near-term result also affects the average increase expected over the next ten years.

Another source of information on inflation expectations comes from analyses using a financial instrument that is called Treasury Inflation-Protected Security, or TIPS for short. The key feature of TIPS is that the payments to investors adjust automatically to compensate for the actual change in the CPI. By comparing yields on these securities with those on standard Treasury securities that are *not* indexed to compensate for inflation developments, we can estimate what the market thinks inflation will do over the life of the securities.

In other words, using this kind of analysis, we can estimate inflation expectations over various time horizons.² Compensation for average inflation over the next five years rose by about ¹/₄ percentage point in the month following Katrina, but has since dipped below pre-hurricane levels. Furthermore, it is notable that longer-term inflation expectations—those covering the period from five years ahead to ten years ahead—are slightly below the level that prevailed when oil prices started to rise in early 2004. This development supports the view that the public has confidence in the FOMC's commitment to price stability, even in the face of a large energy price shock.

This brings me to my last point, the conduct of policy. Clearly, for monetary policymakers, the public's confidence in our commitment to price stability is a very helpful thing. As I've just indicated, well-anchored inflation expectations *themselves* are

² Simon Kwan, "Inflation Expectations: How the Market Speaks," *FRBSF Economic Letter*, Number 2005-25, October 3, 2005.

likely helping to contain the inflationary pressures associated with higher energy prices. Therefore, policy's response to those pressures can be more tempered than "slamming on the brakes," and that means running less of a risk of pushing the economy into a deep recession. Public confidence is helpful in other circumstances, too. If there's a sudden drop in demand, the Committee can ease to offset it without worrying that the public will think policy is on a path toward *overstimulation* that would generate inflation. Stable inflation expectations allow monetary policy to respond to shocks without having to pitch the economy too far in one direction or the other; in other words, credibility facilitates the pursuit of our dual mandate for price stability and "full" employment—the two main policy goals articulated in the Federal Reserve Act.

How has the Committee established credibility? First, of course, as I said, inflation has come down markedly over the past twenty-five years and stayed low for quite some time. I don't want to give *all* the credit for this to monetary policy, because, of course, rapid productivity growth has played an important role as well. But the Committee *has* been diligent about the *actions* it has taken—setting policy to lower inflation gradually and to keep it low.

In keeping with this strategy, at the November meeting, the Committee voted to continue its gradual removal of policy accommodation and raised the federal funds rate target to four percent. The objective of this policy action—as well as any future actions—is to position the economy on a trajectory characterized by "full employment" and price stability. Such a so-called glide path requires that as slack in labor markets is absorbed, real output growth must converge toward a sustainable long-run pace at the same time that inflation is at its desired rate.

In addition to actions such as this, I believe the Committee has reinforced its credibility with the public by becoming more transparent and focusing on communication. By this I mean that the Committee has made a significant effort to let the public know what it has done and why in recent years. Let me recount quickly the steps toward greater transparency which began in 1994. First, the Committee started issuing post-meeting press releases that explicitly announced changes in the federal funds rate target; then it added descriptions of the state of the economy and the rationale for the policy action to the release; then it introduced a statement describing the "balance of risks" to the outlook; then it began releasing the votes of individual Committee members and the preferred policy choices of any dissenters; then it added explicit language concerning *future* policy to its post meeting press release; and finally, it decided to release the minutes of its meetings with a much shorter delay—only three weeks instead of five to eight weeks—so that now the minutes appear *before* the next meeting, instead of after it.

Transparency is helpful not only in building credibility, but it is also helpful in another important way. By letting everyone in on its current thinking, the Committee helps to align expectations, including those in financial markets, with its best estimate of where policy is likely to go. A good example of this was in 2003, when it appeared that there was a threat of outright deflation. This was a potentially serious situation and the Committee wanted to lean on the side of an accommodative policy until the threat had passed. The statement said that "In these circumstances, the Committee believes that policy accommodation can be maintained for a considerable period." I think this

forward-looking language was helpful in keeping long-term interest rates lower than they otherwise would have been, which helped to reduce the risk of deflation.

Another example is what happened following the recent hurricanes. Before the September FOMC meeting, there was a great deal of speculation about the Committee's response to the potential for a simultaneous slowdown in growth and rise in inflation. The September release stated that "While these unfortunate developments have increased uncertainty about near-term economic performance, it is the Committee's view that they do not pose a more persistent threat." It went on to say that, "the Committee believes that policy accommodation can be removed at a pace that is likely to be measured." I believe that these clarifications and signals about future actions helped avoid confusion about the Committee's perspective and contributed importantly to making policy more effective.

As I said, the sentences about where policy is likely to go reflect the Committee's best estimates. And best estimates, of course, are always subject to revision. So I want to emphasize that, in my view, the Committee must always have the flexibility to respond to changing circumstances. Indeed, the statement typically includes language along those lines. For example, in November, the statement said "the Committee will respond to changes in economic prospects as needed to fulfill its obligation to maintain price stability."

If you look at the minutes from the November meeting, you will see that the statement is currently a subject of discussion. Two phrases in particular are at issue: "remove accommodation" and "at a measured pace." While it seems unlikely that the end of the current tightening phase is yet at hand, there obviously will come a time when these two phrases are no longer appropriate, and other changes to the statement may be

needed as well. As the November minutes suggest, going forward, the Committee will pay close attention to incoming data and weigh options carefully in assessing the stance of policy and the wording of the statement.

I started this discussion of the conduct of policy by saying that public confidence in the Committee's commitment to price stability is a helpful thing. As I've indicated, I believe that this public confidence has strengthened under Chairman Greenspan's leadership of the Fed, with years of consistently low inflation and a communication strategy that has made the conduct of U.S. monetary policy more transparent to the public. I'd like to close by saying that public confidence is also a very valuable thing and like all valuable things, it is hard to win and easy to lose. For my part, this must mean ensuring—in both deeds and words—that, as developments unfold, our economy does not suffer from an unacceptable rise in inflation.