

Presentation to the University of California at Berkeley Boalt School Alumni
San Francisco, California
By Janet L. Yellen, President and CEO of the Federal Reserve Bank of San Francisco
For delivery March 2, 2005, 6:05 PM Pacific Time, 9:05 PM Eastern

Prospects for the U.S. Economy

Good evening, and thanks for the warm welcome. I'm delighted to be here. I plan to give you my thoughts on the prospects for the U.S. economy and the implications for monetary policy. As always, my remarks reflect my own views, and not necessarily those of others in the Federal Reserve.

Let me start with a little background. When I set off to Washington a decade ago to become a Fed Governor, a friend gave me William Greider's *The Secrets of the Temple* to read. He thought it would be good preparation. As the title of the book suggests, the Fed was not considered an open, transparent or communicative institution. Indeed, most central banks for centuries had cultivated the image of being powerful and secretive.

The world has changed a lot since then. Several countries have now followed the lead of New Zealand which, in 1990, became the first country to adopt a strategy for conducting monetary policy known as inflation targeting. Inflation targeting is a highly transparent regime in which a central bank publicly specifies a numerical inflation objective—typically a range—and routinely issues reports detailing its performance in meeting that objective. The central bank must explain the reasons for any deviations that occur. New Zealand went so far as to specify that the Governor could be dismissed for failing to attain the target. The Bank of England not only has a numerical inflation target but also gives explicit probabilistic assessments of the odds of alternative outcomes via a series of so-called “fan charts.”

Perhaps one day the Fed will adopt an explicit numerical inflation objective. It has not gone so far yet, but over the past decade, the Federal Open Market Committee has taken many steps to improve its communications with the public, the markets, and the press, and thereby its transparency.

The rationale for increased central bank transparency is highly practical—not simply ideological. The more people understand about the goals of monetary policy, and the Committee’s strategy to achieve them, the more effective policy can be. One reason is because people’s *expectations* about future policy actions have a strong influence on today’s longer-term interest rates and on financial conditions more generally—including the value of assets like equities and the dollar. And it is these broader financial conditions that influence people’s and firms’ economic decisions and plans. If the Fed’s only leverage were on the overnight federal funds rate governing lending of deposits between financial institutions, it would have little effect on the economy. Better communication both strengthens and speeds the impact of the Fed’s policy moves on the economy.

Improved understanding of the Fed’s inflation objective can also serve to anchor inflationary expectations. That gives the Fed more latitude to respond to the adverse real economic impact of supply shocks, such as an increase in the price of imported oil—without touching off an expectations-led, destabilizing wage-price spiral. So, greater transparency can actually lead to better economic performance.

I’ll give you some examples of the steps the Fed has taken toward greater transparency. During the Greenspan era it became standard practice for the Committee to release an explicit statement following the end of a meeting announcing its policy

actions. Before that, Fed watchers had to infer policy changes from the Fed's behavior in the open market.

Over time, the amount of information in that statement has also gradually increased. For example, the Committee introduced language in 2000 describing its assessment of the balance of risks with respect to each of its objectives—price stability and growth. Then, in 2003, the statements included explicit discussions concerning likely future policy actions. This was a controversial step. It was taken because the Committee, probably for the first time since the Great Depression, became concerned about the risk of deflation and the fact that the federal funds rate, at 1 percent, was about as low as it can go. Beginning in August 2003, it sought to condition market expectations about future policy with the explicit statement that “policy accommodation can be maintained for a considerable period.” This strategy likely served to hold down long-term interest rates and stimulate economic growth.

The most recent move toward increased transparency, which began at the end of last year, has been to speed up the release of the minutes so that they're available *before* the next meeting, rather than shortly after it. This is significant because it gives the public more information in assessing the Fed's next policy decision.

The minutes from the January meeting—released a week ago Wednesday--reiterated the views in the Committee's statement after the meeting ended. It noted that, at present, inflation and longer-term inflation expectations remain well-contained, output appears to be growing at a moderate pace, and the risks to price stability and sustainable growth for the next few quarters are roughly equal. As a result, policy accommodation most likely can be removed at a measured pace.

But there are some big differences between the statement and the minutes. For example, the minutes provide a wealth of information on the nuanced views of all 19 participants in the discussion—one sees the full range of opinions in gory detail, rather than just the consensus. In addition, the minutes for the January meeting contain a discussion of a longer-term topic the Committee considered--namely, the pros and cons of formulating an explicit numerical definition of the price stability objective of monetary policy. The pros were basically the ones I already noted---a numerical objective might anchor inflation expectations, help with communication about likely future policy actions, and also provide greater clarity for Committee deliberations. The cons were that it might appear to be inconsistent with the Fed's dual mandate of fostering maximum sustainable employment as well as price stability and that it might constrain policy at times. It was a lively discussion that may be rejoined in the future. Although I have some sympathy with the con arguments, on balance, I generally favor increased transparency and think the benefits of establishing a numerical objective are likely to outweigh the costs.

Does this description entice you to want to read the minutes? Well, before you run out to download your own copy, let me be honest. The text will not rivet you with an action-packed, blow-by-blow account of clashing opinions. But it does lay out a range of issues--short-term, medium-term, and long-term--that the Committee is worried about. And that's very fitting. After all, the classic description of Fed officials, and of central bankers generally, is that we're people who are paid to worry about things.

U.S. economic prospects

With that bit of background, let me turn explicitly to my personal views concerning the outlook for the U.S. economy—particularly the likely evolution of output, employment, and inflation. Then I'll spend a little time going over some of the things that seem to me worth worrying about. Before I begin, I'd like to emphasize that my assessment of the outlook for the economy is quite consistent with the FOMC statement—that the risks to moderate growth and price stability are both balanced.

First, I'll briefly review where we are in terms of the real economy and inflation and how we got here. According to the National Bureau of Economic Research, which is the semi-official arbiter of business cycle peaks and troughs, the U.S. economy has been expanding since November 2001. Last summer, however, there was widespread concern that the expansion might falter. Consumer spending, which has been the mainstay of this expansion, suddenly and substantially slowed. It seemed likely at the time that energy prices were a culprit. Energy prices had increased a lot, and that increase took a big bite out of consumers' wallets. It had the potential to noticeably depress spending on a wide range of other goods and services. The hope was that the impact on spending would diminish over time and the growth rate of consumer spending would spring back.

That is exactly what has happened. Consumer spending, and the economy overall, have proven quite resilient. Investment spending by businesses has also picked up substantially. I now feel that we've seen enough positive signs to be reasonably confident that the expansion is self-sustaining. Over the past year, output has grown at just under 4 percent, noticeably above trend, which is estimated to be 3-1/4 to 3-1/2

percent. And recent data show strength in business investment in equipment and software, consumer spending, and housing.

In terms of the labor market, the expansion began as a jobless recovery, but the data on job creation have been consistently positive for most of last year. Taking the average over all of 2004, the economy gained 181,000 jobs per month. In January it added another 146,000 jobs, and the unemployment rate fell to 5.2 percent, reasonably close to common estimates of “full employment.” Other indicators, however, including the fraction of the population that is employed and measures of job vacancies suggest that quite a bit more slack remains than might be surmised from the unemployment rate. The record of job creation during the past year is by no means spectacular, but it’s good enough to suggest firming in the labor market and a gradual elimination of remaining slack. I would note that it takes a gain of about 125,000 to 140,000 jobs per month to match labor force growth, holding unemployment constant.

Now, the outlook for inflation. The Committee tends to focus more on core inflation—that is inflation excluding volatile food and energy prices--and probably the best measure of it is the personal consumption expenditures, or “PCE” price index. This measure’s behavior over the last twelve months has been generally quite reasonable—around the value I would endorse as a numerical, long-run inflation objective if the Committee ever were to adopt one. It rose at 1-1/2 percent in 2004, up from just over 1 percent in 2003—a period in which the Committee was worried that inflation might drop to a dangerously low level. The uptick this year probably reflects in part the pass-through of higher prices for oil, commodities, and imports. Given that I think the economy will continue to grow modestly above trend and that inflation expectations will

remain stable, my expectation is that inflation in 2005 will be much as it was in 2004. I'd consider this an excellent outcome, and I see the risks to it as roughly balanced.

Worries

But, as I said, my job is be a worrier, so now let me turn to my list of worries—developments or potential developments that could have an impact on economic activity and inflation. My list won't be exhaustive--I'll keep it to just five items, which are not in any particular order of concern. They are: oil prices, the trade gap, the saving rate, productivity, and fiscal policy.

Worry #1—oil prices. As I said, consumer spending has been remarkably resilient in the face of higher oil prices, but the evidence does suggest that there was some negative impact on spending over the past year and oil prices have again ratcheted up over \$50 per barrel. In terms of inflation, we have seen some modest upward pressure coming from higher oil prices in the past year. The key question is whether this upward pressure on inflation will persist or intensify. The answer depends on at least two factors. One, obviously, is whether oil prices rise further. This is not what futures markets are forecasting, but it is a notoriously tricky thing to predict. The second is whether the effects on inflation today are changing people's *expectations* about future inflation. As I indicated at the outset, if people begin to expect higher inflation because of the current impact of oil prices, we could face a kind of scaled down version of the devastating wage-price spiral we lived through in the 1970s. The good news is that evidence from financial market indicators, surveys, and recent patterns of labor compensation all indicate that long-term inflation expectations have been extremely stable. Presumably,

this reflects the market's view that the Fed will continue to demonstrate that it's willing to do what's necessary to ensure U.S. price stability.

Worry #2—the trade gap. This has risen from near balance in the mid-1990s to a (nominal) deficit of almost \$700 billion now. By reducing the need for domestic production of goods and services, the trade deficit subtracted about three quarters of a percentage point from real GDP growth in the first half of this year. Whether the trade gap will narrow depends—in part—on the strength of economic growth among our trading partners, because that affects demand for our exports. However, most of our major trading partners have had only moderate growth recently. So long as these conditions prevail, they won't provide much impetus for growth in our own economy.

Of course, prospects for the trade gap also depend on the prices of goods produced in the U.S. versus those produced abroad. It's true that non-oil import prices have risen modestly over the past year, while the prices of U.S. exports have declined relative to foreign price levels. Such price shifts do tend to curb imports and boost exports over time. But they're hardly enough to narrow the gap very quickly.

Worry #3—the low saving rate. The personal saving rate has fallen over the past decade from about 7 percent to under half a percent in the third quarter of this year. One reason that consumers are saving so little out of disposable income is that their wealth has been on the rise; in the latter half of the 1990s, rising stock prices had a lot to do with the increase in wealth, but more recently, the main impetus has been house price appreciation. With interest rates rising now and housing prices unlikely to continuing advancing at their recent robust pace, consumers will need to curtail their spending to keep wealth growing in line with income. In other words, the saving rate might rise to

more normal levels. If this happens, the falloff in spending growth by consumers could have a significant effect on overall economic activity.

Worry #4---productivity growth. The concern here is that some recent developments hint at a slowdown in productivity growth. Slower productivity growth would have negative consequences for economic activity and would boost inflation because less rapid productivity growth translates into more rapid increases in firms' production costs. One development hinting at slower productivity growth is the recent moderation in the pace of price declines for high-tech goods. This could imply that technological progress is slowing to some extent. Another is the productivity data themselves. Until recently, the productivity news was exceptionally good. Since the middle of the 1990s, the U.S. has been enjoying strong productivity growth. In the latter half of that decade, the pace of productivity growth was around 2-1/2%, a speedup of about 1% relative to the 1973-1990 period. It is now recognized that that speedup was a key reason why unemployment was able to drift so low without igniting inflationary pressures—quite the contrary, inflation fell. Beginning in 2001, productivity grew even faster—at an amazing 4% rate.

The very recent data have not been as good. In the last half of 2004, productivity growth slowed sharply—averaging less than 2 percent in the third and fourth quarters.¹ Though these numbers seem to confirm suspicions of a slowdown, I'd have to say I'm not convinced on several counts. One is simply that productivity data are very typically quite volatile, so you just can't make that much out of the performance over a few quarters. Second, the concern is not whether productivity growth will remain at that

¹ The official numbers show average growth of 1.3 percent. However, with fourth quarter real GDP having been revised up from 3.1 to 3.8 percent, it appears likely that the fourth quarter productivity number will be revised up as well.

amazing 4% rate—in fact, few economists would expect to see that. Rather, the issue is whether productivity growth will remain at the current estimate of its trend rate, which, according to several leading experts, is around 2-1/2%. If it does, that would be very good news indeed. It would support robust output growth and help keep inflation well-contained.

My view is fairly optimistic. I think there is some evidence that the economy is continuing to reap productivity gains from much of the investment firms and people already have made. These reasons are laid out in a growing literature on technology and productivity, much of which focuses on the significant lag that often exists between the time that firms invest in technological capital and the time they benefit from greater output and higher productivity. What takes time is the human element. People need time to learn how to get the most out of the technology they have. For example, one of our contacts at the Fed—a lawyer!—told us that his firm had recently discovered they could use search engines, rather than lawyers and paralegals, to look for incriminating evidence in emails. Beyond developing proficiency, people also need time to figure out how to reorganize their work processes to maximize the benefits of the technology they have. For example, Sam Walton argued that he benefited in the 1980s and 1990s from knowledge he had accumulated in the 1960s and 1970s, when he flew around the country visiting competing discount stores and attending IBM conferences. These anecdotes and analyses suggest to me that this learning and reorganization is still ongoing and is likely to play out for a good while, providing a continuing boost to productivity growth.

Worry #5---fiscal policy. Fiscal policy has been very stimulative in recent years—we've had two large tax cut packages and an increase in spending on defense,

Iraq, Afghanistan, and homeland security. In principle, it is appropriate for fiscal policy to stimulate demand during a recession, when private sector spending is sluggish. However, the policy went well beyond these desirable countercyclical effects. The tax cuts have mushroomed the deficit for the long term at a time when the baby-boomers are becoming golden-agers and when the costs of retirement programs are set to soar. In fact, Social Security, Medicare and Medicaid are projected to rise dramatically as fractions of GDP over the next several decades. Currently projected budget deficits are unsustainable and will ensure a low level of national saving. Conventional economic analysis suggest that this situation is likely to raise long-term interest rates, crowd-out business capital investment, depress productivity growth, and exacerbate the current account deficit.

Monetary Policy

I'll conclude with just a few thoughts on monetary policy. To assess the stance of monetary policy, economists commonly compare the inflation-adjusted level of the federal funds rate to a benchmark rate called "neutral." The neutral real federal funds rate is defined as the rate that would be consistent with full employment of the economy's labor and capital resources over the medium term. Efforts to quantify this rate, via statistical techniques or model-based simulations, take into account factors such as productivity growth in the economy, the stance of the fiscal policy, and the magnitude of the trade deficit that conceptually affect this neutral rate. Because these factors vary over time, the neutral rate also tends to change over time. In addition, I should emphasize that estimates of the neutral rate are highly uncertain. That said, reasonable estimates place the neutral real federal funds rate in the range of 1.5 to 3.5%. With

inflation now in the vicinity of 1.5%, the associated value of the nominal federal funds rate corresponding to “neutral” ranges from 3 to 5 percent.

Judged from the perspective of a neutral policy stance, monetary policy at present is accommodative. At 2 ½ percent in nominal terms (about 1% in real terms), the federal funds rate remains below the lower bound of the estimated neutral range. An accommodative monetary policy stance is appropriate when there is excess slack in the labor market—the current situation—or when inflation is below desirable levels. In my judgment, inflation is now at a level consistent with price stability. With slack in the economy diminishing, the degree of monetary accommodation also needs to diminish over time, toward neutral, for inflation to remain well contained. The Committee has stated for some time that, with underlying inflation remaining low, policy accommodation can be removed at a pace that is likely to be measured. In fact, we have raised the rate by 25 basis points at each of the last six meetings. However, it should be obvious that the closer the actual rate gets to the neutral range, the more carefully the Committee will need to consider each successive increase. In other words, the pace of removing policy accommodation must, in reality, depend on how economic activity and inflation actually develop. Moreover, these developments themselves could affect the Committee’s judgment concerning the momentum in aggregate demand or supply and thus the real federal funds rate corresponding to a neutral policy stance.

If the pace of economic activity accelerates and labor market slack erodes more quickly than expected—or if some of the upside risks to inflation materialize—it would probably be appropriate to remove accommodation more rapidly. If, alternatively, the expansion falters or we experience some of the downside inflation risks, there are likely

to be more opportunities for the Committee to pause. Policymakers could be confronted with more difficult choices if output growth and inflation move in opposite directions. Naturally, risks to both growth and inflation abound. Nevertheless, I would reiterate that at present, the economy appears to be well positioned for healthy economic growth with stable inflation going forward. The upside and downside risks to both objectives appear to be roughly balanced.

#