

Speech to the Arizona Council on Economic Education  
Scottsdale, Arizona

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### The U.S. Economy in 2007: Prospects and Puzzles

Good afternoon, everyone. It's a pleasure to be here in Scottsdale, and it's a special pleasure to have the chance to speak before the Arizona Council on Economic Education. As President of the San Francisco Fed, I wholeheartedly support the role our Bank plays as a "key partner" in your efforts. The San Francisco Fed and, I should add, the whole Federal Reserve System, place high priority on economic education and our partnership with the Council is part of a range of programs and activities to inform and instruct the public on economic issues. The Fed's emphasis on economic education reflects our recognition that wise financial planning and decisionmaking are critical to any individual's economic security. Beyond that, we recognize that an economically informed public is critical to our mission in monetary policy.

Of course, even if I were *not* a Reserve Bank President, I *still* would applaud your efforts. As you know, I share with you a long history of being an economics educator myself, although my work has been with students at the undergraduate and graduate levels and not in the grade schools. In fact, I have heard about the new mandated economics curriculum for K-12 students in Arizona, and it looks pretty ambitious—introducing the concept of opportunity costs to third-graders, for example! It makes me think how much easier my job at Berkeley might have been if more of my students had had a grasp of such concepts before they walked into my class!

Today I'm going to speak to you not as a professor, but as a national monetary policymaker. So my discussion will center on recent developments affecting employment, output, and inflation in the U.S. economy and what they may portend for the future and especially for the conduct of monetary policy. In doing so, I will spend some time focusing on an emerging puzzle in the data: why is the labor market apparently going gangbusters, while growth in real GDP has turned in only a middling performance on average in recent quarters?

Before I begin, let me note that my comments represent my own views and not necessarily those of my colleagues in the Federal Reserve System.

In describing the economy's recent growth performance as "middling," as I just did, I was not making a pejorative judgment. On the contrary, this relatively modest pace of growth is roughly what I would have expected, given the course of monetary policy. As you no doubt remember, the Federal Open Market Committee began to remove monetary stimulus in mid-2004, after a long stretch of keeping the federal funds rate—our main policy tool—at a very low level. Altogether, there were 17 quarter-point increases in the funds rate over about two years. During much of that time, the economy averaged solid growth, and the labor market tightened, with unemployment declining about a full percentage point to 4.5 percent, an exceptionally low level by historical standards. The object of the policy tightening was to slow the economy's growth to a more sustainable pace and to foster a gradual decline in inflation, promoting price stability. In August of last year, the Committee voted to "pause," that is, not to raise the funds rate another quarter point, but to leave it at 5¼ percent. By then, some of the

effects of the earlier increases were being felt, as the economy showed signs of slowing, and this gave some sense of reassurance that inflation was likely to moderate from an elevated level. The aim of these policy moves, to my mind, at least, was thus to set the economy on a glide path for the proverbial “soft landing”—an orderly slowing of growth that avoids the risk of a severe downturn while producing enough slack in labor and goods markets to relieve inflationary pressures and, indeed, to bring inflation down gradually to a more acceptable level than it has registered over the prior year or so.

In large measure, the economy has moved within range of this outcome. Since the stepwise increases in the funds rate began, short- and intermediate-term interest rates have risen substantially. For example, Treasury bill rates are up by more than 3½ percentage points from mid-2004. It’s true that long-term rates, including conventional mortgages, are actually down a bit over this period. However, variable mortgage rates have risen along with short-term rates.

The overall effect of such rate changes has been to reduce demand. For example, although long-term fixed mortgage rates have not changed much, the rise in variable mortgage rates probably has contributed to the housing downturn, which has been a drag on the economy. I should note, however, that interest rates are not the only culprit. It’s likely that the recent cooling also is a necessary correction after years of rapid run-ups in house prices that ultimately proved to be unsustainable. Nationally, housing permits are down by more than 30 percent from a year ago, and inventories of unsold houses are up significantly. The national data on residential investment reflect these developments and enter directly into the calculation of real GDP growth. After adjusting for inflation, (real)

residential investment registered its fourth straight decline in the third quarter, which held overall real GDP growth down by a substantial 1¼ percentage points. The partial data we have on the fourth quarter suggests that there was a similar effect then.

While the decline in housing activity has been significant and will probably continue for a while longer, I think the concerns we used to hear about the possibility of a devastating collapse—one that might be big enough to cause a recession in the U.S. economy—have been largely allayed. As I mentioned, long-term rates have remained low, and that has helped to cushion the downturn in housing activity. Likewise, the fears about plummeting house prices have not materialized at the national level, though some pockets of the country have seen house prices actually decline. Phoenix provides a striking example of how the market has turned around: sales cancellations have been rampant on new homes, and, after rising about 40%-50% in 2005, in 2006 prices on existing homes flattened out and perhaps even declined a bit by the end of the year. It would not surprise me to learn that some of you have directly observed recent price declines in this area. But for the country as a whole, house prices have continued to appreciate, though obviously at a much more moderate rate than they did earlier. The concern here was that a significant fall in the prices of houses, which make up such a significant part of so many people's wealth, could lead to a weakening in consumer spending. Since consumption expenditures represent two-thirds of real GDP, even relatively modest effects of declining housing wealth could put a noticeable dent in overall economic activity. While slower house price appreciation is undoubtedly imparting less impetus to consumer spending now than during the years of rapid run-ups, consumer spending remains solid overall, outpacing real GDP growth in the second half

of last year. We have seen few signs of substantial negative spillovers from weakness in housing markets to consumer spending.

Looking at other sectors of the economy, we see a pretty robust picture, for the most part. Business demand has been solid, fueled by high profits and relatively favorable financing conditions, leading to healthy growth in spending on business investment in equipment and software, especially in the high-tech industries. Moreover, spending for the construction of nonresidential structures advanced smartly last year, and promises to remain robust for a while longer. For example, outlays on drilling and mining structures have continued to increase in response to oil prices that are still high by historical standards, though the pace of investment is moderating. Furthermore, fundamentals in commercial real estate markets improved last year, increasing demand for commercial space from office parks to warehouses. Going forward, even at a more moderate pace of economic expansion, private forecasters expect the positive trends in commercial real estate to continue but to moderate over the year as capacity comes online.

In addition to housing, auto production has been a drag on the economy during the past few quarters. The auto industry has felt the effects of high oil prices and people's growing preferences for more fuel-efficient vehicles. That has been good news for some of the foreign automakers, but not such good news for some U.S. automakers, for whom SUVs and trucks have been a key source of strength. As the demand for these vehicles dropped, producers found themselves holding unsustainably high inventories. So it's little wonder that they moved to ramp down production. These production cuts slowed

overall real GDP growth in the U.S. in 2006. However, once the adjustment to a lower level of inventories is reached, probably in the not too distant future, this factor will cease to hold down growth in the U.S. economy.

In fact, energy prices themselves could be a source of support for growth this year. Over the past couple of years, the surge in the price of oil took a bite out of consumer spending, even though other factors, like growth of jobs, wages, and wealth, kept consumption moving up overall. Needless to say, it has been a relief to see that oil prices have not just stabilized but actually receded quite a bit since their peak in the middle of last year. At this point, futures markets expect them to stabilize around the current lower levels, and if they do, not only should the restraint we felt last year evaporate this year; the decline in oil prices would actually contribute to a pickup in growth. Of course, given the well-known volatility of energy markets, that's a very big "if," so they remain a wild card in the outlook as usual.

So, to sum up the story on output, real GDP advanced at moderate rates of only 2½ and 2 percent in the second and third quarters of last year. Recent monthly data have boosted estimates of growth in the fourth quarter, but such high frequency data can be volatile, and very recent developments don't change my overall assessment that economic activity is proceeding at a moderate underlying pace. In other words, it looks as if the economy is pretty close to the "glide path" I mentioned before—growth has slowed to a bit below most estimates of the economy's long-run potential, while the risk of an outright downturn has receded.

That would all be very comforting, except for the puzzle I mentioned at the beginning, which could have serious implications for inflation and, therefore, for the “soft landing” I’m hoping for. Just to restate the puzzle: if the economy is growing a bit below its long-run trend, why is the labor market going gangbusters? It is as if the Bureau of Economic Analysis, which produces the GDP data, hasn’t delivered its message to the Bureau of Labor Statistics. The latest labor-market data show payroll employment growing steadily and at a rather robust pace. Moreover, the unemployment rate has declined by  $\frac{1}{2}$  percentage point over the past year and now stands at  $4\frac{1}{2}$  percent; that rate suggests a degree of tightness in the labor market, because it is somewhat *below* common estimates of the rate that can be sustained in the long run without generating rising inflation. Using a standard rule of thumb, the unemployment rate should have been essentially *unchanged*, given the 3 percent growth rate the economy has averaged over the past four quarters.

The ramifications of this puzzle are significant. If labor markets are as tight as the unemployment rate suggests, then there may be reason for concern about building inflationary pressures. If, on the other hand, they are not, then it is more likely that we are headed for a “soft landing.”

Let me start with the worrisome possibilities, in which the puzzle could indicate building inflationary pressures. One such possibility is that the apparent disconnect between labor markets and output reflects a misreading of how close output is to its long-run capacity. This could happen because the economy’s long-run capacity may actually be lower than many estimates. It also could happen if output is actually growing faster

than the data show. In fact, there are indications to that effect, namely, that actual output growth may have been faster than the pace reflected in measured GDP.

Aggregate statistics on the U.S. economy are calculated in two ways—we have measurements of total output and separate measurements of total income. In principle, these must be the same—every dollar of output generates a dollar of income for some economic entity, be it an individual or a firm. However, in practice, the statistical sources for output and income are different, so that the two measurements need not come out to the same aggregate number. This difference is known as the “statistical discrepancy,” a topic that tends to put even economists to sleep. However, I raise this obscure issue because it could have important implications.

Growth in gross domestic income has outpaced growth in gross domestic product by a whopping three-quarters of a percentage point over the past year. If the income measure ends up being more accurate than the output measure, then the decline in the unemployment rate this year would not be surprising at all. Indeed, this would mean that *both* labor and product markets have been tight, which would add to our estimate of inflation pressures.

Now let me turn to the more benign possibilities, that is, where labor markets may not be signaling growing inflationary pressures. One possibility is that the disconnect between the unemployment rate and output growth will be resolved by a little more patience. Labor markets adjust to output growth with a lag, and that lag is not always consistent over time. So we may just need a little more time for the standard relationship



to reassert itself, with increases in unemployment that reestablish the normal relationship with the slower rate of growth we've seen.

Another possibility is that even after the lags have worked themselves out, the unemployment rate may be overstating the tightness of labor markets. One form of evidence for this is that certain other labor market indicators suggest a bit of softening. In particular, the Conference Board index of job market perceptions, which is based on a survey of households, declined in both October and November. This index is historically very highly correlated with the unemployment rate, but now it is sending a different signal, suggesting that labor markets are roughly in balance, not tight. Similarly, in November, fewer firms reported openings that are hard to fill.

Another form of evidence bearing on this benign interpretation relates to labor compensation. If labor markets are tight, one would expect that labor compensation—including both wages and benefits—would be rising rapidly. However, the available information on this provides a mixed, and, I must admit, a somewhat confusing picture. We have two broad measures of labor compensation. One, the employment cost index, is showing remarkably restrained increases of only 3 percent over the past year, about the same as in the prior year, and this development would seem to belie tight labor markets. The other measure, compensation per hour, gives a higher reading of more than 4¼ percent.<sup>1</sup> However, this measure includes compensation methods like stock options that are more akin to profits than wages. So part of the strength in this measure may not

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<sup>1</sup> Corrected January 26, 2007.

actually indicate a tight labor market. Taken together, these two indicators provide at best a mixed picture of tightness.

My own sense of how the labor market situation will affect inflation inclines me more toward the benign view than the worrisome view—and I say this with the appropriate caveats, of course: There are indeed large uncertainties—and in particular, upside risks—to the outlook for inflation.

To begin with, over the past year, our main measure of consumer inflation—the price index for personal consumption expenditures excluding food and energy, or the core PCE price index—has increased by 2.2 percent, which is higher than I would like to see. On a more positive note, inflation has come down in recent months, with this index up by a more acceptable 1.8 percent over the past three months.

One reason why inflationary pressure may be easing is due to the impact of stabilizing, and now falling, oil prices. As I mentioned, core inflation, by definition, excludes energy prices, but energy prices still may affect core inflation to the extent that they affect the prices of other goods and services. For example, transport companies might raise their prices to pass along the higher costs of filling their trucks' gas tanks. This is known as "pass-through," and it is likely that it has played at least some role in recent movements in core inflation.<sup>2</sup> Now that energy prices have fallen a fair bit from

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<sup>2</sup> However, one shouldn't exaggerate the importance of pass-through. Research suggests that the extent of pass-through for any given rise in energy prices has been lower in the past twenty-five years than it was back in the 1970s (see Mark Hooker, "Are Oil Shocks Inflationary? Asymmetric and Nonlinear Specifications versus Changes in Regime," *Journal of Money, Credit, and Banking*, May 2002).

recent highs and are expected by futures markets to remain at those lower levels, this upward pressure on core inflation is likely to dissipate and may even be turning into modest downward pressure.

However, it's important to recognize that the effects of energy price changes on inflation are inherently temporary. Once they have fully worked through the system, we will be left with the more fundamental and enduring influences of factors such as the extent of labor and product market tightness. This is why I spent so much time going into the puzzle about why labor and product markets are currently sending mixed signals about inflationary pressures. How this puzzle is resolved is a key issue for future inflation and therefore for monetary policy.

A second reason to be optimistic about future inflation is that inflation expectations appear to have been well anchored over the past ten years or so as the Fed has established its credibility with the public about both its commitment to and its competence in keeping inflation at low and stable rates. For example, in the face of the large oil price increases we've seen in recent years, this credibility shows up in the stability of survey and market measures of inflation expectations looking ten years ahead.<sup>3</sup>

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<sup>3</sup> Bharat Trehan with Jason Tjosvold, "Inflation Targets and Inflation Expectations: Some Evidence from the Recent Oil Shocks," *FRBSF Economic Letter*, 2006-22, September 1, 2006. <http://www.frbsf.org/publications/economics/letter/2006/el2006-22.html>.

Statistical analysis of the behavior of core inflation over time also lends some support to the view that inflation expectations are well anchored. In such statistical analyses, the inflation data historically have exhibited “persistence.” This basically means that, when you're forecasting inflation, it works pretty well to assume that the rate in the future will be the same as it is today. The implication of persistence is frankly worrisome: Since inflation is too high today, persistence implies it could *stay* too high for an extended period.

However, research suggests that if a central bank's commitment to price stability has gained credibility with the public, then the persistence observed in the inflation data will tend to be dampened. And as it turns out, recent research at the Federal Reserve Bank of San Francisco finds less evidence of persistence during the past ten years.<sup>4</sup> That is, rather than sticking at a certain rate, core inflation has tended to revert to its long-run average, which, over that period, is between 1-3/4 and 2 percent. Admittedly, the past ten years constitute a relatively small sample from which to draw definitive conclusions. Nonetheless, this evidence is important because, if it holds up, it implies that inflation may move down from its elevated level faster than many forecasters expect.

To sum up my inflation forecast, then, I find recent inflation readings encouraging, but I also am keenly aware that this pattern has yet to show up in the data on any sort of a sustained basis. The inflation situation remains uncertain and, in

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<sup>4</sup> John C. Williams, "The Phillips Curve in an Era of Well-Anchored Inflation Expectations," unpublished paper. A less technical version with the same title has been published as *FRBSF Economic Letter* 2006-27 <http://www.frbsf.org/publications/economics/letter/2006/el2006-27.html>.

particular, there are upside risks to my outlook, especially having to do with the situation in labor markets.

These considerations play a key role in my views on monetary policy. I have supported the decision to hold policy steady at the current rate. That may seem a little surprising, given that inflation remains higher than I would like it to be and that there are some upside risks to my inflation outlook. Let me be clear that I do want inflation to move down, but I believe policy may now be well-positioned to foster exactly such an outcome while also giving due consideration to the risks to economic activity.

I came to this conclusion by considering a variety of metrics that help assess the stance of policy. These measures include the forecast I have outlined today, as well as the recommendations from commonly used Taylor rules for monetary policy, named after John Taylor, a professor at Stanford who first suggested them. They give an estimate of an appropriate setting of the funds rate given where inflation is relative to an assumed target and a measure of tightness in goods or labor markets.

Taken as a whole, a variety of these rules indicate that the funds rate is currently within the moderately restrictive range that appears appropriate. Current conditions in goods markets generally suggest that the current policy stance is sufficient to bring inflation down to more acceptable levels. In view of what I've said today, it will come as no surprise that consideration of the situation in labor markets provides less room for optimism on inflation. And while I am inclined to see labor market tightness as transitory, I do take it as a serious risk.

Even if policy is now well positioned, as I think is likely to be the case, it will still take some additional time for inflation to unwind due to lags between policy actions and their impacts on economic activity and inflation. These lags can be anywhere from several months to a couple of years. This means that we have yet to see the full effects of the series of 17 funds rate increases—some are probably still in the pipeline.

You will note that I am casting my statements about the stance of policy and the outlook in very conditional terms. I do this because of the great uncertainty that surrounds economic forecasts and any simple measure of the tightness of monetary policy. Frankly, all approaches to assessing the stance of policy are inherently imprecise. Just as imprecise is our understanding of how long the lags will be between our policy actions and their impacts on the economy and inflation. This uncertainty argues, then, for policy to be responsive to the data as it emerges, especially since we are within range of the desired policy setting. The decision to keep policy on hold allows us more time to observe the data so that appropriate adjustments can be made over time.

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