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FEDERAL RESERVE'S SECOND MONETARY POLICY REPORT FOR 2006

HEARING

BEFORE THE

COMMITTEE ON BANKING, HOUSING, AND URBAN AFFAIRS UNITED STATES SENATE

ONE HUNDRED NINTH CONGRESS

SECOND SESSION

ON

OVERSIGHT ON THE MONETARY POLICY REPORT TO CONGRESS PURSUANT TO THE FULL EMPLOYMENT AND BALANCED GROWTH ACT OF 1978

JULY 19, 2006

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FEDERAL RESERVE'S SECOND MONETARY POLICY REPORT FOR 2006

WEDNESDAY, JULY 19, 2006

U.S. SENATE,
COMMITTEE ON BANKING, HOUSING, AND URBAN AFFAIRS,
Washington, DC.

The Committee met at 10:06 a.m., in room SD–106, Dirksen Senate Office Building, Senator Richard C. Shelby, Chairman of the Committee, presiding.

OPENING STATEMENT OF CHAIRMAN RICHARD C. SHELBY

Chairman SHELBY. The hearing will come to order. We are very pleased this morning to welcome Chairman Ben Bernanke before the Committee on Banking, Housing, and Urban Affairs, to deliver the Federal Reserve's Semi-Annual Monetary Policy Report to the Congress.

Chairman Bernanke, your testimony and report this morning note the economy's strong performance in the first half of 2006. Real gross domestic product, GDP, increased at an annual rate of 5.6 percent in the first quarter of 2006. Federal Reserve data released earlier this week showed U.S. industrial production rising 0.8 percent in June with capacity utilization now at 82.4 percent, the highest rate since June 2000. We continue to enjoy a low unemployment rate, both historically and relative to other industrialized nations.

Some of the most recent economic data make it clear the balancing act that the Federal Reserve now faces. Energy prices, including oil, have increased over the past year and the turmoil in the Middle East adds to concerns in this area. Housing markets seem to be catching their breath, with the pace of rapid price appreciation slowing and in some markets showing small declines. Both factors lead to questions about the ability of consumers to continue consumption growth in our economy.

At its most recent meeting on June 29, the Federal Open Market Committee raised its target for the Federal funds rate by 25 basis points to 5.25 percent, the seventeenth one-quarter point increase since June 2004 when the FOMC began raising the target rate from a then low of 1 percent.

Fed watchers noted that the latest FOMC statement seemed to leave open the question of whether the FOMC will increase the Federal funds target at its next meeting, referencing "the extent and timing of any additional" rate increases. Although the minutes of that meeting will not be released until July 20, our hearing this morning gives us the opportunity to discuss which factors were sig-

nificant in your deliberations and what factors you may be looking at as the FOMC prepares for its next monetary policy hearing on August 8. Our hearing this morning can thus add to the transparency of the FOMC process.

Mr. Chairman, we are pleased to have you with us this morning. We look forward to discussing in greater detail the Federal Reserve's performance in carrying out monetary policy and its views on the future direction of our Nation's economy. We all look forward to raising a number of questions with you then.

Senator Sarbanes.

STATEMENT OF SENATOR PAUL S. SARBANES

Senator SARBANES. Thank you very much, Chairman Shelby. I welcome Chairman Bernanke before the Committee.

I think it is fair to say this hearing comes at a particularly pivotal time for monetary policy. The economy is slowing down and the run-up in oil prices is contributing to that slowdown. An oil price spike has preceded a number of recessions since 1973, but some spikes have occurred without a subsequent recession. We look to the Federal Reserve to help avoid a recession this time around.

There are a number of signs of economic weakness. Job growth has been anemic for the last 3 months, averaging just over 100,000 jobs per month. The pace is less than 1 percent a year. Over the last half century we have tended to have such slow job growth when we are going into or coming out of a recession. It is less than half the pace of job growth for the 10 years of expansion from March 1991 to March 2001.

Not only are jobs growing slowly, but also all the measures of wages and compensation show gains below inflation over the last year. Total compensation, including wages and benefit costs, have risen 2.8 percent in the last year. Such pay gains are not putting upward pressure on inflation because they are almost entirely offset by productivity gains, which are up 2.5 percent. Unit labor costs, which adjust hourly labor costs for productivity gains, are up by a negligible 0.3 percent in the last year.

That is shown rather dramatically in this chart, which shows compensation, productivity, and unit labor costs.

Unfortunately, the only people with pay gains that are keeping ahead of inflation are those at the top of the ladder. By this stage in previous business cycle expansions, people at the middle and bottom of the wage ladder have typically been enjoying healthy pay gains. This was certainly the case from 1995 to 2000. We need to keep the expansion going so that those at the middle and the bottom of the pay scale can finally share in the exceptional productivity gains that they have helped to create.

With the higher cost of fuel and little room to cut back on fuel use, consumers have been forced to cut back on other types of spending and they go into debt. Consumer spending has risen at less than a 2 percent rate over the last 4 months. To manage even that modest increase, households have had to reduce savings and increase borrowing. The household savings rate has plunged to an unprecedented minus 1.7 percent.

Where is the rise in inflation coming from? Although higher prices for oil and other commodities have contributed, much more

important is the surge in profit margins. At this hearing 2 years ago, Chairman Greenspan drew attention to this, stating "from an accounting perspective, between the first quarter of 2003 and the first quarter of 2004 all of the 1.1 percent increase in the prices of final goods and services produced in the nonfinancial corporate sector can be attributed to a rise in profit margins rather than cost pressures."

He predicted at the time that competition to create new capacity and hire more workers would bring down the profit share to more normal levels, but that has not happened. In fact, the profit share of GDP hit 12.7 percent in the first quarter, the highest profit margin since 1950. With inflation racing ahead of wages and rising interest rates, we see a serious downturn in the housing industry. The housing affordability index has plunged to the lowest level since 1989 when declining housing led to a recession in 1990.

New home sales so far this year are running 11 percent below the rate for the same period last year. With sales down, builders have cut back on new home construction. They are obtaining permits at a rate of more than 1.7 million a year for 5 months last year, but that rate fell below 1.5 million in the latest months. We are now down below 1.4 million. This is new single family home permits, and it shows a rather marked decline over the last year.

Last week's report on the consensus of blue chip economic forecasters should also give Federal Reserve policymakers pause. The consensus expects growth below the trend line starting with the just-completed second quarter through the end of 2007. In addition, the blue chip economic forecasters expect inflation to slow down to about 2.5 percent next year.

I am hopeful that this morning Chairman Bernanke can put to rest some troubling concerns about monetary policy. The Fed's statements that future changes in interest rates will depend on new data, not an all together unreasonable statement I might say, but it has been interpreted by some commentators to mean that the Federal Reserve will raise interest rates at every meeting until inflation comes down.

The headlines of the last two weekly reports from Goldman Sachs are "The Stance of Monetary Policy, Enough is Enough." And the other one "Bernanke Preview, Monetary Policy Begins to Bite." Two recent headlines from Merrill Lynch state that its "getting tougher for the Fed to justify what it is doing" and "nearly every indicator showing signs of a slowdown."

Merrill Lynch Economist David Rosenberg, in a report last Friday entitled, "To Pause Or Not To Pause: That Is The Conundrum," expressed this concern: "The Fed has managed to elevate a pause to something that is a pretty major event. What was normal in prior cycles, up or down, is now something that grabs headlines. The Fed paused twice in the 1999–2000 cycle and three times in the 1994 cycle, and it elicited a yawn from the markets. This time around a 'pause' is being treated as an 'ease,' which has basically put the Fed in a pickle."

The 17 Fed rate hikes over the last 2 years are having an effect. You can see that in the housing sector, job growth, the blue chip forecast. Both for subdued growth and for falling inflation over the next year.

I look forward to the opportunity to pursue these concerns with the Chairman in the question period. I also, just to send a warning, hope to be able to ask you about the Basel II situation which I think is a matter that calls for very close attention, which I do not think it has been receiving.

Thank you very much, Mr. Chairman.

Chairman SHELBY. We have established a quorum and at this time, if you will bear with us, Mr. Chairman, I would like to move the Committee to executive session to consider a number of nominations that we have had hearings on.

[Recess.]

Chairman SHELBY. We will now resume the hearing.

Senator Bennett.

STATEMENT OF SENATOR ROBERT F. BENNETT

Senator BENNETT. Thank you, Mr. Chairman.

Chairman Bernanke, welcome to the Committee. I look forward to hearing what you have to say today. I will not recite a bunch of statistics as my colleagues have because I think we will get into those.

I will look for to your comments with respect to how the economy is changing. We are in the midst of the Information Revolution, and just as the Industrial Revolution changed things rapidly, so I believe the Information Revolution is changing things, and we need to recognize that sometimes past benchmarks in the new, changed environment in which we find ourselves may not be the best benchmarks to look at. We should look around for new ones and the signs of the changes.

I am particularly focused on the impact of productivity gains. Productivity has gone up much more rapidly in the information age than it did in the industrial age and it is affecting a number other economic indicators.

So, I welcome you here and look forward to a dialogue with you on these and other related issues.

Chairman SHELBY. Senator Reed.

STATEMENT OF SENATOR JACK REED

Senator REED. Thank you very much, Mr. Chairman. I would make three points.

Gross domestic product has spiked up in the first quarter but there is evidence that the economy is slowing even before most Americans have benefited from the growth we have seen thus far in the recovery. As my colleagues have pointed out, strong productivity growth has shown up in the bottom lines of shareholders but not in the paychecks of workers. We are also facing soaring energy prices, record budget and trade deficits, and a negative household saving rate. All of these pose tremendous challenges to setting monetary policy which the Chairman and his colleagues are charged to do.

We also have a situation where we no longer maintain the fiscal discipline that we had in the 1990's which allowed for monetary policy that encouraged investment and long-term growth. We have, I think, squandered that fiscal discipline and that complicates your job also, Mr. Chairman.

I would also associate myself with the comments that Senator Sarbanes made with respect to the growing inequality of income, earnings, and wealth in this economy. It is particularly troublesome because as we pursue some of these tax policies which further increase the deficit and further erode the ability to provide basic support to middle-income Americans, like Pell grants and other programs, the difficulty of workers in this country to support their families is infinitely complicated and I think that is something that the Fed has to be concerned about, even if it does not have direct policy leverage to use.

So, Mr. Chairman, I look forward to Chairman Bernanke's testimony. I thank him for his service.

Chairman SHELBY. Senator Bunning.

STATEMENT OF SENATOR JIM BUNNING

Senator BUNNING. Thank you, Mr. Chairman.

This is a very important hearing that we do twice a year and I cannot remember when it came at a more critical time for our markets and our economy. It has been a long time since I have seen a stock market that is as sensitive and unstable as this one.

Chairman Bernanke, you have only been on the job for 5½ months but it has been a wild ride. I am disappointed in your leadership of the Fed so far but I am not surprised. During your confirmation process, I warned my colleagues that you were going to be much the same as former Chairman Greenspan, and so far you have been. The string of interest rate increases started by Chairman Greenspan has continued, and just as he did in 2000, I think you are going to overshoot.

Also, you have not ended the group think at the Fed. In fact, it seems you have gone so far as to hand-pick new Fed Members that think just as you do.

Some commentators point to the situation in the Middle East and North Korea as driving the market down, but those tensions have been around a lot longer than the current market downturn. Others say high energy prices are hanging over the economy. Yes, oil is expensive, but it is still below all-time highs when adjusted for inflation, and our energy expenses are a smaller percentage of our total expenses than in the past. Those are not the market's problems.

What is dragging the market down is interest rates and uncertainty about Fed action. The Fed can do three things with its interest rate actions. It can overshoot, it can undershoot, or it can get it just right. It is much easier to mess up than to get it just right.

The Fed has raised rates at 17 straight meetings. The Fed funds rate stands at 5.25 percent today and could go higher. There has been no pause to see how the economy reacts to those rate hikes. It has been one increase after another. At the current pace the Fed is going to overshoot and not even know it. By the time the full impact of interest rate increases is evident it will be too late. The U.S. economy will be damaged, and for that matter, the world economy could follow.

The decisions of our central banks are often followed by foreign central banks and many have raised rates to keep pace with the United States. So many foreign economies rely on a strong U.S.

economy for their growth and stability. The Fed is marching into dangerous territory and not looking back. There is a lot of speculation that the Fed may pause at the next meeting, but that is another way of saying that the Fed is still considering another increase. The markets do not know what the Fed is going to do and they will be on edge until there is certainty.

Public statements by Fed Members over the last few months have not helped either. Many Governors have raised concerns that inflation is growing and said that interest rate hikes should continue. Others have said that it may be time to pause but have not dissented in Fed actions.

The most recent official Fed statement has even caused more uncertainty. It was softer than the tough talk of the Chairman and others leading up to the meeting yet it does not rule out further rate increases. I still do not understand what all this talk and uncertainty is for. Inflation is not out of control. And I say it definitely, one more time. Inflation is not out of control. And if you think it is, we will further pursue it in the question and answer period.

All indicators of inflation show that while it may be higher than in the past few years, it is still far below what we saw in the past few decades. Key indicators like gold are off their highs from earlier in the year and productivity has kept unit labor costs in check. The Fed is chasing an inflation monster that is just not there. I hope the Fed realizes that before it is too late.

Thank you, Mr. Chairman. I look forward to asking some questions.

Chairman SHELBY. Thank you.

Senator Menendez.

STATEMENT OF SENATOR ROBERT MENENDEZ

Senator MENENDEZ. Thank you, Mr. Chairman.

Welcome, Chairman Bernanke. Let me say, recently we learned that the anticipated deficit for the fiscal year 2006 is down from what had been projected and for that we should all be happy. However, we are still talking about a deficit of $296 billion. And though that is better than the original estimated deficit of $423 billion, which some considered was an inflated estimate in the first instance, it is a far cry from the $600 billion budget surplus for 2006 that was predicted by the White House back in 2001.

Now that discussion certainly belies the $10 trillion to $12 trillion debt that the Congressional Budget Office tells us we are headed to by 2011. So while some in this country believe that are our economy is chugging along quite well because our gross domestic product continues to grow, there seems to be an increasing gap between the average citizen and those at the top of our economic ladder. The disparity between the haves and have-nots seems to be widening at an alarming rate.

When I am back in New Jersey, I hear more and more from New Jerseyians that they are working harder and longer just to try to keep their heads above water, whether it is because of higher costs for college, soaring health care costs, increasing energy prices, gas prices, stagnant and flat wages, or pensions being underfunded and in some cases totally abandoned, there is a huge disconnect be-

tween growth in our GDP and the situation that the average American finds themselves and their families in.

So the question is, who is this economy working for? I look forward to your testimony today and to hearing your thoughts on some of those items I have just mentioned and other challenges we face as a Nation, such as the cooling off of the housing market and what that may mean, rising energy prices, consequences of deficit and debt, record trade deficits, real wages remaining flat, negative household and national savings, a variety of global influences and how these factors affect the dynamic of the modern global economy that we have. Those are the challenges I hear from average New Jerseyians and Americans that they are currently facing and that you have before you.

So as we wish you well in the stewardship of the economy, we look forward to hearing your testimony and hopefully reflecting upon some of those items. If not, I will pursue it in my questions.

Thank you, Mr. Chairman.

Chairman SHELBY. Thank you.

Senator Dole.

STATEMENT OF SENATOR ELIZABETH DOLE

Senator DOLE. Thank you, Chairman Shelby.

Mr. Chairman, I join my colleagues in extending a very warm welcome to you this morning. We have seen very strong growth in our economy over the last few years even as our Nation as has faced some extremely challenging times. I expect the positive economic trends will continue in the coming months and years. Still, we have hard work ahead indeed to ensure that all levels and sectors of the economy benefit from this prosperity.

In just the past year, the economy has created nearly 2 million new jobs and the national unemployment rate remains lower, as we have said so often, than the average of the 1970's, the 1980's and 1990's. While we are seeing a cooling of the housing sector, the other pistons of our economic engine are firing.

There have been recent reports that wages are going up, which I hope signals that wages are beginning to catch up with the very dramatic increases in productivity. Also, consumer confidence has continued to rise. The first-quarter GDP results of this year were revised upward to an impressive 5.6 percent, as we have heard already this morning. This has resulted in higher than expected tax revenues and a decline in the deficit. In fact in the first 9 months of fiscal year 2006, we have seen one of the highest growth in tax revenues in 25 years, second only to last year. These are indeed indicators of a robust and expanding economy.

Still, I share the concerns of the American people that energy prices continue to increase. There is no question these costs are putting a real strain on families and businesses. Folks also are concerned about the availability and affordability of health care.

In order to address this broader problem, I believe we must empower families to make health care decisions based on their specific needs and allow them greater choice over how their health care dollars are spent. We must also work to improve transparency, portability, and efficiency to better meet consumers' needs.

In addition, as our overall economy is thriving, we must be mindful that there are areas in some of our States like North Carolina where the economic picture is not quite as bright, where factories and businesses have closed and people are out of jobs. In North Carolina, we have experienced a transition from our tradition tobacco and manufacturing industries of textiles and furniture to new high-growth industries like biotechnology and pharmaceuticals. These new jobs, as we all know, require a well-educated and highly trained workforce. To this end, we must make education and job training a priority and focus our efforts on closing the gap between skilled and unskilled workers.

Unfortunately, this gap has only widened since my days as Secretary of Labor. As our economy moves forward, the opportunities for lower-skilled workers are simply diminishing. It is imperative that we educate our less-skilled workers so that they can take advantage of the new jobs that are being created.

I continue to have confidence that the very forces that stimulate economic growth, tax relief to spur investment, free but fair trade, ever-improving global communications, higher education and training for workforce, and of course, hard work, these will ensure that we stay on course toward greater opportunity for North Carolina and for the Nation.

Mr. Chairman, thank you for being here today. I look forward to hearing from you and working closely with you on these and other important issues. Thank you.

Chairman SHELBY. Senator Stabenow.

STATEMENT OF SENATOR DEBBIE STABENOW

Senator STABENOW. Thank you, Mr. Chairman, and welcome, Chairman Bernanke. It is good to have you with us again. I look forward to your testimony. I have read your statements recently and have become increasingly concerned about the slowdown you are referring to, as my other colleagues have as well. I recognize that while this may be good for inflationary purposes to hold down interest rates certainly, and slows down growth to make sure the economy is not moving too fast, in my home State of Michigan this just means more bad news because we are already experiencing a slowdown.

As Senator Menendez spoke, he was really speaking about the squeeze that middle-class families are feeling on all sides right now, being hit by slowdown in terms of their wages, maybe losing a job, health care costs going up, if they get health care at all, maybe faced with losing a pension, and the cost of college, and the cost of gas, and so on.

So we are feeling that, certainly, in Michigan as we look at not just one or two plants or one or two jobs but entire communities that are struggling as we, as a country, try to figure how we are going to compete in a global economy in a way that does not lose our way of life.

There are certainly two different views. One says, compete down to the lowest wage, lowest health care, lose a pension. And the other says, which I espouse, which is race up, which means you level the playing field on trade and you address the costs you can,

health care, energy, protect pensions, and then you race like crazy on education and innovation. That is the American way.

My concern right now is that in a State like mine, because we make things, grow things, and have been the leaders in doing that, we now find ourselves struggling in a global economy because we do not have those elements in place. We have lost another 19,000 manufacturing jobs just in the first half of this year. What I cannot seem to grasp in the graphs and numbers that you have is really the impact of this as it relates to middle-class jobs, good-paying jobs in manufacturing in America. I do not believe we can have a strong economy unless we make things in this country. That is what we do, make things and invent things, in Michigan. So, I am interested in knowing about how you view us in terms of the industries that have created the middle class of America.

What I do see in your analysis is a growing trade deficit which is on track to make history again. And we are in a path in another year of a record trade deficit for the entire country which means more lost American jobs.

More concerning is the fact that one-third of that deficit is with one country, China. On Monday, I had an opportunity to go to a hearing that I was pleased to testify at in Michigan, in Dearborn, the United States-China Commission came into Michigan to hear about the concerns from business and labor in the community about what is happening with China, and our relationship and how it affects the auto industry and other industries. And I want you to know there is tremendous concern. I was very impressed with the Commission. Tremendous concern across the board, both on the Commission and those who testified, about what is happening and why we are not enforcing our trade laws.

We can compete with anybody if it is a level playing field. China cheats. Other countries cheat. They steal our ideas. They steal our patents. They manipulate their currency. They dump counterfeit products. I recognize, Mr. Chairman, this is not in your jurisdiction but I do want to know what role you believe our increasing trade deficit has on our ability to enforce our trade laws.

Furthermore, in your recent testimony at the International Monetary Conference on June 5 you stated, sustaining global expansion will require a greater reliance by our trading partners on their own domestic spending as a source of growth. This tells me we are going to be increasingly beholden to other countries in order to reverse the trade deficit. So, I am hoping to hear more about that in your testimony.

But as I interpret your statement, we are allowing countries to ignore our trade laws and hurt good-paying, middle-class jobs while we simultaneously become more reliant, to use your description, on their spending habits. This is of great concern to me and I certainly welcome your thoughts and would appreciate your leadership.

Thank you.

Thank you, Mr. Chairman.

Chairman SHELBY. Senator Allard.

STATEMENT OF SENATOR WAYNE ALLARD

Senator ALLARD. Mr. Chairman, thank you for holding this hearing. This is one of the hearings I always look forward to hearing

participation and hearing from the Chairman of the Federal Reserve. You have been on the job about 5½ months now, Chairman Bernanke, and you are settling into the job and I look forward to hearing what your comments will be.

I am not as down on the economy as some of my colleagues would express here today. I do think that our pro-growth tax policies we put in place that were implemented in 2003 have had a positive impact. And I am interested in hearing from you and your comments on how we are comparing worldwide. If you look at our growth in the last 2½ to 3 years, 20 percent growth, somewhere around $2.2 trillion in growth, that is almost the size of the entire Chinese economy. And if you look at the share of product that we have throughout the world, gross domestic product might be a way of expressing that, we have grown 2 percent during that time period.

So it looks to me like we remain competitive in a world environment and our economy is doing better than other countries. And I would like to hear some comments that you have in that regard.

It does not mean that we do not have some problems with our economy, and things that we need to watch. Areas that I feel particularly distressing is our runaway spending that we are having here with the Federal budget, particularly in the area of mandatory spending. Interest rates are part of that. We must also, I think, find ways to deal with the rising energy costs. But historically, it does not seem like energy has had as adverse an impact on the economy as perhaps other times in our Nation's history when we have had high energy costs. And also I am concerned about low personal savings rates.

Now while the Federal Reserve is an independent agency, Congress must maintain a careful oversight role, particularly given the importance of the Fed's responsibility. And Chairman Bernanke, we are eager to hear your assessment of our economy and we look forward to your economic insights which will be helpful as we consider various policy issues.

Thank you for taking the time to appear before the Committee.

Chairman SHELBY. Thank you.

Senator Carper.

STATEMENT OF SENATOR THOMAS R. CARPER

Senator CARPER. Thanks, Mr. Chairman.

Welcome, it is good to see you and you are good to join us. I like to sometimes telegraph my questions and use an opening statement for that purpose. I say this partly with tongue-in-cheek but some of my colleagues will recall a recently departed Cabinet Secretary who used to come and appear before us and as we would give our opening statements he would sit there with papers spread all around him and read this and that and would kid him and say, he came and he would read the newspaper and he would work his Blackberry. And you sit here; you are very attentive and listen to everyone, writing notes.

So one of the questions I am going to ask you is, what do you actually think about when we give our opening statements, because you give every impression of paying great attention, which we hope is true.

I am going to ask you about your assessment. You have been in the job for about 6 months. You had big shoes to fill. And I think most fair-minded, objective people say that you seem to have settled in pretty well, but just your own assessment. How is the job similar to what you expected, maybe different than what you anticipated?

Some of my colleagues have touched on the budget deficit which is for me still troubling. I think we can all celebrate strong GDP growth. We should be happy about that. We are. We should celebrate strong revenue growth and we are. But as we look ahead I am troubled by the fact that, you know, it is great that the deficit is down to only $300 billion. That is a heck of a lot of money in my view.

As we look down the road I do not know that we are really—assuming any kind of expenditures in Iraq, any kind of expenditures in Afghanistan, I do not think we assume at all that we are going to ever fix the AMT problem. I do not think we are assuming that we are going to do anything about these tax extenders that are about to expire. And if we do all of those things, continue to fund Iraq, continue to fund Afghanistan, fix the AMT, continue these tax extenders, we are back in the soup again. And that does not even assume that the boomers ever retire which we are about to, as you know.

I was reading the paper coming down today and it said that trade numbers are out for June and they reported that the trade deficit was about $63 billion for the month of June. They said we are on track for the biggest trade deficit in the history of our country. And they mentioned one country, I think Senator Stabenow might have mentioned that country, China. And I believe the deficit with China for 1 month might have been $17 billion. I think that is what it was.

In any event, I thought to myself, that is a bigger trade deficit with one country in 1 month than we used to have in a whole year. When does the rest of the world start to look at our trade deficit and our inability to balance our budget and say that if they are going to continue to invest money here they want a higher interest rate? I just want to talk a little bit about that when we have a chance.

Maybe the last thing is, in addition to saying grace over monetary policy and a whole bunch of other duties, you have a major responsibility as a regulator. We are familiar with those responsibilities. We have had before this, and hopefully we will have before the full Senate later this year, legislation dealing with the regulation of Government Sponsored Enterprises, Fannie Mae, Freddie Mac, and the Federal Home Loan Banks.

There are two issues that seem to divide us on that. One is affordable housing fund, and the second deals with the portfolio. What should be in the portfolio? Who should be in the position to say whether portfolios can grow, what kind of items can be included in those portfolios? In the interest of telegraphing another pitch I just want you to know that I would welcome your comments as we get into that.

I think my time has expired. Thank you, Mr. Chairman.

Chairman SHELBY. Senator Sununu.

STATEMENT OF SENATOR JOHN E. SUNUNU

Senator SUNUNU. Chairman Shelby, I have no comment at this time. I would just like to welcome the Chairman.

Chairman SHELBY. Senator Martinez.

STATEMENT OF SENATOR MEL MARTINEZ

Senator MARTINEZ. Thank you, Mr. Chairman. I will not be nearly that disciplined in my approach.

Mr. Chairman, thank you for being here and thank you for coming to share with us. I will be very brief actually. I was noting with particular interest the area of labor in your report. I noted, in spite of what some would profess to be gloom and doom that there are a lot of good news in the economic report and the forecast terms of the labor statistics.

For instance, it seems like this past quarter we were able to reach a low unemployment level that had not been seen in 5 years, and 4.7 in the second quarter of the year, below 5 percent. That is consistent, and even not quite as good as what we are experiencing in Florida where I think our unemployment rate is probably around 2.7 percent. Which gives rise to an issue that I do not know if you will address but hopefully in the questioning I will have an opportunity to discuss with you, which is whether in fact we may not have, in some aspects of our economy, a labor shortage.

Recently, in the agricultural sector in Florida it was reported that there will be probably 3 million to 6 million boxes of citrus that will not be harvested this year because there simply was not the labor there to pick the fruit. I have heard of similar reports coming from California. I know in the housing industry, which seems to have slowed down a bit in Florida, but still housing construction is strong, that there is great competition for labor to be able to get the work done.

So as some of us have been struggling to try to put some sense into our immigration laws one of the issues that we have repeatedly discussed is some type of a guest worker program and whether there is the need for such. In fact some Americans, I think mistakenly believe that if only wages rose a bit that there would be plenty of people to do many of the tasks that today we rely on foreign workers to do. The fact is that I think a healthy combination of a guest worker program as well as encouraging job training and so forth are part of what needs to be for our future economic needs.

But I do hope that I get an opportunity to discuss with you some of these labor issues that I think are also an important component part of our economic picture.

Thank you very much for being here.

Chairman SHELBY. Senator Hagel.

STATEMENT OF SENATOR CHUCK HAGEL

Senator HAGEL. Mr. Chairman, thank you.

Chairman Bernanke, welcome. Just a comment regarding your testimony and the questions that will follow.

As you have heard and as you know because you live with this every day and have for many years, the strength of our economy has essentially revolved around, over the last few years, high pro-

ductivity, strong housing market, strong consumer spending, and in my opinion over the last few years since 2001, tax cuts.

Now the reality is, as has been noted here this morning, we are facing significantly rising and unstable energy costs. There is some question about continuation of a strong housing market. As has been noted this morning, record high personal debt, record low savings, continued deficit spending by Government, and I would add to all of this, a rather dangerous and unstable world environment today. And I do not think it is isolated just in the Middle East. I happen to believe the Middle East represents the most combustible time since 1948, where we are today.

Now I would hope in your testimony that you would give this Committee some sense of proportion and balance in how all of this is mixing, and some of these realities are going to affect, in your opinion, our economy and our growth over the next year or two, realizing that you cannot predict. That is not your job. We do want you to do that.

But I do think we need to integrate all these dynamics that are in play, as well as you can, into a comprehensive economic fabric as to how you are approaching this at the Fed, as how you are intending to deal with these things on a comprehensive monetary policy basis.

I know you understand these things and I would hope that you could integrate these issues and will in your testimony. I know we will get to some of these things during the question-and-answer period.

Thank you very much, Mr. Chairman. Thank you.

Chairman SHELBY. Senator Dodd.

STATEMENT OF SENATOR CHRISTOPHER J. DODD

Senator DODD. Thank you, Mr. Chairman. I have no statement.

Chairman SHELBY. I believe that is everybody.

Mr. Chairman, you may proceed as you wish. Your written statement will be made part of record.

STATEMENT OF BEN S. BERNANKE, CHAIRMAN, BOARD OF GOVERNORS OF THE FEDERAL RESERVE SYSTEM

Chairman BERNANKE. Thank you. Mr. Chairman and Members of the Committee I am pleased to be here again to present the Federal Reserve's Monetary Policy Report to the Congress.

Over the period since our February report, the U.S. economy has continued to expand. Real gross domestic product is estimated to have risen at an annual rate of 5.6 percent in the first quarter of 2006. The available indicators suggest that economic growth has more recently moderated from that quite strong pace, reflecting a gradual cooling of the housing market and other factors that I will discuss. With respect to the labor market, more than 850,000 jobs were added, on net, to nonfarm payrolls over the first 6 months of the year, though these gains came at a slower pace in the second quarter than in the first. Last month, the unemployment rate stood at 4.6 percent.

Inflation has been higher than we has anticipated in February, partly as a result of further sharp increases in the prices of energy and other commodities. During the first 5 months of the year, over-

all inflation, as measured by the price index for personal consumption expenditures, averaged 4.3 percent at an annual rate. Over the same period, core inflation—that is, inflation excluding food and energy prices—averaged 2.6 percent at an annual rate. To address the risk that inflation pressures might remain elevated, the Federal Open Market Committee continued to firm the stance of monetary policy, raising the Federal funds rate another three-quarters of a percentage point to 5.25 percent in the period since our last report.

Let me now review the current economic situation and the outlook in a bit more detail, beginning with developments in the real economy and then turning to the inflation situation. I will conclude with some comments on monetary policy.

The U.S. economy appears to be in a period of transition. For the past 3 years or so, economic growth in the United States has been robust. This growth has reflected both the ongoing reemployment of underutilized resources as the economy recovers from the weakness of earlier in the decade, and the expansion of the economy's underlying productive potential, as determined by such factors as productivity trends and the growth of the labor force. Although the rates of resource utilization that the economy can sustain cannot be known with any precision, it is clear that, after several years of above-trend growth, slack in resource utilization has been substantially reduced. As a consequence, a sustainable, noninflationary expansion is likely to involve a modest reduction in the growth of economic activity from the rapid pace of the past 3 years to a pace more consistent with the rate of increase in the Nation's underlying productive capacity. It bears emphasizing that, because productivity growth seems likely to remain strong, the productive capacity of our economy should expand over the next few years at a rate sufficient to support solid growth in real output.

As I have noted, the anticipated moderation in economic growth now seems to be underway, although the recent erratic growth pattern complicates this assessment. That moderation appears most evident in the household sector. In particular, consumer spending, which makes up more than two-thirds of aggregate spending, grew rapidly during the first quarter but decelerated during the spring. One likely source of this deceleration was higher energy prices, which have adversely affected the purchasing power of households and weighed on consumer attitudes.

Outlays for residential construction, which have been at very high levels in recent years, rose further in the first quarter. More recently, however, the market for residential real estate has been cooling, as can be seen in the slowing of new and existing home sales and housing starts. Some of the recent softening in housing starts may have resulted from the unusually favorable weather during the first quarter of the year, which pulled forward construction activity, but the slowing of the housing market appears to be more broad-based than can be explained by that factor alone. Home prices, which have climbed at double-digit rates in recent years, still appear to be rising for the Nation as a whole, though significantly less rapidly than before. These developments in the housing market are not particularly surprising, as the sustained run-up in

housing prices, together with some increase in mortgage rates, has reduced affordability and thus the demand for new homes.

The slowing of the housing market may restrain other forms of household spending as well. With homeowners no longer experiencing increases in the equity value of their homes at the rapid pace seen in the past few years, and with the recent declines in stock prices, increases in household net worth are likely to provide less of a boost to consumer expenditures than they have in the recent past. That said, favorable fundamentals, including relatively low unemployment and rising disposable incomes, should provide support for consumer spending. Overall, household expenditures appear likely to expand at a moderate pace, providing continued impetus to the overall economic expansion.

Although growth in household spending has slowed, other sectors of the economy retain considerable momentum. Business investment in new capital goods appears to have risen briskly, on net, so far this year. In particular, investment in nonresidential structures, which had been weak since 2001, seems to have picked up appreciably, providing some offset to the slower growth in residential construction. Spending on equipment and software has also been strong. With a few exceptions, business inventories appear to be well aligned with sales, which reduces the risk that a buildup of unwanted inventories might act to reduce production in the future. Business investment seems likely to continue to grow at a solid pace, supported by growth in final sales, rising backlogs of orders for capital goods, and high rates of profitability. To be sure, businesses in certain sectors have experienced financial difficulties. In the aggregate, however, firms remain in excellent financial condition and credit conditions for businesses are favorable.

Globally, output growth appears strong. Growth of the global economy will help support U.S. economic activity by continuing to stimulate demand for our exports of goods and services. One downside of the strength of the global economy, however, is that it has led to significant increases in the demand for crude oil and other primary commodities over the past few years. Together with heightened geopolitical uncertainties and the limited ability of suppliers to expand capacity in the short-run, these rising demands have resulted in sharp rises in the prices at which these goods are traded internationally, which in turn has put upward pressure on costs and prices in the United States.

Overall, the U.S. economy seems poised to grow in coming quarters at a pace roughly in line with the expansion of its underlying productive capacity. Such an outlook is embodied in the projections of Members of the Board of Governors and the Presidents of Federal Reserve Banks that were made at around the time of the FOMC meeting late last month, based on the assumption of appropriate monetary policy. In particular, the central tendency of those forecasts is for real GDP to increase about 3.75 percent to 3.5 percent in 2006 and 3 percent to 3.25 percent in 2007. With output expanding at a pace near that of the economy's potential, the civilian unemployment rate is expected to finish both 2006 and 2007 between 4.75 percent and 5 percent, close to its recent level.

I turn out to the inflation situation. As I noted, inflation has been higher than we expected at the time of our last report. Much

of the upward pressure on overall inflation this year has been due to increases in the prices of energy and other commodities and, in particular, to the higher prices of products derived from crude oil. Gasoline prices have increased notably as a result of the rise in petroleum prices as well as factors specific to the market for ethanol. The pickup in inflation so far this year has also been reflected in the prices of a range of nonenergy goods and services, as strengthening demand may have given firms more ability to pass energy and other costs through to consumers. In addition, increases in residential rents, as well as the imputed rent on owner-occupied homes, have recently contributed to higher core inflation.

The recent rise in inflation is of concern to the FOMC. The achievement of price stability is one of the objectives that makes up the Congress's mandate to the Federal Reserve. Moreover, in the long-run, price stability is critical to achieving maximum employment and moderate long-term interest rates, the other parts of the Congressional mandate.

The outlook for inflation is shaped by a number of factors, not the least of which is the course of energy prices. The spot price of oil has moved up significantly further in recent weeks. Futures quotes imply that market participants expect petroleum prices to roughly stabilize in coming quarters; such an outcome would, over time, reduce one source of upward pressure on inflation. However, expectations of a leveling out of oil prices have been consistently disappointed in recent years, and as the experience of the past week suggests, possible increases in these and other commodity prices remain a risk to the inflation outlook.

Although the cost of energy and other raw materials are important, labor costs are by far the largest component of business costs. Anecdotal reports suggest that the labor market is tight in some industries and occupations and that employers are having difficulty attracting certain types of skilled workers. To date, however, moderate growth in most broad measures of nominal labor compensation and the ongoing increases in labor productivity have held down the rise in unit labor costs, reducing pressure on inflation from the cost side. Employee compensation per hour is likely to rise more quickly over the next couple of years in response to the strength of the labor market. Whether faster increases in nominal compensation create additional cost pressures for firms depends in part on the extent to which they are offset by continuing productivity gains. Profit margins are currently relatively wide, and the effect of a possible acceleration in compensation on price inflation would thus also depend on the extent to which competitive pressures force firms to reduce margins rather than pass on higher costs.

The public's inflation expectations are another important determinant of inflation. The Federal Reserve must guard against the emergence of an inflationary psychology that could impart greater persistence to what otherwise would be a transitory increase in inflation. After rising earlier this year, measures of longer-term inflation expectations, based on surveys and on a comparison of yields on nominal and inflation-index Government debt, have edged down and remained contained. These developments bear watching, however.

Finally, the extent to which aggregate demand is aligned with the economy's underlying productive potential also influences inflation. As I noted earlier, FOMC participants project that the growth in economic activity should moderate to a pace close to that of the growth of potential both this year and next. Should that moderation occur as anticipated, it should also help to limit inflation pressures over time.

The projections of the Members of the Board of Governors and the Presidents of the Federal Reserve Banks, which are based on information available at the time of the last FOMC meeting, are for a gradual decline in inflation in coming quarters. As measured by the price index for personal consumption expenditures excluding food and energy, inflation is projected to be 2.25 percent to 2.5 percent this year, and then to edge lower, to 2 percent to 2.25 percent, next year.

The FOMC projections, which now anticipate slightly lower growth in real output and higher core inflation than expected in our February report, mirror the somewhat more adverse circumstances facing our economy, which have resulted from the recent steep run-up in energy costs and higher-than-expected inflation more generally. But they also reflect our assessment that with appropriate monetary policy and in the absence of significant unforeseen developments, the economy should continue to expand at a solid and sustainable pace and core inflation should decline from its recent level over the medium-term.

Although our baseline forecast is for moderating inflation, the Committee judges that some inflation risks remain. In particular, the high prices of energy and other commodities, in conjunction with high levels of resource utilization that may increase the pricing power of suppliers of goods and services, have the potential to sustain inflation pressures. More generally, if the pattern of elevated readings on inflation is more protracted or more intense than is currently expected, this higher level of inflation could become embedded in the public's inflation expectations and in price-setting behavior. Persistently higher inflation would erode the performance of the real economy and would be costly to reverse. The Federal Reserve must take account of these risks in making its policy decisions.

In our pursuit of maximum employment and price stability, monetary policymakers operate in an environment of uncertainty. In particular, we have imperfect knowledge about the effects of our own policy actions as well as of the many other factors that will shape economic developments during the forecast period. These uncertainties bear importantly on our policy decisions because the full influence of policy actions on the economy is felt only after a considerable period of time. The lags between policy actions and their effects imply that we must be forward-looking, basing our policy choice on the longer-term outlook for both inflation and economic growth. In formulating that outlook, we must take account of the possible future effects of previous policy actions—that is, of policy effects still "in the pipeline." Finally, as I have already noted, we must consider not only what appears to be the most likely outcome but also the risks to that outlook and the costs that would be incurred should any of those risks be realized.

At the same time, because economic forecasting is far from a precise science, we have no choice but to regard all our forecasts as provisional and subject to revision as the facts demand. Thus, policy must be flexible and ready to adjust to changes in economic projections. In particular, as the Committee noted in the statement issued after its June meeting, the extent and timing of any additional firming that may be needed to address inflation risks will depend on the evolution of the outlook for both inflation and economic growth, as implied by our analysis of the incoming information.

Thank you. I would be happy to take questions.

Chairman SHELBY. Thank you Mr. Chairman.

Mr. Chairman, your testimony notes the possibility of some risk which could add to inflationary pressures, in particular the possibility of higher energy prices feeding into the prices of nonenergy goods and services. Your testimony, Mr. Chairman, also notes the risk to our economy due to a slowing housing market.

The question is this: What would be the impact, Chairman Bernanke, on the economy if both of these effects materialized to a greater degree than is currently anticipated? How would the Federal Reserve be likely to respond to such a scenario? These are not out of the question, either.

Chairman BERNANKE. No, Senator. As I mentioned, we are following the data very closely and we revise our forecasts as needed. Right now we see, of course, the housing market slowing. We see some offsetting strength in some other sectors of the economy and our expectation is that the economy is going to be growing at or about the pace of its underlying potential.

We also think that inflation is going to moderate. We see some risks to the upside, and that is an issue that we have to think about. But of course, if we see changes in the data, we will certainly adjust our balance of risk and thinks about it accordingly.

Chairman SHELBY. Among that same lines, both your testimony, Mr. Chairman, and your written report this morning discuss the lag between Fed policy actions and their effects. Some analysts have remarked on the trade-offs which may exist between spurring economic growth by way of low interest rate regime and combating inflation. That is always a challenge.

How do Members of the Federal Reserve know when your changes to monetary policy have been fully incorporated throughout the economy?

For example, how does the FOMC go about assessing whether the 17 quarter point rises in the Federal funds rate are fully incorporated in the market 3 months from now, 6 months from now, or some other time? Is that a judgement on your part?

Chairman BERNANKE. Senator, it is judgment based on a great deal of quantitative analysis. We look at extensive models. We look at statistical models. We look at financial market data. We use our own judgment. We listen to anecdotes. We try to make our best judgment about where the economy is heading, including the effects of the policy actions that we have already taken.

Our goal is to achieve a sustainable, noninflationary expansion and we are adjusting our policy in a way to try to meet that goal.

Chairman SHELBY. In other words, you do not want the medicine to destroy the patient; right, in a sense?

Chairman BERNANKE. Senator, that is absolutely right. Again, our goal is to achieve a sustainable expansion.

There are risks in both directions, if I may say so. Clearly, we do not want to tighten too much to cause the economy to grow more slowly than its potential, and we are very aware of that concern, and we think about it and we look at it and try to evaluate it.

The risk in the other direction is that, if we were to stop tightening too soon and inflation were to get higher and more persistent, then we would be faced with the situation of having to address that later on with perhaps even more interest rate increases.

So our goal is to achieve a sustainable expansion. We have to balance those risks and those two directions. And we do that by looking forward to our forecasting process and thinking about how actions we have already taken are likely to affect the economy in the long-run.

Chairman SHELBY. So whatever you do, you have to keep in mind price line stability at every move, do you not?

Chairman BERNANKE. Senator, price stability is part of the mandate, of course. And I do believe it is important for achieving stability, and also moderate interest rates. For example, we talk about mortgage rates and we understand that our actions affect mortgage rates. But if you look back historically, the periods where mortgage rates were by far the highest, were high inflation periods like the 1970's and early 1980's, when mortgage rates reached 18 percent. So if we want to keep mortgage rates low, we need to keep inflation low.

Chairman SHELBY. Mr. Chairman, as the cost of energy, as you have noted, is often volatile, in part because of its seasonal use and in part because of factors beyond our control. Historically, energy prices have been excluded from the measure of what you call core prices in the consumer price index. If there is a sustained increase in energy prices, would it be more appropriate for policymakers to rely upon an inflation measure which includes the energy cost?

In other words, does the exclusion of energy prices from the definition of core prices pose any problems for economists trying to understand the health of our economy at the present time?

Chairman BERNANKE. Mr. Chairman, that is a difficult question. As you point out, we have excluded it from one of our basic measures, the core measure, because in the past it has been a very volatile price. Of course, more recently, instead of going up and down, it has just gone up.

So the question is what is the purpose of our measure? If we are trying to forecast inflation over the next couple of years, we can still look at the futures markets for energy. And although they have not been very reliable, I have to admit, they do say that energy prices are likely to be relatively flat over that period. If that is true, then the core inflation measure is a better forecast of what total inflation will be a year or two from now.

On the other hand, the inflation rate that people see is the overall inflation rate. They see the gasoline price at the pump. That affects their behavior. That affects their expectations. If those high

inflation rates, including energy, cause people to develop an inflationary psychology, that would be a concern that would effect, perhaps, the future course of inflation.

So depending on the purpose, we do have to look at different combinations of measures.

Chairman SHELBY. We all like 99 cent gasoline, as you well know, all of us.

Chairman BERNANKE. Yes, sir.

Chairman SHELBY. Mr. Chairman, last question here for now, dealing with the housing market GSE's.

In your testimony this morning, you note the cooling down in the housing market and its associated effect perhaps on consumer spending.

What effect, Mr. Chairman, if any, would a more significant slow down in the housing market and asset-based securities industry have on the financial condition of Freddie Mac and Fannie Mae? And do you have any concerns regarding effects on the banking system in this regard?

Chairman BERNANKE. Senator, so far the credit quality looks to be good. We see that mortgages are, for the most part, fixed-rate despite the fact that we have seen more nontraditional mortgages and ARM's issued recently. We only see about 10 percent of all mortgages being repriced during 2006. Because of these rapid increases in house prices, a lot of homeowners do have a lot of equity. And, therefore, they are able to make the payments on their homes. So we do not see any near-term significant increase in mortgage delinquencies or credit risk.

The one area that we are watching very carefully is low and moderate-income subprime mortgage lending. That area, more than the broader market, has seen adjustable-rate mortgage lending. And therefore, there is more susceptibility, I think, there to increases in interest rates affecting the monthly cost of mortgages.

Chairman SHELBY. Senator Sarbanes.

Senator SARBANES. Thank you very much Mr. Chairman.

Chairman Bernanke, do you agree that the rate hikes over the last 2 years, 17 successive rate hikes, are beginning to bite and they have reduce long-term inflation risks?

Chairman BERNANKE. Senator, as you know, we started from an extraordinarily low level of about 1 percent, and we had to move many times to remove that extraordinary degree of monetary accommodation from the system. I would agree we have essentially removed that extraordinary degree of monetary policy accommodation and we are much more in a more normal range of interest rates at this point.

I do think it is beginning to have some effect. We are trying to judge the effect on both real output and inflation, and trying to make our best judgment.

Senator SARBANES. If there were no further rate hikes, how long do you think the negative effects of past rate hikes on growth and output in jobs would continue?

Chairman BERNANKE. Senator, the forecasts that I gave you earlier are based on our analysis of the future of the economy, taking into account the policy actions that we have already taken. So based on those actions, or actually based on appropriate monetary

policy more specifically, the Members of the FOMC see the economy cooling slightly relative to the last 3 years to a sustainable pace consistent with underlying productive capacity. And they also see inflation moderating to a level more consistent with price stability over the next 2 years.

Senator BENNETT. Is there a further lag between the slowing of the economy and changes in core inflation? If so, how long is that lag?

Chairman BERNANKE. Again, our forecasts have tried to incorporate those legs. If you were asking about even beyond the 2007 forecast horizon, my guess would be that we would see some further decline in inflation in 2008.

Senator SARBANES. I am concerned about this perception I quoted in my outset, "To Pause or Not to Pause, That is the Conundrum," and that "The Fed has managed to elevate a pause to something that is a pretty major event. What was normal in prior cycles, up or down, is now something that grabs headlines."

And then the commentator noted "The Fed paused twice in the 1999–2000 cycle, three times in the 1994 cycle. It elicited a yawn from the markets. This time it is attracting enormous attention."

There is an article in this morning's *Wall Street Journal* in which they quote Alan Greenspan, who made this observation after a series of rate increases: "There may come a time when we hold our policy stance unchanged or even ease despite adverse price data should we see signs that underlying forces are acting ultimately to reduce inflation pressures."

He made that statement to the Senate days after the Labor Department had reported the biggest monthly increase in the core CPI since 1992. What is your reaction to that?

Chairman BERNANKE. I absolutely agree with your point, Senator. In fact, in my testimony before the Joint Economic Committee, I argued that at some point, a point which I did not specify, the Fed would have to get off this 25 basis point per meeting escalator and adopt a more flexible approach, possibly varying its pace of tightening, possibly taking a pause.

That has been the practice in the past. That is the practice of the European Central Bank and the Bank of Japan today. They do not move at every meeting. They move based on the state of the economy and based on the pace at which they wish to tighten.

So I did make that point. I think it is still relevant. But of course, we always look at this meeting by meeting, and we will be evaluating all options when we come to meet in August.

Senator SARBANES. This development in the housing market that I showed earlier, and the drop in the new housing starts, that is a 22 percent drop in a matter of months.

Now the National Association of Home Builders, which obviously would be quite concerned about something of this sort, has written to Members of the Committee about this. And I understand that some forecasters say that this could result in a 1.5 percent drop in GDP.

Now we have relied on the strong housing market to keep the economy up in recent times, and now this seems to indicate a deterioration in that position.

Furthermore, in your statement when you talk about higher core inflation, you reference increase in residential rents, as well as the imputed rent on owner-occupied homes. Now the Association of Home Builders makes, it seems to me, a rather valid point in communicating with us about this measure, saying that the weakness in new housing increases the demand for rental housing. Therefore, the price of rental housing goes up and the imputed value of the owner's equivalent rent—which they are not actually paying, it is a statistical measure—that goes up. And therefore, the core inflation goes up. Then the reaction to the core inflation going up is to raise the interest rates in order to check what is perceived as an inflation problem.

The raise in the interest rates intensifies this trend in the decline in new housing, available housing, greater demand for rental housing, a greater imputed value into the core inflation measure. And you have this vicious circle contributed to by the raised interest rates.

That seems to me to have some validity, that observation. What is your reaction to that?

Chairman BERNANKE. Senator, on your first point about housing, we are watching housing market very carefully. I would point out that there have been some offsets in nonresidential construction, in exports, and in investment. So other parts of the economy are picking up to offset some of the weakness we see in the housing market. But we are watching that very carefully.

Your point on owner-occupied equivalent rent is a good point and we are quite aware of it.

Senator SARBANES. Seventy percent of the housing in this country is owner occupied; correct?

Chairman BERNANKE. Senator, what I was going to say is, and I think that is a good reason, that for example we focus more on the personal consumption expenditure deflator, which puts a much lower weight on that than does the CPI, for example.

In addition, as I mentioned in my testimony, the increase in inflation we have seen is a much broader phenomenon than that single component. If that single component was the only issue, I would think twice. But I do see movements in inflation in a broad range of goods and services.

Senator SARBANES. Is it worth thinking one-and-a-half 5 times when you see that component doing that thing?

Chairman BERNANKE. No, I will think twice, Senator.

Senator SARBANES. Mr. Chairman, I want to make one final point, if I could, with the Chairman. I want to use two charts to show it.

One is a chart showing that rising profits more than account for inflation in the nonfinancial corporations. What this shows is the red line represents the increase accounted for by higher profits. The blue line is the increase in prices. And it goes back to the chart I showed about the labor costs.

It seems to me it is fair to say, at least up to this point, that a rise in labor costs, which had 0.3 percent I guess, most of it is we have increased productivity, is not a factor in looking at a current inflationary situation. Would you agree with that?

In fact, the whole thing is skewed so that the benefits of whatever economic activity is taking place are going very much to profits, which then translate out to this growing inequality in incomes and wealth in the country.

Chairman BERNANKE. Senator, I agree that there is more of a problem in the product markets than in the labor markets. In the product markets they are sufficiently tight that firms are developing pricing power and they are passing on their energy and materials costs.

It still is an inflation problem because if inflation rises, it is still going to have the same adverse affects. It is going to get into expectations. I am not saying that is going to happen. Our forecast is for inflation to decline over time. But it is a risk. And nevertheless, if it is coming from product markets more than labor markets, it is still a risk to inflation.

Senator SARBANES. Thank you, Mr. Chairman.

Chairman SHELBY. Senator Bennett.

Senator BENNETT. Thank you.

Chairman Bernanke, we have had a lot of conversations about wage growth compared to inflation. I find it hard to get a single statistic on this. If you look at the narrow measure of labor compensation that is labeled average hourly earnings, which does not include any benefits, then you get one answer. If you look at the more comprehensive measures of labor compensation, such as those that come from the Bureau of Labor Statistics, productivity statistics, and the employment cost index from the International Compensation Survey, you get another answer.

If you take those BLS measures that include benefits as well as that which shows up in the W–2, suggesting that benefits sometimes very often comprise 30 percent of compensation. So leaving them out of the figure would be kind of misleading. If you take the information from the BLS statistics, you find that workers have made gains, in some cases very healthy gains, after adjusting for inflation.

Now, what statistics do you use when you look at this? And can you give me some help as to where I should go?

Chairman BERNANKE. Senator, we look at them all. I am sorry that I cannot point to one in particular.

But you do make a valid point, which is that if you look at nonfarm business compensation per hour, you have real increases about 2.5 percent over the past few years. If you look at real average hourly earnings, it is much closer to zero.

The difference, as you point out, is really two things. One is the fact that the former, the nonfarm business compensation, includes benefits. But it also includes the full universe of workers, not just production workers. So depending on what sector you are looking at, you might use one or the other.

For purposes of looking at household income, that is how much income consumers have to spend, you would probably look at the nonfarm business compensation. If you are looking at costs affecting manufacturing, for example, you would look at some of the average hourly earnings numbers.

Senator BENNETT. When I was an employer, I learned very quickly you cannot look at your labor costs in terms of what shows

up on the W–2. Your labor costs are based on the entire compensation package, which includes all of the benefits. And you learned very quickly that if you did not recover enough value added from the employee's work to cover everything, what is in the W–2 plus the Social Security plus the health care, plus the unemployment compensation, plus, plus, plus all of the other things that got added on. If you did not get sufficient value added from the work of the employee to cover all of that, you could not afford the employee. And all of that was always significantly higher than the earnings that was reported in the W–2.

So, I have to continue to look at that when we have these arguments about compensation and where it really goes.

Let me shift completely from that argument to another one that we have had maybe in some of the opening statements. You have suggested that persistently low, long-term interest rates, even as short-term rates have risen significantly, comes as a result of a global savings glut with respect to global investment opportunities. And it is that global savings glut that has allowed large amounts of savings to flow into the U.S. investments.

I was at the Aspen Ideas Festival and one economists there said people send their money here because, number one, it is the safest place to do it. And number two, they get a higher rate of return in the United States than they get elsewhere.

Do you still believe there is a global savings glut and that we can expect people to continue to want to put their money here?

Chairman BERNANKE. I think there still is a global savings glut. It may have moderated somewhat because of increased growth in some of our trading partners. But on the other hand, there has also been, of course, these large revenues that the oil producers are accumulating because of the high price of oil. They are not able to absorb, or use those revenues at home, very quickly. So they are taking that money and putting it back into the global financial system. So that is contributing to this overall global savings glut.

I would say that real interest rates at the long end have recent risen a bit recently. And I think that some moderation in the global savings glut, together with some return toward normalcy in term premiums, may account for that. So, I think there has been some change. But the broad idea that the global savings glut is out there, I think, is still valid.

Senator BENNETT. So you are suggesting that foreign investment in the United States is not about to dry up at any point soon?

Chairman BERNANKE. I do not think it is going to dry up. I do think that over a period of time we should become more reliant on our own saving and reduce the current account deficit.

Senator BENNETT. Surely.

Thank you, Mr. Chairman.

Chairman SHELBY. Senator Reed.

Senator REED. Thank you very much, Mr. Chairman.

Thank you, Mr. Chairman, for your testimony today. You have indicated that you expect inflation to moderate going forward. Is that a consequence of the slowing economy or moderating economy?

Chairman BERNANKE. That is one part. But in addition, we are seeing, we are hoping at least that these energy price increases will

not continue at the same pace as they have been going on in the past. And that would remove a source of inflation pressure, as well.

Senator REED. If the economy moderates, what will that do to already, from my perspective, inadequate job growth? Would you anticipate job growth to also moderate?

Chairman BERNANKE. I think that job growth will continue to be close to what the labor force growth demands, in some sense. There has been a change in the last few decades in terms of the rate of growth of the labor force, in part because, for demographic and other reasons, the share of the population that participates in the labor force has flatted out and now looks to be declining.

It therefore appears that the number of jobs we need to create each month to keep the unemployment rate roughly constant is lower today than it would have been, say, in the early 1990's. And so I think job growth will be lower than it has been over the last 15 years. But I think it will be close to where it needs to be to keep the unemployment rate at a healthy, low level.

Senator REED. But that is a function of the participation rates. And for some reasons, demographic rates, an older population you would have a lower participation rate. But you still have a significant number of Americans that are looking for both work or looking to move up. And with a job rate that simply replaces the new entrants in the job market, that is not going to provide the type of robust job growth that most people associate with a vibrant economy.

Chairman BERNANKE. What we see in the labor market, and it is a very difficult problem, is a bifurcated market. What we see is people who are skilled, who are machinists, registered nurses, truck drivers with a commercial driver's license, and so on, are finding a lot of opportunities. People with less skills are finding it more difficult.

That is, of course, a serious problem for our economy. But it is one probably that needs to be addressed more by education and skill training and other approaches rather than monetary policy.

Senator REED. I think that is a conclusion we have all reached. But in the short to intermediate run, it is hard to reeducate a workforce. And people have to be able to live and work. And that is a dilemma that we both face.

Is it accurate to say that some of the productivity gains have been increased not by upgrading the skills of Americans or the equipment they have, but by simply shipping jobs overseas? That as you lower the unit cost of labor, for example, and your output is constant that would seem to me to increase productivity. Are some of these productivity gains a direct result of outsourcing American jobs?

Chairman BERNANKE. I do not think we have clear knowledge of which direction that effect is working. It depends on the composition of jobs that have been outsourced. It depends on how it affects the productivity of firms that remain in the United States. For example, if they are able to improve their global supply chains and the like.

I think the primary source of the productivity gains are two. First is the improvements in information communication technology we have seen over the last 20 years or so.

But second, the United States has done a lot better at using those technologies than a lot of other industrialized countries. I think that relates to the fact that we do have very flexible product and labor markets. We have deep capital markets that provide funding for new ventures. And we have an economy that has an entrepreneurial spirit.

So we have made better use of those technological changes than some other countries. I think that is the primary source of our productivity gains.

Senator REED. But is it worth, in terms of just an analytical approach, to look at the effect on productivity of outsourcing jobs? We take great pride in increased productivity. But I think if part of the story is it represents the loss of American jobs, it is not as compelling or as desirable a notion.

Chairman BERNANKE. We could look at that. As I said, I do not think we have clear evidence on that point. I think a broader issue is competition.

There is some very interesting research done by the McKinsey Corporation that has looked at firms around the world and looks at their productivity gains. What it finds is that firms that are exposed to competition, as unpleasant as that might feel, increase their productivity gains much more rapidly.

And so one of the benefits, I think, of a more open trading system, a more open economy where we compete with, and trade with, countries around the world, despite the fact that it does create stress and sometimes changes and dislocations, is that competition forces productivity gains and has been, I think, a source of growth for us as well as for our trading partners.

Senator REED. Thank you, Mr. Chairman.

Chairman SHELBY. Senator Bunning.

Senator BUNNING. Thank you, Mr. Chairman.

Chairman Bernanke, as I said in my opening statement, the stock market has been on a wild ride since you took over in February. I have a chart here that I would like to share with you.

Since you were sworn in, the Dow is down 65 points, 0.61 percent. Standard & Poor's is down 43.22 points, 3.49 percent. The Nasdaq has suffered what we call a severe drop. It is down 262 points or 12.85 percent.

Since your lapse in judgment, in your words, took place, the Dow is down 567 points, a total of 5.26 percent. Standard & Poor's is down 73.75, almost 6 percent. The Nasdaq is down 279 points, 13.67 percent.

But even more importantly, since the May 10 Fed rate increase, the Dow is down 840 points, 7.78 percent. Standard & Poor's is down 88.28, 7.14 percent. And the Nasdaq is off 295.02, or 14.4 percent.

My question, to follow that up, why do you think the markets have reacted so drastically to the Fed's actions?

Chairman BERNANKE. Senator, I do not think it follows necessarily that they are reacting to the Fed's actions. There are a lot of factors in the world that could explain why the markets are down. We have geopolitical uncertainty and oil prices going on. We have, around the world, many other central banks raising interest rates. And that has led to a clear reduction in the amount of risk

that people willing to take on. We have seen that in lots of markets, in other stock markets in other countries, as well. There is greater uncertainty now about inflation and growth in the U.S. economy. I think all of those things can help explain why the markets are down.

I would add that the literature suggests that stock markets do not do well in periods of inflation. I think the best thing the FOMC can do, to strengthen, to get the stock market up, although that is not one of our mandated goals but I think it would be a good thing, but to help get the market up, would be to go toward our mandated goals and create stable growth and to keep inflation low. And that is what we intend to do.

Senator BUNNING. Do you know how this translates for the average American? Into the higher interest rates, which the FOMC has done, into lower values on their pension plans? This is average America. Lower 401(k) values by billions of dollars.

It seems like a straw horse to use higher energy costs when higher energy costs have been occurring off and on since 1974, we have had an unstable energy market, sometimes to the extreme of $12 or $8 per barrel to $78 plus per barrel, which it hit this past week. So that is not a real factor. That is one that is coming and going. That is why it is not in the core inflation rate.

These are real problems that everyday Americans are facing. And your action on the FOMC, and your 11 other people that are with you, deciding interest rates on a given day, trying to project 9 months down the road how it will affect the U.S. economy is just breathtaking.

Last week, a writer for one of our wonderful business publications, *Business Week,* said if you, as a Chairman of the Federal Reserve, expect growth to moderate and inflation to ease, why do you even consider another rate hike?

Chairman BERNANKE. Senator, again, I do not think you have made the case that this is not a fundamental set of factors affecting the stock market. If we had stopped raising rates at 4.25 or 4.50, I think there would be a lot of concern in the market and in the economy about inflation at this point. We have tried to balance those inflation concerns against growth concerns. We are looking at both very carefully.

As far as the future policy, as I said, we have not made any future decisions. We are going to be looking at the situation at each meeting. We do have to take into account, though, the possible risks, as well as the expected path that we are looking forward to, because if there is a chance that a very bad outcome might occur, there is a risk management approach, which Chairman Greenspan and other central bankers apply, which suggests that you need to lean a bit against that possible outcome.

But again, we will be looking at all the data and thinking hard about it when the time comes for us to meet again.

Senator BUNNING. Thank you, Mr. Chairman. My time has expired. I will wait for the next round.

Chairman SHELBY. Senator Menendez.

Senator MENENDEZ. Thank you, Mr. Chairman.

Mr. Chairman, I want to return to some of the issues I raised in my opening statement. It appears to me that we have an econ-

omy in which increasing productivity and large tax revenues are driving up our gross domestic product. But that, in turn, has benefited a very small number of people who own capital.

As I said to you in my opening statement, in New Jersey when I talk to people, they tell me that they are constantly feeling squeezed by higher tuition rates as they try to send their kids to college, facing the challenges of the costs of taking care of a loved one, facing higher energy prices to heat or cool their homes, facing higher gas prices, facing higher insurance premiums and copays, and yet finding their median incomes are flat over the last 5 years.

And so, with all of those challenges and negative personal savings, who is this the economy working for?

Chairman BERNANKE. Senator, I think what you are addressing is the issue of inequality. I agree that inequality is potentially a concern for the U.S. economy. We want everybody in the society to have a chance to participate in the American Dream. We want everybody to have a chance to get ahead. And to the extent that incomes and wealth are spreading apart, I think that is not a good trend.

That however is a development, a trend, that has been going on for about 25 years now, according to most of the studies. It is therefore, a big challenge to think about what to do about it. I could go into some of the literature, if you would like, about some of the research on why this is happening. But I do think that fundamentally the increased importance of skilled jobs and of technology in our society puts a higher premium on people with more education, more experience, and more skills.

I think really the only long-term solution to this problem is to try to upgrade the skill levels of our workers. And I think that is not necessarily a 10, 15, or 20 year process because people can learn, as Senator Dole often says, in community colleges or technical schools. They can learn on the job. There are all kinds of adult training and various things that can be done. I think we need to take that seriously because I think that is really the only way we can address this issue on a long-term basis.

Senator MENENDEZ. Often when we talk about inequality, we think about the people at the lowest level. I am talking about middle-class families who are facing those squeezes of all of these higher costs. Many of them are pretty well-educated. And yet their incomes remain relatively stagnant.

Our global challenge is it used to be that the casualties of global trade were those at the lowest skill levels. But I have software engineers telling me that they are losing their jobs, and they make some pretty significant incomes. And that the certainty of their job employment has moved. One guy told me he is in his third different company in the last 18 months, not because he is not a good employee, but because the global challenges are either consolidation or offshoring of the services that he provides.

So it seems to me that we have to look at the underpinnings of this in terms of middle-class families increasingly being squeezed.

And we talk about inflation. If all of these prices are going up and yet your incomes remaining relatively flat is not inflationary to the average family, it seems to me they are pretty inflationary.

The other question I would like to ask you is what do you see currently as the most significant threat to economic expansion, in your view?

Chairman BERNANKE. Economic expansion in the short term?

Senator MENENDEZ. Yes.

Chairman BERNANKE. I think it is the risk that we are considering, and again it is just a risk, that inflation might move up and might force us to be more aggressive, which we do not want to do, because we hope that inflation will stay under control or come down as we expect it to. I think that is a risk.

We also have the geopolitical issues. We have seen the latest in the Middle East, for example. Oil prices are a risk and a concern, and we are paying very close attention to that situation as well.

Senator MENENDEZ. And last, I had asked you in a written question which you answered about paying down publicly held debt and the importance of that. Now we see where CBO tells us we are headed to $12 trillion worth of debt by 2011. How much importance do you place on paying down that publicly held debt in the context of long-term economic health?

Chairman BERNANKE. Senator, I think it is really important to think about the long-run. And what we are facing going forward is an aging population, increasing costs of medical care, and the costs for our entitlement programs that are going to be rising very seriously.

So, I think the strongest case for trying to pay down some debt sooner is to try and provide some buffer or some savings that will help us meet those challenges as we go forward. I think that the most serious long-term issue for our budget, is these growing transfer programs.

Senator MENENDEZ. Thank you, Mr. Chairman.

Chairman SHELBY. Senator Dole.

Senator DOLE. Mr. Chairman, are there signs that wages are beginning to catch up to past productivity growth? And if not, when do we expect this to happen? And would it be a concern to the Fed? Can you have a period in which wages catch up to productivity without an increase in inflation?

Chairman BERNANKE. Senator, we see some evidence of this, but it is not very overwhelming. For example, the average hourly earnings number is up about a percentage point this last year versus the previous year. We are seeing anecdotally that firms are finding it harder to hire skilled workers and are either giving or contemplating wage increases. So our forecast is for increase in wage growth going forward.

But again, it has been slow coming. I want to be clear about that.

As far as inflation is concerned, I want to also be very clear that increases in the real buying power of workers are not inflationary.

For example, if it happens because the inflation rate is going down and a given wage buys more, there you have an increase in real wages without any inflation.

Similarly, if wages go up but they are offset by productivity gains, which has been the case for the last few years, you have higher real wages but no inflation.

And third, another possibility is that markups go down, the margins go down.

So, I do think the wages will rise. I am a little surprised they have not risen more already. I believe that real wage increases, though, are not at all inconsistent with our prediction that inflation is going to moderate over the next couple of years.

Senator DOLE. Congress has been engaged in a debate over increasing the minimum wage. As a former Labor Secretary who has testified on this issue, I know that increasing the minimum wage is not an effective mechanism for lifting people out of poverty. I have long advocated for increasing the earned income tax credit and jobs and skills training, which I think are far more effective at relieving poverty.

Would you share with this Committee your thoughts on the most effective ways that Congress can act to reduce poverty?

Chairman BERNANKE. Senator, the minimum wage is controversial because economics suggests that, when you raise the minimum wage, you would pay a higher wage to some workers, but then some workers would not get work because of the higher wage. The research on this is controversial. Some people have argued that the effect is very small. Others think it is larger.

My inclination is to say that you would like to find ways of increasing the return to work, which do not have the effect of potentially shutting some people out of the workforce. So, I think I would agree, and I have said this in previous testimony, that the earned income tax credit, which provides extra income to people who are working, and increased training for increased skills and productivity, are in my opinion probably more effective ways to approach this question.

Senator DOLE. Thank you.

Another question. Do you believe that Fannie Mae and Freddie Mac's regulator should have the authority to allow the GSE's to increase their portfolios when there is a downturn in the housing market?

Chairman BERNANKE. This is another controversial issue. The point is sometimes made that the GSE's can enter into a situation where there is a downturn and provide extra liquidity in the market through their portfolios to support the mortgage-backed security market, for example.

In our research at the Federal Reserve, we have not found that to be a very important effect. We have really found very little effect in that direction. We would also point out that if you are going to do that, what you want to have in your portfolio is liquid assets like treasuries, not MBS, because you cannot increase liquidity if you buy MBS with other MBS. So we have been some concerns about that.

Now having said that, I think it is worth, for the purposes of trying to come to some kind of agreement on GSE's legislation, we could perhaps discuss or consider the possibility that the director might provide some emergency ability to GSE's to make extra purchases during times in which the director judged the housing market to be in distress for some reason, but then to get rid of that extra portfolio, get rid of the extra MBS, over a period of time when the emergency was eliminated.

Again, we do not really see much evidence that this is necessary. But if that were part of an overall agreement that brought a strong and effective regulator to the GSE's, it might be worth considering.

Senator DOLE. Thank you. I believe my time has expired, Mr. Chairman.

Chairman SHELBY. Thank you. Senator Carper.

Senator CARPER. Thank you very much.

I had indicated several questions I was going to ask you. One is what do you think about when we give our opening statements. I will ask you that in private on another day.

I want to go back to this issue of GSE regulations, of Fannie Mae and Freddie Mac and the Federal Home Loan banks. I know our Chairman has raised this issue and Senator Dole has just raised it and I suspect others have as well.

As Chairman of the Federal Reserve, you regulate some of our biggest entities and holding companies in the country. I want to just come back and ask you for some advice as we try to find—we have really differences in two principal areas. One of those is with respect to an affordable housing fund and how to structure that. The House has passed legislation, by a pretty wide margin, where they establish one.

I think they ask for setting aside I want to say 5 percent of net income from Fannie Mae and Freddie Mac to go into an affordable housing fund, that monies would be apportioned from there into affordable housing in our different States.

The other issue, of course, is the portfolio, what could be in it? How much can it grow? What powers do we give the regulator with respect to regulating what is in the portfolio?

If you are giving us advice, and you have given us a little bit but I am going to ask you just, sitting back, looking at it as a regulator yourself, what would you want to have as a strong regulator and legislation that would enable you to do a good job? If you were regulating the GSE's.

Chairman BERNANKE. Senator, I do not have much to offer on the affordable housing. I know that is an item for negotiation. I would just point out that an alternative would be to put it directly on budget rather than to do it indirectly through the GSE's.

With respect to the portfolios, as you know, the Federal Reserve has argued for a substantial time that the portfolios are larger than is needed to serve the fundamental housing mission of the GSE's. My advice would be not to set a hard cap or a number and restrict the portfolio in that way, but to give strong guidance to the regulator about how to relate the portfolio to the mission of the GSE's.

For example, it would make perfectly good sense for the GSE's to hold affordable housing mortgages that are difficult to securitize in their portfolio, for example, or maybe to hold liquidity for some of the issues that Senator Dole is raising.

But I think by grounding the size of the portfolio in the mission of the GSE's, you would bring down, over time, the portfolio to a safer level and not hurt the underlying mission of the GSE.

Senator CARPER. How important do you think it is that we find common ground and actually regulate in this area this year before we call it a day?

Chairman BERNANKE. I do think it is very important. The Federal Reserve was drawn to this issue initially because we felt that while the securitization function of the GSE's is extremely valuable and constructive, we felt that the large portfolios exceeded what was needed for the housing purpose, and indeed posed a threat to the stability of the financial system.

The reports we have seen recently on GSE accounting by OFHEO and so on, which cast into doubt the underlying accounting and internal controls of these agencies, I think just heightens my concern that those large portfolios at some point might create serious problems for financial markets.

Senator CARPER. Thank you.

I suspect others have already talked to you about, as you have raised short-term interest rates, and we have actually seen the emergence of an inverted yield curve. Why is that happening? Do you think it is going to persist? Is it something we should be concerned about?

Chairman BERNANKE. Senator, there appears to be a structural tendency for the yield curve to be flatter than it was in the past. Part of it, as I answered to Senator Bennett, is the global savings glut which is keeping long-term real interest rates lower than they otherwise would be.

The second is, for a variety of reasons that I went into in a speech earlier this year and talked about in some detail, for a variety of reasons the term premium, the risk premium on long-term debt, seems to have been lower recently than historically.

And for those reasons, the term structure seems to be flatter structurally than has been the case historically, although there has been a bit of an increase, I think, in the long rates in both the term premium and the portion attributable to the savings glut, I think, since the beginning of the year.

Senator CARPER. A question on energy independence, if I could. I mentioned in my earlier comments that over a third of the trade deficit this year now is imported oil. When we look at inflation, a significant part of what is pushing up prices is the cost of energy.

Our neighbors down to the south in Brazil, about 15 years or so ago they had said they wanted to become energy independent. And they have done a fair amount of work. We hear a lot about what they have done with flexible fuel vehicles and greater reliance on ethanol.

We, meanwhile, have gone in the other direction over the last 15 years. We have become more and more dependent on foreign oil and it takes an ever larger bite out, in terms of with respect to the trade deficit.

Your advice for our country with respect to moving toward energy independence and whether or not it is something we should be taking seriously? And if so, what counsel would you have for us there?

Chairman BERNANKE. I think as a practical matter being literally energy independent is not something that is feasible in the near-term.

Senator CARPER. It will not happen in my term and probably not yours either.

Chairman BERNANKE. I think what we should do broadly is to diversify our portfolio, to have a wider range of energy sources including ethanol, coal, nuclear, and other possibilities.

And I think there are a number of ways Government can help, but in two ways in particular. The Government has, in the past, been effective in helping in basic research. That is research that individual companies do not find it profitable to undertake because they cannot appropriate the returns.

I think we also need to try to increase the amount of regulatory certainty. It is certainly appropriate to have regulations that offset environmental and other concerns. That is totally appropriate. But there is so much uncertainty about what the regulations will be when the time comes to apply them that many projects simply do not get undertaken.

So if we can provide clearer mechanisms by which those who wish to build new energy sources can understand what is expected of them, I think we will see, given the very high prices we are seeing for oil, we will see, over the next few years, a lot of alternative energy sources coming forward.

Senator CARPER. Thank you.

I would just share with you and our friends, I think it was 106 years ago this year that the very first diesel engine was introduced. I believe it was at an exhibition in Paris, France. It was powered by peanut oil.

We now just opened up last month, in the central part of my State, not too far from where Senator Sarbanes is from, Dover, a biodiesel refinery which is run entirely on soybean oil, which we have a lot of on the Delmarva Peninsula, as Senator Sarbanes knows.

The other thing, we just got a new air conditioner at our house, and we also got a new air-conditioning standard, a new SEAR standard for air-conditioning efficiencies this year. The new standard is SEAR–13, as opposed to SEAR–8. And we had a battle over whether we were going to go to SEAR–10 or SEAR–13. We ended up at SEAR–13.

What that means, just the difference between a SEAR–10 and a SEAR–13 with respect to energy consumption, it means roughly 50 or so power plants we will not have to build over the next 15 or 20 years, simply by having SEAR–13 standards for new air conditioners, as opposed to SEAR–10.

Thank you.

Chairman SHELBY. Senator Sununu.

Senator SUNUNU. Thank you, Mr. Chairman.

Chairman Bernanke, in your testimony you used what seems to me to be an interesting phrase in a couple of places. That is the phrase "appropriate monetary policy," "reflect our assessment that, with appropriate monetary policy—the economy should continue to expand at a sustainable pace and core inflation—from its recent level over the medium term." You use it in another place.

Could you elaborate a little bit on what appropriate monetary policy is? Is that not too hot, not too cold?

Chairman BERNANKE. I wish I could, Senator. The forecasts are made under that assumption, and each person who is submitting

their forecast makes their own assumption about what that would be.

So what I take this to be is really a summary view of what we can achieve, where we should be heading with policy.

Senator SUNUNU. If everything goes perfectly?

Chairman BERNANKE. No, not perfectly, but if things go as generally expected.

I think there is a lot we could do to make those forecasts more informative and that might be one direction to go in the future. But I understand that is an ambiguous phrase.

Senator SUNUNU. You also say in your testimony that "It bears emphasizing that, because productivity growth seems likely to remain strong." So you were assuming that productivity growth will remain strong.

On what are you basing that assumption?

Chairman BERNANKE. I am basing it on looking at the pattern of recent years. First, we saw the productivity gains mostly in the industries producing high-tech equipment, as companies learned how to build ships faster, for example.

Then we saw it moving into the users. That is firms that were not high-tech producers but were using and consuming those goods to increase their own productivity. And what we see as we talk to people in the industries and the like is we see first that there is continuing innovation and improvement at the level of high-tech producers.

And moreover, what we hear from CEO's and the like is that they feel there is a lot more diffusion to take place before they have fully exhausted the benefits of new technologies in terms of increased productivity.

As a historical matter, when productivity changes from a high level to a low level, it does tend to last for a while. And that is another piece of encouraging evidence.

Senator SUNUNU. So you have what you feel to be some pretty good anecdotal evidence.

Chairman BERNANKE. It is mostly anecdotal, a little statistical. The fact is that as our society relies more and more on productivity gains as a source of growth, the forecasting is going to get tougher because it is more difficult to forecast in say the size of the workforce.

Senator SUNUNU. Which are you more worried about with regard to the medium term prospects for inflation: Inflationary expectations or the absolute level of inflation based on changes in energy prices or labor prices?

Chairman BERNANKE. Senator, the two interact because if there was just a one-time pass-through and the public were completely convinced that the Fed would keep inflation low and expectations were low and the Fed were perfectly credible, then that inflation would be just a temporary thing and would come back down.

So the risk is the interaction of the two. The risk is that inflation will go up because of energy prices, because of greater pass-through, and that will feed into inflation expectations, which then will feed into a round of additional price increases and the like.

You really cannot get a permanent increase in inflation unless people increase their inflation expectations. That is why the Fed's credibility is, I think, such a major asset of the United States.

Senator SUNUNU. It seems to me to the extent that you are in the midst of a little bit of a dilemma it is as follows. Right now, inflation is above what has been stated in different ways your target range. We have still got high energy prices. So that would suggest that the absolute level of inflation remains a concern.

On the other hand, you have a forecast for moderating growth. You have a slowdown in the housing industry. So while the inflation numbers may push you toward a rate increase, the moderating growth that has been forecast might encourage you to pause or to forgo further rate increases. That is a dilemma. I think we all understand that.

To what extent is the fact that you now find yourself in this dilemma the result of a slowness or a delay to action in beginning this cycle of rate increases?

Chairman BERNANKE. To comment on your first part of your question, we cannot do anything about this month's inflation number because our policy works with a lag. And so we have to be looking at a forecast or a future to make those judgments and to assess the risks.

I do not know the answer to your second question.

Senator SUNUNU. First of all, the second question was the good one. I did not have a first question.

I think we are working under the assumption that the forecast for inflation is in the, I think you said 2.25 percent, 2.5 percent, that is still above the 1 to 2 percent target.

Chairman BERNANKE. We do not have a target, Senator.

Senator SUNUNU. I stand corrected.

But the answer to the second question, is this the result of slowness to act or delay to act initially in the tightening cycle?

Chairman BERNANKE. I think certainly an important part of what has happened has been the increases in energy and commodity prices. That has directly added to total inflation, and now we are seeing it passing through, to some extent, to core inflation. I think if energy prices were $40, I think things would be much better. I would say that.

Whether policy has been optimal or not, I really cannot judge.

Certainly, along with fiscal stimulus and other measures we did succeed in getting the economy back on a strong growth track in the middle of 2003. And we have seen 3 years of strong growth. It took a while for jobs to come back but eventually the labor market also began to improve.

Senator SUNUNU. When you say I cannot judge, is that because you are not technically suited to do that evaluation? Or because you do not think it would be productive in your current occupation?

Chairman BERNANKE. We could try to do an evaluation with our models and the like. I am not sure how accurate it would be. In addition, the interesting thing about the energy price increases is that if you go back for 3 or 4 years and you look at each month at what the futures market was expecting, it was always expecting these things. We have had these increases, the energy prices are

going to finally stabilize. And every single month it has been wrong.

And so this increase in energy prices and commodity prices certainly has been a significant contributor. And I think that we would not really be talking about this now if energy prices were still $30 or $40 a barrel.

Senator SUNUNU. Thank you, Mr. Chairman.

Chairman SHELBY. Senator Dodd.

Senator DODD. Thank you, Mr. Chairman. And thank you, Mr. Chairman, for your presence here today.

I want to raise three quick issues if I can with you. I think all three of them could normally consume significant more time than will be allotted to me here to talk about him. And I realize we are here today to talk about monetary policy, but obviously fiscal policy has a direct bearing on monetary policy.

I am concerned, along with I presume many of my colleagues, about the rising level of our debt. I recall only a few years ago having a hearing in this Committee with your predecessor on which we actually had a hearing about what the effects would be about eliminating the national debt.

Here we find yourselves today, 5 years later, with $8.4 trillion in debt, $2.6 trillion of it occurred in the last 4 or 5 years. In fact, more debt accumulated, I gather, in this period of time than all of our previous administrations combined, and the implications of that.

It has been reported that our Vice President allegedly commented that deficits just do not matter. I am quoting him here, that is what I am told he said. I disagree with that. I would like to know how you feel about this.

I want to raise with you, in the conjunction of this rising level of debt, and the accumulation of it, the implications about how much of it is being held offshore. I noted when you consider some of the problems we are wrestling with today, whether it is the presence of a—the possibility of a presence of a growing weapons of mass distraction on the Korean Peninsula and obviously the problems we are facing as we speak here in the Middle East, the issue of immigration and the policy on our southern border.

I note that of the 10 top holders of our national debt are China at some $326 billion, oil exporters of $103 billion, Korea at $69 billion, Hong Kong at $51 billion. And coming in at number 10 is Mexico at $43 billion.

My experience has been that when you are trying to lecture your banker, it can be dangerous in a sense. And I wonder if you are as worried, as many of us are, about this trend and whether or not we should be more concerned about this growing problem, a trillion dollars of it now or more of our debt being held offshore, and what the implications could be here, and what these implications mean in terms of the monetary policy for the country.

Chairman BERNANKE. That was a lot of questions, Senator.

Senator DODD. I realize that, and I apologize.

Chairman BERNANKE. First, I think I will comment that, in retrospect, the idea that the national debt would disappear was never all that realistic. The share of GDP that was collected in taxes in the late 1990's was over 21 percent, compared to a historical aver-

age of about 18 percent. A lot of that came basically from the stock market, which we know now was not sustainable at the pace it was rising.

Nevertheless, I do think that deficits matter. I think the size of Government also matters. But deficits matter because they represent additions to debt that our children and grandchildren will either have to pay through higher taxes or reduced services. And so I think they do matter.

I would add, though, that one must also think about the size of the Government and what share of the GDP we want to devote to Government services.

With respect to the offshore holdings, you can look at it two different ways. From one perspective, it is a good thing that countries that are holding reserves want to hold them in the form of U.S. Treasuries because we have a deep and liquid capital market which is very attractive and very safe and very low cost to people as a way of holding wealth. And we do not want to do anything that would disturb that. We want people to want to hold our assets. It is good for our country.

On the other hand, from a different perspective, I think that part of what you are getting at is the fact that with a large current account deficit, the external debt that the United States owes, whether it be held in the form of treasury debts or MBS or whatever, is growing over time.

And as I agreed, I think it would be very desirable for us over a period of time to reduce that current account deficit and reduce, therefore, the growth in the holdings of U.S. assets abroad.

Senator DODD. Just a related quick question here. You mentioned earlier our trading partners and the economic circumstances in those countries where, in fact, some of the very nations that are purchasing a lot of this debt may find more attractive markets elsewhere than the United States. Does that pose a problem, in your mind, for the United States in the shorter term?

Chairman BERNANKE. That is what I was saying, that it is in our interest to keep our debt attractive both because the capital markets are deep and liquid and because our economy is strong. I do not really see a good alternative right now. I think that the great majority of the international reserves are held in U.S. dollars and I think that will continue to be the case.

However, from a current account perspective, if we look forward 5 or 10 years at the rate we are going, there will be increasing reluctance of foreigners to hold U.S. assets. And that will have effects on our economy and we need to address that.

Senator DODD. Mr. Chairman, I will come back to the savings rate and the consumer debt issue, which is a concern of mine as well. And I want to just quickly raise this issue about the job creation issue, because it seems to me based on indications—this did not happen, by the way, in the last 4 or 5 years. There has been a trend, as you pointed out, over the last 20 or 30 years where we are seeing job growth occurring at the very low level of the lower-income levels and at the upper-income levels. It is in that middle range, that middle-income earner that Senator Menendez talked about, and Senator Reed addressed, where we see not just a skill gap. But it seems to be hollowing out of job opportunities in that

area. And that troubles me very deeply, with that sense of being a low-income earner and the sense of upper mobility, moving into those middle-income jobs. And they just seem to be disappearing at an incredible rate.

I heard you say you had not really examined the outsourcing issue of jobs. I wish you would. It would be interesting to come back and give us some report on how you look at that issue of that. If I am correct, is there a hollowing out occurring here? And if so, how troubling is that to the Federal Reserve?

Chairman BERNANKE. Let me give you an example, which would be manufacturing, that certainly Senator Stabenow, for example, would be interested in.

Whether you think U.S. manufacturing is strong or not depends on how you look at it. In terms of output and production, U.S. manufacturing output is up 50 percent in the last 10 years. It is growing faster than in any other major industrialized country.

And moreover, we have moved toward higher tech, higher value-added, types of manufacturing. So from that perspective, manufacturing in the United States is alive and well.

On the other side, you look at the labor inputs, you look at the number of workers. Because manufacturing has also been extraordinarily productive, we have about a 6 percent a year increase in manufacturing productivity over the last 10 years, we can produce that extra output with many fewer workers. And so the number of manufacturing jobs, and I think these are the kind of jobs that you are possibly referring to, has been declining.

One thing to say about that, which is actually I think very interesting, is that even though the overall number of manufacturing jobs has declined quite significantly, the number of high skilled manufacturing jobs has actually been rising.

And so again, and I know this sounds repetitive, but again there is a solution, which is to help workers get the skills that will give them those opportunities.

But I agree that manufacturing is an example where the overall number of jobs has declined as the productivity of that sector has increased.

Senator DODD. Could you just add, by the way, you said to Senator Reed that the number of jobs that needed to be created on a monthly basis is dropping. I know the number today is roughly about 150,000 jobs per month. At least that is the number I have always used. What is the number you have in mind that we will be looking at?

Chairman BERNANKE. I think it is dropping. I would say now it is more like 130,000. And within the next few years we might be down to 100,000. This is all based on research at the Federal Reserve on labor force participation rates, which suggests that we will be seeing, over the next 10 years, some significant decline from the current rate. About 66 percent of the adult population is in the labor force. We expect to see that coming down, and therefore the number of jobs a month we need to keep the unemployment rate constant is likely to fall, as well.

Senator DODD. Thank you, Mr. Chairman.

Chairman SHELBY. Senator Allard.

Senator ALLARD. Thank you, Mr. Chairman.

Obviously, we are going through a period of time where there has been a huge relative change in the price of energy. And the most recent period of time when we experienced this great a change would be in the late 1970's.

At that particular point in time in our Nation's history, we had double-digit inflation, we had double-digit unemployment, we had double-digit interest rates. In fact, all of this was put together and frequently referred to as the misery index.

We have a similar situation today. But when you look at these same figures that we looked at today, our unemployment is 4.6 percent. Our inflation rate is 4.3 percent. Our interest rate is 5 to 6 percent.

What is the difference between the late 1970's, when we had this huge increase in energy costs, yet the economy did not respond, and today when we have a huge increase—the economy is still staying very strong.

I wondered if you could shed some light on your view on that?

Chairman BERNANKE. Thank you, Senator.

There are a lot of reasons including, for example, the fact that we are less energy intensive as an economy now than we were 30 years ago.

But the one I would like to somewhat self-servingly emphasize, and it relates to my answer to Senator Sununu, is the fact that the Fed has a lot more credibility for keeping inflation low and stable.

In the 1970's, when the energy crisis arose, it generated expectations of further increases in wages and prices, and you got into a wage price spiral. The Fed was caught between a rock and a hard place, having to raise rates very significantly in order to try to arrest that inflation, at the same time leading to deep recessions.

Over the last 20 years or so, the U.S. economy has become much more stable. And one of the very important reasons for that is the fact that the Fed has gained strong credibility for keeping inflation low.

The Michigan Survey just came out, and the front page was describing inflation expectations of the American public. And they have a lot of confidence that the Fed will keep inflation low, despite the fact that gas prices are up at the pump.

To the extent that the Fed's credibility is strong and people think that inflation will be low in the long-term, when energy price increases hit, it causes a temporary burst of inflation. But if nobody expects it to continue, then it will just moderate away. And we do not get into this pattern of having to raise rates a lot and getting into a stagnant, inflationary situation.

So, I think monetary policy is not the only factor. There are other factors. But I think it does have a lot to do with the better performance we have seen the last 4 or 5 years.

Senator ALLARD. Has the tax stimulus package had an impact on this?

Chairman BERNANKE. I think the tax stimulus package did help the economy recover from the 2003 period. And monetary policy helped, as well.

Senator ALLARD. Now the United States has been enjoying a period of economic expansion. What do you see as a single biggest threat to the continuation of that expansion?

Chairman BERNANKE. I think I had a similar question earlier and I mentioned two things. One would be that we would have an inflationary problem which is greater than we now expect. And the other would be energy prices coming from geopolitical concerns or other sources. I think those are two.

Obviously you can think of others. Senator Sarbanes has pointed to the housing market and other things. But I think those would be the ones I would point to.

Senator ALLARD. My colleague from Connecticut talked about the debt. We have the public debt and then we have the total debt, which includes transfer funds for Social Security into the debt.

If we did not have a deficit today and even, in fact, had a surplus, wouldn't our total debt figures increase because of the transfer from Social Security surpluses into the general fund? Would that not reflect on the total debt figure?

And if we are ever really going to accomplish total debt reduction, how are we going to do that without mandatory spending reform?

Chairman BERNANKE. You are correct that because we have a consolidated budget the money we are essentially borrowing from Social Security, which shows up as paper in the trust fund, does not count in the deficit. So in that sense, a broader sense, if you want to think about the U.S. deficit as being the current flow deficit plus the accrued liabilities to future Medicare and Social Security recipients, it is actually a lot larger than the official deficit.

And all that is just another way of saying that as we look forward to the next 10 or 15 years, we are going to be seeing a lot more pressure coming from these transfer programs and we do need to be thinking about how we are going to address those problems.

Senator ALLARD. I see, Mr. Chairman, my time has expired.

Chairman SHELBY. We have concluded our first round.

I have two questions I am going to submit to you, Mr. Chairman, for the record. One has to do with the Basel II capital standards. Senator Sarbanes raised Basel II earlier. We have some concern there. We have talked with you about this privately before.

The other one has to do with the Chinese economy. And I know you will respond to these.

Chairman BERNANKE. Yes, sir.

Chairman SHELBY. Senator Sarbanes, do you have any other comments or questions?

Senator SARBANES. A few questions, Mr. Chairman.

Chairman Bernanke, first of all, just to be clear, you make constant reference to the cost of energy going up and you relate that to a potential inflation problem. But it is my understanding it also has a relationship to a slowing down the economy problem, as well.

So once again you are caught betwixt and between. It works in one direction to create more of an inflationary concern, but it also works in a direction to create more of a concern about the possibility of an economic downturn. Would you agree with that statement?

Chairman BERNANKE. Yes, I would.

Senator SARBANES. Now let me ask you this question. In view of the energy situation, the fact that household savings rate is now

down at minus 1.7 percent, which is I think unprecedented certainly over a very long period of time. This chart I showed about new single-family housing home permits, which is way down, almost 25 percent since a year ago. And what we are hearing from the people in the housing field is that there is a real slow down.

The inequality in income which we referred to earlier, which I think erodes purchasing power on behalf of the people not at just the lower end but the median portion of the income scale. The people that are getting these benefits, their consumption is not going to go up significantly because they are getting these benefits. But the people who are falling behind, it is going to impact consumer purchasing.

This raise in interest rates, of course, carries with it making much more expensive servicing the national debt. We have run up the debt, the interest rates are going up. Now we have to have a bigger item in the budget to handle the interest charges.

When you put all of this together, how worried are you about the possibility that we could have a substantial economic downturn?

Chairman BERNANKE. Senator, you raised a lot of issues.

I would just say that I take very seriously the dual mandate, which is to keep the inflation low and to keep the economy growing at its potential. And we are setting our policies in a way that we think will do that. Our forecast is for the economy to grow near potential, and for inflation to moderate, and so that is consistent with what Congress has charged us to do.

I do not see a recession as being very likely. We can never rule out anything. My expectation is that the economy will continue to grow going forward.

Consumption, in particular, can still be strong enough to support growth even as the savings rate moves northward. I believe the savings rate will be improving somewhat over the next couple of years.

Senator SARBANES. I think the Members of the FOMC have some very tough decisions to make here in this particular—I think you yourself said we were in a transition period. I think you said that at the outset of your statement.

And of course, only some of the Federal Reserve regional presidents are on the Open Market Committee. A lot of them seem to be running around making statements nowadays about the situation. I am not sure where that exactly takes us. I just make that observation.

I want to just ask one final question, and the Chairman referenced the Basel II. I actually want to get that out here on the table.

The Fed has taken the lead on this issue amongst our regulatory agencies. I am concerned that the Fed—and this is really before your watch—that the Fed has gotten us down a path that is now very difficult for us.

In fact, I note that four of the largest U.S. banks have recently written the Federal bank regulatory agencies, saying that they want the option of adopting alternative methodologies, including the standardized approach, which are permissible under the Basel II framework.

Other countries are allowing this. We are the only country, apparently, proposing to limit its banks to the advance approach option only.

I do not know how we got so far down the path that when we ran the quantitative impact analysis, we had these tremendous drops in the capital the banks would be required, which have set off alarm bells all over the place. I mean virtually everyone has looked at that and said well, this is not a good model.

How seized of this issue is the Federal Reserve? We expressed repeated concern here from the Congress. The Chairman has held a number of hearings on this issue to try to maintain oversight. But it seems to have almost a life of its own. It seems to me the Fed really needs to grab hold of this issue and start thinking it through because everyone who is looking at this thing thinks this is not going to work.

And yet I get reports that the Fed continues to press ahead on this path, I guess in part because the Fed is being pushed by its international partners to do so. But I, for one, think you need to really take a hard look at this and reconsider exactly where we are.

You do not have to answer that. I just leave that with you, unless you have some comment.

Chairman BERNANKE. I would like to comment briefly, Senator. I think you and I or a group need to talk about this in much more detail. I would just make a few comments.

One is that the notice for proposed rulemaking which is going out is a joint product of all four Federal banking agencies. So it is an agreed upon notice. And it is one where, of course, we are going to invite all kinds of comments from all parties who are interested.

I discussed the QIS–4 in previous testimony. I will not take time to do that. But we certainly agree that we would not tolerate, would not want to see capital levels decline anywhere like what was seen in the QIS–4.

We do think that safety and soundness of the banking system, given how complex and sophisticated it is becoming, does require some significant updates of the Basel II approach. And the banking agencies have essentially agreed that this is the right framework. But we are very open both to suggestions about details and also about methods of making sure the capital does not fall unduly.

If I may finally say, on the three methods, I believe it is the case that other countries will be asking their largest and most sophisticated banks to use the advanced method because that is really the only one of the three that is appropriate for the kind of international banks that we are talking about.

Senator SARBANES. We understand that the Conference of State Bank Supervisors has recently written, encouraging consideration of the standardized approach in the implementation of Basel II. And this also apparently is the request that these major U.S. banks have now made to the regulatory agencies. It is an approach apparently being allowed by other countries.

What is the problem in considering the standardized approach?

Chairman BERNANKE. It is being allowed for other countries for the appropriate banks, for small banks. The standardized approach is very similar to what we have now. What we are doing is proposing a Basel I–A, that is a modification of the existing system

that would be appropriate for the smaller and medium-sized banks in our system. And that is analogous to what foreign countries will be doing when they put smaller banks on the standardized approach.

But I do not think you are going to see any large international, sophisticated, complex banks with all these different kinds of derivatives and off-balance sheet activities and operational risks, you are not going to see any of those on the standardized approach because they just do not accommodate the risks that those banks are taking.

Senator SARBANES. So you would not allow that as an option? You would not be prepared to even consider it is an option?

Chairman BERNANKE. We are prepared to consider anything, but I think that my judgment is that the standardized approach is essentially the same as the existing approach and would not be adequate for complex internationally active banks.

Senator SARBANES. Thank you, Mr. Chairman.

Chairman SHELBY. Senator Bunning.

Senator BUNNING. I apologize, but since we only get to see you twice a year, I am going to ask some more questions.

Does it concern you that so many on the Federal Reserve Board come from an academic background? Do you think it would be beneficial to have some of the remaining vacancies filled with someone with experience in the business or finance world?

Chairman BERNANKE. Well Senator, we have an opening right now. As you know, Mark Olson, who is a banker, former President of the American Bankers Association, has moved over to the accounting board. I would very much like to see his replacement be somebody with a similar set of banking and financial business skills, yes.

Senator BUNNING. That is a yes answer.

Chairman BERNANKE. Yes.

Senator BUNNING. I do not get many of them from you. That is okay.

The Fed minutes say that there is a discussion of a range of options. But it turns out that the vote is almost always unanimous. I had to go back, I cannot remember when the last dissenting vote in the FOMC occurred. Leading up to the June meeting, public statements by some of the Fed Members indicated there might be a pause. But once again the vote was unanimous to raise rates.

How much serious debate is there really if the Fed keeps coming up with unanimous decisions?

Chairman BERNANKE. Senator, different committees have different approaches to decisionmaking. The Monetary Policy Committee in the United Kingdom, for example, like the Senate, is where everybody votes directly. And on a recent occasion, the Governor of the Bank of England was voted down in his recommendation.

Senator BUNNING. Gee, that would be a very pleasant surprise at times.

Chairman BERNANKE. In the Federal Reserve, we are more of a consensus-based organization. We do try to come to an agreement among ourselves, the same way other organizations like the European Central Bank do. But I assure you that we have lengthy and

spirited discussions within the meetings, and outside the meetings with staff. And each person is contributing a perspective and a point of view to the policy.

Senator BUNNING. Mr. Chairman, they never show up in the minutes of the FOMC meetings. All this discussion, all this debate never shows up in the minutes when we get them.

Chairman BERNANKE. Perhaps the minutes could be more detailed.

Senator BUNNING. Transparent?

Chairman BERNANKE. Possibly. Another possibility, sir, is to look at some of the transcripts, which are of course only available with 5-year legs. But they give a full verbatim description of the meeting. You will see there, if you look, quite a bit of debate and discussion. That is the tradition we continue today.

Senator BUNNING. It took me years of practice, but before Chairman Greenspan left, I was actually able to understand what he was talking about. There is still a problem with understanding what the Fed is thinking though totally. You have thought about bringing back the balance of risk statements or doing something else so people can understand what is going through all of your heads.

Is that a fact? Is that going to happen?

Chairman BERNANKE. In the short-run, Senator, we are trying to maintain some continuity with previous practice so as not to confuse people who are paying attention to the Fed too much. But what we are doing, as was revealed in the minutes, we have set up a small committee which is going to help the entire FOMC think through our entire range of communications, all aspects, including the minutes, including the statements, and try to develop a better, more explicit, and more useful form of communication.

And I will certainly keep Congressional leaders apprised of this. And if anything happens that is a departure from past practice, I will certainly let you know about it and get your input.

Senator BUNNING. Last but not least, one thing different in your time as Fed Chairman than when Chairman Greenspan, is the amount of attention the public is paying to statements from other Fed Members. There was even a Bloomberg article yesterday about that.

Do you have any problem with other Fed Members speaking out with different points of view? Do you think that is good for the markets and the economy?

Chairman BERNANKE. Senator, you were asking about differences of opinion and getting around group think, and this is one way in which Members of the FOMC can express different shades of their views.

We do not restrict, we do not coordinate, the speeches of FOMC Members. They are going out on their own in their own districts and talking about whatever issues are important to them. And sometimes they make comments on monetary policy.

Senator BUNNING. Most of those people that are speaking out are members of the four banks that happen to be also Members of the FOMC, the different banks that are also members, four different ones.

Chairman BERNANKE. Not necessarily, Senator. All 12 bank presidents do come to the meeting and offer their views. Of course only four——

Senator BUNNING. Vote.

Chairman BERNANKE. Actually five, including the Bank of New York, vote.

Senator BUNNING. Thank you very much, Mr. Chairman.

Chairman SHELBY. Thank you.

Chairman Bernanke, we appreciate your appearance here. We wish you well in your job. We know it is difficult, but we think you are up for the job.

Chairman BERNANKE. Thank you very much, Senator.

Chairman SHELBY. The hearing is adjourned.

[Whereupon, at 12:39 p.m., the hearing was adjourned.]

[Prepared statements, response to written questions, and additional material supplied for the record follow:]

PREPARED STATEMENT OF BEN S. BERNANKE

CHAIRMAN, BOARD OF GOVERNORS OF THE FEDERAL RESERVE SYSTEM

JULY 19, 2006

Mr. Chairman and Members of the Committee, I am pleased to be here again to present the Federal Reserve's Monetary Policy Report to the Congress.

Over the period since our February report, the U.S. economy has continued to expand. Real gross domestic product (GDP) is estimated to have risen at an annual rate of 5.6 percent in the first quarter of 2006. The available indicators suggest that economic growth has more recently moderated from that quite strong pace, reflecting a gradual cooling of the housing market and other factors that I will discuss. With respect to the labor market, more than 850,000 jobs were added, on net, to nonfarm payrolls over the first 6 months of the year, though these gains came at a slower pace in the second quarter than in the first. Last month, the unemployment rate stood at 4.6 percent.

Inflation has been higher than we had anticipated in February, partly as a result of further sharp increases in the prices of energy and other commodities. During the first 5 months of the year, overall inflation as measured by the price index for personal consumption expenditures averaged 4.3 percent at an annual rate. Over the same period, core inflation—that is, inflation excluding food and energy prices—averaged 2.6 percent at an annual rate. To address the risk that inflation pressures might remain elevated, the Federal Open Market Committee (FOMC) continued to firm the stance of monetary policy, raising the Federal funds rate another ¾ percentage point, to 5¼ percent, in the period since our last report.

Let me now review the current economic situation and the outlook in a bit more detail, beginning with developments in the real economy and then turning to the inflation situation. I will conclude with some comments on monetary policy.

The U.S. economy appears to be in a period of transition. For the past 3 years or so, economic growth in the United States has been robust. This growth has reflected both the ongoing reemployment of underutilized resources, as the economy recovered from the weakness of earlier in the decade, and the expansion of the economy's underlying productive potential, as determined by such factors as productivity trends and growth of the labor force. Although the rates of resource utilization that the economy can sustain cannot be known with any precision, it is clear that, after several years of above-trend growth, slack in resource utilization has been substantially reduced. As a consequence, a sustainable, noninflationary expansion is likely to involve a modest reduction in the growth of economic activity from the rapid pace of the past 3 years to a pace more consistent with the rate of increase in the Nation's underlying productive capacity. It bears emphasizing that, because productivity growth seems likely to remain strong, the productive capacity of our economy should expand over the next few years at a rate sufficient to support solid growth in real output.

As I have noted, the anticipated moderation in economic growth now seems to be under way, although the recent erratic growth pattern complicates this assessment. That moderation appears most evident in the household sector. In particular, consumer spending, which makes up more than two-thirds of aggregate spending, grew rapidly during the first quarter but decelerated during the spring. One likely source of this deceleration was higher energy prices, which have adversely affected the purchasing power of households and weighed on consumer attitudes.

Outlays for residential construction, which have been at very high levels in recent years, rose further in the first quarter. More recently, however, the market for residential real estate has been cooling, as can be seen in the slowing of new and existing home sales and housing starts. Some of the recent softening in housing starts may have resulted from the unusually favorable weather during the first quarter of the year, which pulled forward construction activity, but the slowing of the housing market appears to be more broad-based than can be explained by that factor alone. Home prices, which have climbed at double-digit rates in recent years, still appear to be rising for the Nation as a whole, though significantly less rapidly than before. These developments in the housing market are not particularly surprising, as the sustained run-up in housing prices, together with some increase in mortgage rates, has reduced affordability and thus the demand for new homes.

The slowing of the housing market may restrain other forms of household spending as well. With homeowners no longer experiencing increases in the equity value of their homes at the rapid pace seen in the past few years, and with the recent declines in stock prices, increases in household net worth are likely to provide less of a boost to consumer expenditures than they have in the recent past. That said, favorable fundamentals, including relatively low unemployment and rising dispos-

able incomes, should provide support for consumer spending. Overall, household expenditures appear likely to expand at a moderate pace, providing continued impetus to the overall economic expansion.

Although growth in household spending has slowed, other sectors of the economy retain considerable momentum. Business investment in new capital goods appears to have risen briskly, on net, so far this year. In particular, investment in nonresidential structures, which had been weak since 2001, seems to have picked up appreciably, providing some offset to the slower growth in residential construction. Spending on equipment and software has also been strong. With a few exceptions, business inventories appear to be well-aligned with sales, which reduces the risk that a buildup of unwanted inventories might act to reduce production in the future. Business investment seems likely to continue to grow at a solid pace, supported by growth in final sales, rising backlogs of orders for capital goods, and high rates of profitability. To be sure, businesses in certain sectors have experienced financial difficulties. In the aggregate, however, firms remain in excellent financial condition, and credit conditions for businesses are favorable.

Globally, output growth appears strong. Growth of the global economy will help support U.S. economic activity by continuing to stimulate demand for our exports of goods and services. One downside of the strength of the global economy, however, is that it has led to significant increases in the demand for crude oil and other primary commodities over the past few years. Together with heightened geopolitical uncertainties and the limited ability of suppliers to expand capacity in the short run, these rising demands have resulted in sharp rises in the prices at which those goods are traded internationally, which in turn has put upward pressure on costs and prices in the United States.

Overall, the U.S. economy seems poised to grow in coming quarters at a pace roughly in line with the expansion of its underlying productive capacity. Such an outlook is embodied in the projections of members of the Board of Governors and the Presidents of Federal Reserve Banks that were made around the time of the FOMC meeting late last month, based on the assumption of appropriate monetary policy. In particular, the central tendency of those forecasts is for real GDP to increase about 3¼ percent to 3½ percent in 2006 and 3 percent to 3¼ percent in 2007. With output expanding at a pace near that of the economy's potential, the civilian unemployment rate is expected to finish both 2006 and 2007 between 4¾ percent and 5 percent, close to its recent level.

I turn now to the inflation situation. As I noted, inflation has been higher than we expected at the time of our last report. Much of the upward pressure on overall inflation this year has been due to increases in the prices of energy and other commodities and, in particular, to the higher prices of products derived from crude oil. Gasoline prices have increased notably as a result of the rise in petroleum prices as well as factors specific to the market for ethanol. The pickup in inflation so far this year has also been reflected in the prices of a range of nonenergy goods and services, as strengthening demand may have given firms more ability to pass energy and other costs through to consumers. In addition, increases in residential rents, as well as in the imputed rent on owner-occupied homes, have recently contributed to higher core inflation.

The recent rise in inflation is of concern to the FOMC. The achievement of price stability is one of the objectives that make up the Congress's mandate to the Federal Reserve. Moreover, in the long run, price stability is critical to achieving maximum employment and moderate long-term interest rates, the other parts of the Congressional mandate.

The outlook for inflation is shaped by a number of factors, not the least of which is the course of energy prices. The spot price of oil has moved up significantly further in recent weeks. Futures quotes imply that market participants expect petroleum prices to roughly stabilize in coming quarters; such an outcome would, over time, reduce one source of upward pressure on inflation. However, expectations of a leveling out of oil prices have been consistently disappointed in recent years, and as the experience of the past week suggests, possible increases in these and other commodity prices remain a risk to the inflation outlook.

Although the costs of energy and other raw materials are important, labor costs are by far the largest component of business costs. Anecdotal reports suggest that the labor market is tight in some industries and occupations and that employers are having difficulty attracting certain types of skilled workers. To date, however, moderate growth in most broad measures of nominal labor compensation and the ongoing increases in labor productivity have held down the rise in unit labor costs, reducing pressure on inflation from the cost side. Employee compensation per hour is likely to rise more quickly over the next couple of years in response to the strength of the labor market. Whether faster increases in nominal compensation cre-

ate additional cost pressures for firms depends in part on the extent to which they are offset by continuing productivity gains. Profit margins are currently relatively wide, and the effect of a possible acceleration in compensation on price inflation would thus also depend on the extent to which competitive pressures force firms to reduce margins rather than pass on higher costs.

The public's inflation expectations are another important determinant of inflation. The Federal Reserve must guard against the emergence of an inflationary psychology that could impart greater persistence to what would otherwise be a transitory increase in inflation. After rising earlier this year, measures of longer-term inflation expectations, based on surveys and on a comparison of yields on nominal and inflation-indexed government debt, have edged down and remain contained. These developments bear watching, however.

Finally, the extent to which aggregate demand is aligned with the economy's underlying productive potential also influences inflation. As I noted earlier, FOMC participants project that the growth in economic activity should moderate to a pace close to that of the growth of potential both this year and next. Should that moderation occur as anticipated, it should help to limit inflation pressures over time.

The projections of the Members of the Board of Governors and the Presidents of the Federal Reserve Banks, which are based on information available at the time of the last FOMC meeting, are for a gradual decline in inflation in coming quarters. As measured by the price index for personal consumption expenditures excluding food and energy, inflation is projected to be 2¼ percent to 2½ percent this year and then to edge lower, to 2 percent to 2¼ percent next year.

The FOMC projections, which now anticipate slightly lower growth in real output and higher core inflation than expected in our February report, mirror the somewhat more adverse circumstances facing our economy, which have resulted from the recent steep run-up in energy costs and higher-than-expected inflation more generally. But they also reflect our assessment that, with appropriate monetary policy and in the absence of significant unforeseen developments, the economy should continue to expand at a solid and sustainable pace and core inflation should decline from its recent level over the medium term.

Although our baseline forecast is for moderating inflation, the Committee judges that some inflation risks remain. In particular, the high prices of energy and other commodities, in conjunction with high levels of resource utilization that may increase the pricing power of suppliers of goods and services, have the potential to sustain inflation pressures. More generally, if the pattern of elevated readings on inflation is more protracted or more intense than is currently expected, this higher level of inflation could become embedded in the public's inflation expectations and in price-setting behavior. Persistently higher inflation would erode the performance of the real economy and would be costly to reverse. The Federal Reserve must take account of these risks in making its policy decisions.

In our pursuit of maximum employment and price stability, monetary policy makers operate in an environment of uncertainty. In particular, we have imperfect knowledge about the effects of our own policy actions as well as of the many other factors that will shape economic developments during the forecast period. These uncertainties bear importantly on our policy decisions because the full influence of policy actions on the economy is felt only after a considerable period of time. The lags between policy actions and their effects imply that we must be forward-looking, basing our policy choices on the longer-term outlook for both inflation and economic growth. In formulating that outlook, we must take account of the possible future effects of previous policy actions—that is, of policy effects still "in the pipeline." Finally, as I have noted, we must consider not only what appears to be the most likely outcome but also the risks to that outlook and the costs that would be incurred should any of those risks be realized.

At the same time, because economic forecasting is far from a precise science, we have no choice but to regard all our forecasts as provisional and subject to revision as the facts demand. Thus, policy must be flexible and ready to adjust to changes in economic projections. In particular, as the Committee noted in the statement issued after its June meeting, the extent and timing of any additional firming that may be needed to address inflation risks will depend on the evolution of the outlook for both inflation and economic growth, as implied by our analysis of the incoming information.

Thank you. I would be happy to take questions.

RESPONSE TO WRITTEN QUESTIONS OF SENATOR SHELBY FROM BEN S. BERNANKE

Q.1. China's foreign exchange reserves stand at $941.1 billion, creating excess liquidity in their banking system. In addition, various estimates of China's first and second quarter growth rates suggest that the Chinese economy has grown by upward of 10 percent this year.

Do you see any danger that the Chinese economy is overheating? Are the Chinese now willing to take all necessary steps, like a revaluation of their currency, which could rein in problems before they pose systemic risk?

A.1. The ratio of investment to GDP was over 40 percent in 2005, which is likely too high a rate for an economy to absorb efficiently. This is leading to overcapacity in some industries and is likely to add to the already large stock of bad loans in the future. However, there is less evidence of widespread overheating. Inflation is still quite low, at about 1½ percent for consumer prices on a 12-month basis, despite the fact that the money supply has been growing at a rate of almost 19 percent.

Chinese authorities have indicated that they would like investment to slow and that they would also like growth to be better balanced between external and domestic demand. They have taken some steps to try to encourage consumption. However, they still have not allowed a substantial appreciation of the reminbi, a step that many analysts argue would be the most effective way to address the imbalances in the economy.

Q.2. Has the Federal Reserve been asked or offered to provide guidance to the Chinese Central Bank and are you concerned about any spillover effects that a Chinese economic crisis could have in U.S. markets?

A.2. The Federal Reserve has provided technical assistance to the People's Bank of China for a number of years on various aspects of central banking. The Federal Reserve has also been supportive of the U.S. Treasury's initiative to provide technical assistance to China in the economic and financial areas.

We believe that the chance of a Chinese economic crisis is very low for the foreseeable future. Although the banking sector is burdened with an enormous and probably growing stock of problematic loans, the government possesses sizable resources and is unlikely to allow the banking system to fail. The large stock of foreign exchange reserves also makes a potential currency crisis a very low probability event.

However, we do not entirely discount the possibility of a "hard landing," in the form of significantly slower growth, as the authorities attempt to reduce investment growth from its current rapid pace. We do not think this is the most likely outcome, but it is a possibility. Such an outcome would have significant repercussions for other Asian economies, including Japan, and would also be detrimental for some of the other emerging market economies, notably in Latin America and the Middle East, that have been supplying the enormous Chinese demand for oil and other commodities. The impact on the United States would be less direct, given that China is not a major buyer of our exports, but the overall impact on world

GDP would certainly have some negative effect on the United States.

Q.3. In recent weeks, several banks have suggested that the current Basel II framework should be revised to provide any bank the option to use either the advanced approach or the standardized approach set forth in the original Basel II framework. Apparently, there is concern that Basel II as set forth in the draft NPR released last March would not be cost effective for banks to implement. Does the Federal Reserve support allowing banks such an option? If not, please explain your rationale. Does the Federal Reserve believe that concerns about the cost effectiveness of Basel II as presently set forth in the draft NPR are valid? Would you please update the Committee on the Federal Reserve's timetable for the implementing Basel II and Basel IA? Please provide specific dates, if possible, by which the Federal Reserve expects to have completed each of steps for implementing Basel II and Basel IA.

A.3. The Federal Reserve and the other banking agencies have received several comment letters asking that we provide optionality in the United States. Basel II framework similar to that provided in the Basel Mid-Year text. As with other comments we have received on the draft Basel II NPR, and consistent with out duties under the Administrative Procedure Act, we will seriously consider the merits of the suggestion.

As I tried to indicate in my response to a similar question posed by Senator Sarbanes, I am concerned that the Basel II standardized approach would not accommodate the risks that the large, complex, internationally active banks take, both on and off their balance sheets. In my judgment, elements of the Basel II standardized approach, particularly those related to the measurement of credit risk, would be more appropriately applied to smaller, less complex, and primarily domestic U.S. banking organizations. That is how it was designed and that is how it appears it will be implemented in other countries. For example, there is no evidence that any of the largest 50 non-U.S. G–10 banks plans to adopt the standardized approach, even though they have the option to do so.

Evaluating the cost effectiveness of Basel II NPR requires measurement of both costs and benefits, both of which are difficult. With respect to the costs of compliance, it should be noted that many of the risk measurement and risk management policies and practices required by the draft Basel II NPR are policies and practices that banking organizations adopted or would have adopted even in the absence of Basel II in order to (i) improve their own understanding of their risk profile; (ii) meet supervisory expectations for good risk measurement and management; or (iii) satisfy Basel II regulatory capital requirements in other jurisdictions. On the benefits side, we expect that Basel II will improve the risk sensitivity of our bank regulatory capital framework, remove opportunities for regulatory capital arbitrage, improve our supervisory ability to evaluate a bank's capital adequacy, improve market discipline of banks, and, ultimately enhance the safety and soundness of our banking system. Given the inherent complexities in measuring costs and benefits, it is difficult to evaluate the question of cost effectiveness in any simple terms. We have sought, and will continue to seek, com-

ment from banks and others to gain a better understanding of the costs of compliance with our Basel II proposals.

The timetable for implementation of Basel II and Basel IA is set by the four Federal banking agencies acting in concert. That timetable currently contemplates adoption of final rules for Basel II and Basel IA by mid-2007 so that the parallel run for Basel II can begin in January 2008. Transitional capital floors and other safeguards will be in place at least through January 2012 and perhaps longer for some banks depending on when they complete their parallel run.

RESPONSE TO A WRITTEN QUESTION OF SENATOR REED FROM BEN S. BERNANKE

Q.1. Chairman Bernanke, in your testimony you state that the standardized approach is "essentially the same as the existing approach" in Basel I. My understanding is that the standardized approach has some significant differences, including, for example, greater differentiation of assets by credit quality; an operational risk charge; more accurate measures of counterparty exposure; recognition of some credit risk mitigation measures; and risk-weighting of mortgages. Could you clarify for the record whether you really believe that the standardized approach is the same as Basel I?

A.1. I believe that the general broad-brush approach to risk-weight categories and the expectations for risk management contained in the credit risk standardized approach in Basel II are not a large change from our existing Basel I-based capital rules. To be sure, there are a number of differences between Basel I and the credit risk standardized approach in Basel II, and your question highlights many of these differences. However, my remarks were made in the context of whether the Basel II credit risk standardized approach would be appropriate for large, internationally active banking organizations in the United States. In my opinion, the Basel II credit risk standardized approach is much less risk-sensitive than the Basel II advanced approach and does not make use of the most advanced risk management practices. For example, I note that the Basel II credit risk standardized approach generally provides the same risk weight for all first-lien mortgage loans (35 percent), nonmortgage retail loans (75 percent), and unrated corporate credits (100 percent), regardless of the creditworthiness of the borrower.

As you are aware, the agencies intend to update the Basel I-based capital rules for most banks in the United States. In updating those rules, we expect to utilize some of the improvements in the Basel II standardized approach.

RESPONSE TO WRITTEN QUESTIONS OF SENATOR STABENOW FROM BEN S. BERNANKE

Q.1. On Wednesday, July 12, China's top planning agency forecasted that China would report a more than 10 percent growth for the first half of the year.

In response, the National Development and Reform Commission reiterated their calls for stronger action to curb excessive investment. And, the *Financial Times* reported that credit tightening policies are imminent—a matter of weeks not months.

Given that the United States-China trade deficit continues to surpass previous records every passing month, we need to be much more in tune with Chinese economic policies. Therefore, my question for you is—do you think China will begin to tighten their lending policies and if they do, how will it impact our trade deficit and the global economy at large?

A.1. China has taken a number of steps this year to try to restrain growth in lending, with limited success. Chinese authorities have imposed some administrative controls, raised interest rates, and increased banks' reserve requirements. Most recently, the Chinese central government has issued a circular requiring a review of all new investment projects undertaken this year in excess of RMB 100 million, with a cutoff of RMB 30 million in sectors that are thought to have excess capacity (including steel, aluminum, and autos). If these measures are still not successful in slowing investment growth, they are likely to do more. In any case, slower growth is not likely to translate into any improvement in our trade deficit with China. In fact, if slower growth in China resulted in reduced growth in China's imports, the Chinese trade surplus would increase.

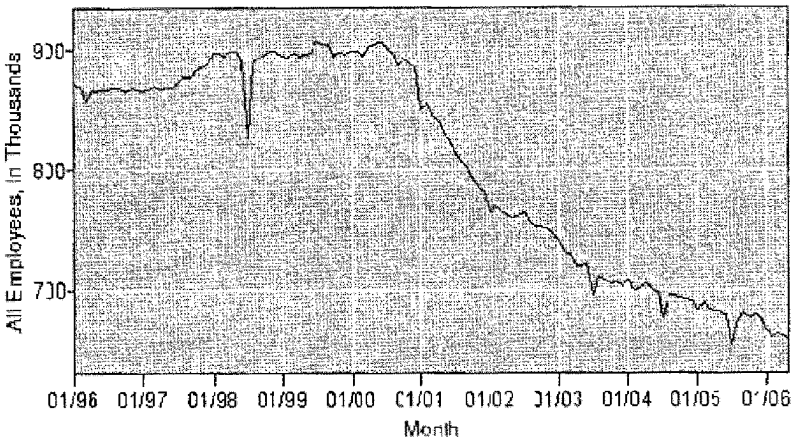
Q.2a. The next time we meet will be at the end of 2006. From now until then, China is gearing up for its first real push into the U.S. auto market.

In your opinion, how will the entrance of China—who has a history of under pricing their products through currency manipulation—affect the manufacturing industry in the United States?

A.2a. I understand that three Chinese companies are aiming to introduce autos and light trucks into the U.S. market over the next several years. Overall, they are not likely to have a significant impact on the U.S. auto industry because they are small: The largest, Chery, sold fewer than 200,000 vehicles globally last year compared with GM's sales of more than 8 million vehicles. More important over the longer-run, our experience with other foreign firms indicates that offering vehicles at a low price will by no means guarantee their success. The quality and reliability of these vehicles will be an important determinant of their effect on the domestic market for vehicles. Foreign firms also will need to adapt their designs to meet strict U.S. safety and emissions standards and to establish new dealerships.

Q.2b. I have one broader question about manufacturing in the United States. Every quarter I review the manufacturing numbers produced by the Bureau of Labor Statistics. As you can see from this graph—manufacturing continues to decline, ever since 2000. When do you see this slowing down? And in Michigan, the graph looks like this. Again, how do you analyze these trends and what do you expect in the future?

Michigan Employment in Manufacturing 1996-2006



A.2b. Although manufacturing employment fell substantially during the last economic downturn, declines in the sector slowed markedly beginning in late 2003 and from April through July of this year, manufacturing jobs and the average factory workweek were up from the lows reached last fall. Over the longer-run, even as manufacturing employment has been declining, manufacturing production has risen solidly. This is because the reduction in labor input has been more than offset by rapid increases in productivity. Indeed, we estimate that overall manufacturing capacity in the United States in 2005 stood about 50 percent higher than in 1995.

Of course, underlying those positive overall trends are structural changes that affect the composition and location of manufacturing

jobs. For example, many of the expanding manufacturing industries in recent years, such as computers and electronic components, have located outside of the Midwest. The Federal Reserve Bank of Chicago, which studies trends in the Midwest, notes that structural developments in the motor vehicle industry have had an important effect in the region and in Michigan.[1] With the introduction of new assembly by transplants, the geographic distribution of motor vehicle production has spread to the mid-South. And, the loss of market share of sales by the Big Three producers to the transplant firms has exacerbated the loss. Suppliers have followed the shift in assemblies.

RESONSE TO WRITTEN QUESTIONS OF SENATOR CRAPO FROM BEN S. BERNANKE

Q.1. I am very concerned about the potential efforts in this Congress to change the manner in which we regulate derivatives or to impact the manner in which derivatives operate in the economy. As you know, the President's Working Group on Financial Markets has explained why proposals we have faced in the last couple of years for additional regulation of energy derivatives were not warranted, and has urged Congress to be aware of the potential for unintended consequences. Do you share this view? Do you agree with the view of Alan Greenspan and others that derivatives have helped create a far more flexible, efficient, and resilient financial system? Are you aware of any evidence that additional reporting requirements or other regulatory actions would reduce energy prices and price volatility or are energy prices and price volatility determined by the market?

A.1. I share the view that additional regulation of energy derivatives is not warranted. More generally, I agree that derivatives have created a more flexible, efficient, and resilient financial system. To be sure, as Chairman Greenspan recognized, derivatives pose a variety of risk management challenges that users must address. In particular, they must effectively manage the counterparty risks associated with derivatives. Thus far, with a few notable exceptions they have done so and, as a result, derivatives have produced the benefits that you have mentioned.

I am unaware of any evidence that supports a view that additional reporting requirements or other new regulations would reduce energy prices or energy price volatility. Prices and volatility are indeed determined by the market, and as far as I am aware, energy prices and volatility recently have moved in ways that seem sensibly related to fundamentals.

Q.2. Mr. Chairman, in your Sea Island speech in May on the subject of "Hedge Funds and Systemic Risk," you noted that "[t]he primary mechanism for regulating excessive leverage and other aspects of risk-taking in a market economy is the discipline provided by creditors, counterparties, and investors."

You further observed that, in light of 1998's LTCM episode, the President's Working Group's "central policy recommendation was that regulators and supervisors should foster an environment in

[1] William A. Testa, Thomas H. Klier, and Richard H. Mattoon, "Challenges and Prospects for Midwest Manufacturing," *Chicago Fed Letter* (March 2005).

which market discipline—in particular, counterparty risk management—constrains excessive leverage and risk-taking."

You also noted that the PWG rejected so-called "direct regulation" of hedge funds, observing that "[d]irect regulation may be justified when market discipline is ineffective at constraining excessive leverage and risk-taking but, in the case of hedge funds, the reasonable presumption is that market discipline can work. Investors, creditors, and counterparties have significant incentives to rein in hedge funds' risktaking. Moreover, direct regulation would impose costs in the form of moral hazard, the likely loss of private market discipline, and possible limits on funds' ability to provide market liquidity."

Can you tell us a little more about what is involved in fostering market discipline in the hedge fund context and why you believe that is a superior approach to "direct regulation?"

A.2. The creditors and counterparties of hedge funds are regulated banks and securities firms. Banking and securities supervisors have been fostering market discipline by issuing supervisory guidance on counterparty risk management, by encouraging private sector initiatives to identify and promote best practices for risk management, and by undertaking supervisory reviews that assess whether banks and securities firms' practices are consistent with supervisory guidance and emerging best practices.

As I indicated in my Sea Island speech, I believe that it is a reasonable presumption that market discipline can effectively constrain hedge funds' leverage. The banks and securities firms that provide hedge funds with leverage have strong incentives and capabilities to constrain their leverage so as to avoid counterparty losses. Supervisors of those banks and securities firms can and should take action if competition appears to be dulling those incentives in ways that threaten the counterparties and the financial system. Direct regulation of hedge funds could weaken market discipline if hedge funds' creditors and counterparties came to view direct regulation as an effective substitute for their own due diligence and monitoring of risks. Furthermore, development of an effective regulatory regime for hedge funds would be challenging in light of the diversity of hedge fund investment strategies and the speed with which their risk profiles tend to change. A regulatory regime that was insufficiently risk sensitive could impair hedge funds' ability to bear risks and provide liquidity to financial markets, which would make our financial system less efficient and less resilient.

For use at 10:00 a.m., EDT
Wednesday
July 19, 2006

Board of Governors of the Federal Reserve System

Monetary Policy Report to the Congress

July 19, 2006

Letter of Transmittal

BOARD OF GOVERNORS OF THE
FEDERAL RESERVE SYSTEM

Washington, D.C., July 19, 2006

THE PRESIDENT OF THE SENATE
THE SPEAKER OF THE HOUSE OF REPRESENTATIVES

The Board of Governors is pleased to submit its Monetary Policy Report to the Congress pursuant to section 2B of the Federal Reserve Act.

Sincerely,

Ben Bernanke, Chairman

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Monetary Policy Report to the Congress

Report submitted to the Congress on July 19, 2006, pursuant to section 2B of the Federal Reserve Act

Monetary Policy and the Economic Outlook

The U.S. economy continued to expand at a brisk rate, on balance, over the first half of 2006. Spending in the first quarter, which was especially robust, was temporarily buoyed by several factors, including federal spending for hurricane relief and the effects of favorable weather on homebuilding. The pace of the expansion moderated in the spring, to some degree because the influence of these special factors dissipated. More fundamentally, consumer spending slowed as further increases in energy prices restrained the real incomes of households. In addition, home sales and new homebuilding dropped back noticeably from the elevated levels of last summer, partly in response to higher mortgage interest rates. Outside of the household sector, increases in demand and production appear to have been well maintained in the second quarter. Demand for U.S. exports was supported by strong economic activity abroad, and business fixed investment remained on a solid upward trend. Early in the year, as aggregate output increased rapidly, businesses added jobs at a relatively robust pace, and the unemployment rate moved down further. Since April, monthly gains in payroll employment have been smaller but still sufficient to keep the jobless rate steady.

Thus far in 2006, inflation pressures have been elevated. Higher prices for crude oil contributed to a further run-up in domestic energy costs; this year's increases, combined with the steep increases in 2004 and 2005, not only boosted the prices of gasoline and heating fuel but also put upward pressure on the costs of production for a broad range of goods and services. Partly as a result of these cost pressures, the rate of core consumer price inflation picked up. Nevertheless, measures of inflation expectations remained contained, and the rate of increase in labor costs was subdued, having been held down by strong gains in productivity and moderate increases in labor compensation.

Taking a longer perspective, the U.S. economy appears to be in the midst of a transition in which the rate of increase in real gross domestic product (GDP) is moving from a pace above that of its longer-run capacity to a more moderate and sustainable rate. An important element in the transition is the lagged effect of the changes in monetary policy since mid-2004, changes that have been intended to keep inflation low and to promote sustainable economic expansion by aligning real economic activity more closely with the economy's productive potential. Moreover, longer-term interest rates have risen, contributing to increased borrowing costs for both households and businesses. Over time, pressures on inflation should abate as the pace of real activity moderates and, as futures markets suggest, the prices of energy and other commodities roughly stabilize. The resulting easing in inflation should help contain long-run inflation expectations.

Even as the rate of increase in real economic activity moderates, the prospects for sustained expansion of household and business spending appear favorable. Higher energy prices have put strains on household budgets, but once that effect fades, households should experience gains in real income consistent with the ongoing expansion of jobs. Household balance sheets remain generally sound; although some pockets of distress have surfaced, average delinquency rates on mortgages and other consumer debt are still low. Similarly, in the business sector, balance sheets are strong, credit quality is high, and most firms have ready access to funds. Sustained expansion of the global economy, along with the effects of the earlier depreciation of the foreign exchange value of the dollar, should support demand for U.S. exports. The potential for efficiency gains, as well as further declines in the relative cost of capital, are likely to continue to spur capital spending. Indeed, the ongoing advances in efficiency should sustain solid growth of labor productivity, providing support for gains in real wages and income.

As always, considerable uncertainties attend the outlook. Regarding inflation, the margin between production and consumption of crude oil worldwide is quite narrow, and oil markets are especially sensitive to news about the balance of supply and demand and to geopolitical events with the potential to affect that balance; adverse developments could result in yet another surge in energy costs. Indeed, futures markets provide only imperfect readings on the prospects for energy markets, as witnessed by the fact that the surprises in crude oil prices during the past few years have been predominantly to the upside. In addition, a further rise in prices of other, non-energy materials and commodities, if it materializes,

could also intensify cost pressures. Another risk is that the effect on imported-goods prices of earlier declines in the foreign exchange value of the dollar, which has been limited to date, could become larger. More broadly, if the higher rate of core inflation seen this year persists, it could induce a deterioration in longer-run inflation expectations that, in turn, might give greater momentum to inflation. However, the risks to the inflation outlook are not entirely to the upside. In the current environment of elevated profit margins, competitive forces, both in domestic markets and from abroad, could impose significant restraint on the pricing decisions of businesses.

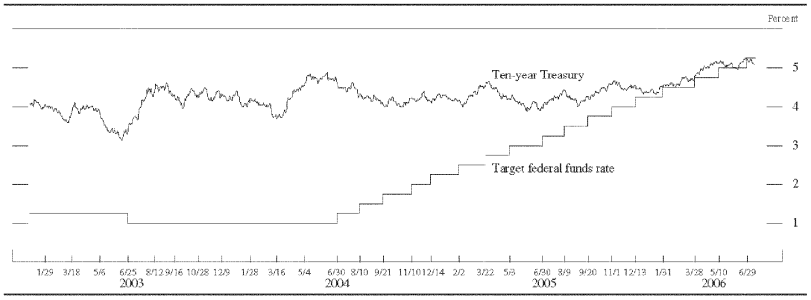
Regarding risks to the outlook for real activity, rates of increase in real GDP have been uneven during the past year, complicating the assessment of whether the pace of the economic expansion is moving into line with its underlying potential rate. One possible risk to the upside is that the softer tone of the recent data on real activity will prove transitory rather than mark a shift to a more sustainable underlying rate of expansion. For example, slower spending and hiring in recent months may represent a shorter-lived adjustment to a higher level of energy prices or to the unusually robust increases in economic activity earlier in the year. In coming months, a sharp rebound in consumer spending accompanied by an acceleration of capital spending could return real activity to a pace that would be unsustainable over the longer run. But downside risks also exist. In particular, the slowing in real estate markets since last summer has been moderate, and the easing of house-price inflation has been gradual. If the softening in the demand for housing and in real estate values becomes more pronounced, the resulting drop in construction activity and the erosion of household wealth could weaken aggregate demand noticeably. Consumer spending might be depressed by the loss of income and wealth, and that effect could be amplified if the downturn is abrupt enough to shake households' confidence about their ability to finance spending or manage their current financial obligations.

The Conduct of Monetary Policy over the First Half of 2006

The Federal Open Market Committee (FOMC) continued to firm the stance of monetary policy over the first half of 2006. At the time of the January meeting, available information suggested that underlying growth in aggregate demand was solid at the turn of the year. The expansion of real GDP in the fourth quarter of 2005 was estimated to have slowed temporarily, in part because of the disruptions associated with last autumn's hurricanes. Core inflation had stayed relatively low, and inflation expectations had remained contained. With rising energy prices and increases in resource utilization having the potential to add to inflationary pressures, the FOMC decided to extend the firming of policy that it had implemented over the previous eighteen months by tightening the policy rate 25 basis points, to 4½ percent. The Committee indicated that some further policy firming might be needed to keep the risks to price stability and to sustainable economic growth roughly in balance.

By March, economic activity appeared to be expanding rapidly, propelled by robust consumer spending and accelerating business investment. Although readings on core inflation for January and February were generally favorable, higher prices for energy and other commodi-

Selected interest rates, 2003–06



NOTE: The data are daily and extend through July 12, 2006. The ten-year Treasury rate is the constant-maturity yield based on the most actively traded securities. The dates on the horizontal axis are those of FOMC meetings.
SOURCE: Department of the Treasury and the Federal Reserve.

ties, together with relatively tight labor and product markets, threatened to add to existing inflation strains. Against this backdrop, the Committee raised the target federal funds rate another 25 basis points, to 4¾ percent. The statement released at the end of the meeting continued to point to the possible need for further policy firming.

Data received by the time of the May meeting confirmed that the economy had expanded robustly in the first quarter, though both consumer spending and housing activity appeared to have moderated in late winter. In addition, inflationary pressures had intensified as core consumer prices rose more rapidly in March than in earlier months. Inflation expectations, as measured by some surveys and by comparisons of yields on nominal and inflation-indexed Treasury securities, also rose in April. The Committee still judged those expectations to be contained, but it was mindful that a further increase could impart additional momentum to inflation, as could the surge in energy and other commodity prices and the drop in the foreign exchange value of the dollar that took place in April and early May. To gain greater assurance that inflationary forces would not intensify, the FOMC decided to raise the target federal funds rate another 25 basis points, bringing it to 5 percent. The FOMC also indicated in the policy statement that some further policy firming could be required. However, the Committee was aware that the cumulative effects of past monetary policy actions on economic activity could turn out to be larger than expected. Accordingly, the FOMC stressed that the extent and timing of any further firming would depend importantly on the evolution of the economic outlook as implied by incoming data.

By the time of the June meeting, available data appeared to confirm that economic growth had moderated from the strong pace evident earlier in the year. Consumer spending had softened, and activity in housing markets had continued to cool gradually. Evidence of inflationary pressures was accumulating, however, and core price inflation had increased. In addition, the high levels of resource utilization and of the prices for energy and other commodities had the potential to spur further inflation. Consequently, the FOMC decided to increase the target federal funds rate an additional 25 basis points, to 5¼ percent. The Committee recognized that the moderation in the growth of aggregate demand that appeared to be under way would help to limit inflationary pressures over time, but it judged that, even after its policy action, some upside inflation risks remained. Yet the FOMC made clear that the extent and timing of any additional firming needed to address those risks will depend on the evolution of the outlook for both inflation and economic growth as implied by incoming information.

In recent years, the FOMC has worked to improve the transparency of its decisionmaking process, and it continues to seek further improvements. Between the March and May meetings, the Chairman appointed a subcommittee to help the FOMC frame and organize the discussion of a broad range of communication issues. At the June meeting, the Committee discussed the subcommittee's plans for work in coming months and decided to begin its consideration of communication issues at its August meeting and to lengthen meetings later this year to allow a fuller discussion of these issues.

Economic Projections for 2006 and 2007

In conjunction with the FOMC meeting at the end of June, the members of the Board of Governors and the Federal Reserve Bank presidents, all of whom participate in the deliberations of the FOMC, provided economic projections for 2006 and 2007. In broad terms, the participants expect a sustained, moderate expansion of real economic activity during the next year and a half. The central tendency of the FOMC participants' forecasts for the increase in real GDP is 3¼ percent to 3½ percent over the four quarters of 2006 and 3 percent to 3¼ percent in 2007. The central tendency of their forecasts for the civilian unemployment rate is 4¾ percent to 5 percent in the fourth quarter of this year, and the jobless rate is expected to still be in that range at the end of 2007. For inflation, the central tendency of the forecasts is an increase in the price index for personal consumption expenditures excluding food and energy (core PCE) of 2¼ percent to 2½ percent over the four quarters of 2006; in 2007, the forecast shows

Economic projections for 2006 and 2007

Percent

Indicator	Federal Reserve Governors and Reserve Bank presidents	
	Range	Central tendency
	2006	
Change, fourth quarter to fourth quarter[1]		
Nominal GDP	5½–6½	6–6¼
Real GDP	3–3¾	3¼–3½
PCE price index excluding food and energy	2¼–3	2¼–2½
Average level, fourth quarter		
Civilian unemployment rate	4½–5	4¾–5
	2007	
Change, fourth quarter to fourth quarter[1]		
Nominal GDP	4¾–6	5–5½
Real GDP	2½–3¼	3–3¼
PCE price index excluding food and energy	2–2¼	2–2¼
Average level, fourth quarter		
Civilian unemployment rate	4¼–5¼	4¾–5

1. Change from average for fourth quarter of previous year to average for fourth quarter of year indicated.

a slower rate of 2 percent to 2¼ percent, which is similar to the rate of core PCE price inflation in 2004 and 2005.

A slowing in activity now appears to be under way in the housing sector, where home sales and residential construction have receded from the elevated levels of last summer. The associated easing in house-price appreciation will likely temper gains in household wealth, which, over time, may be a factor in damping consumer spending. However, households' financial positions should receive a boost from an acceleration of real income if energy prices stabilize as suggested by futures markets. In the business sector, participants view the outlook for fixed investment over the forecast period as positive. Although outlays for new equipment and software may increase a little more slowly with the deceleration in real output, investment opportunities appear to remain attractive: The relative user cost of capital for equipment, particularly high-technology items, is expected to remain favorable, and competitive pressures should maintain strong incentives to exploit opportunities for efficiency gains and cost reduction. At the same time, nonresidential construction seems likely to continue to move up. Finally, the strong performance of the economies of the United States' major trading partners should continue to stimulate U.S. exports of goods and services.

The more moderate pace of expansion and the stability in resource utilization, when coupled with less pressure from the prices of energy and other commodities, should contribute to an environment in which inflation expectations are contained and inflation edges lower. Moreover, ongoing solid gains in productivity should work to limit increases in unit labor costs.

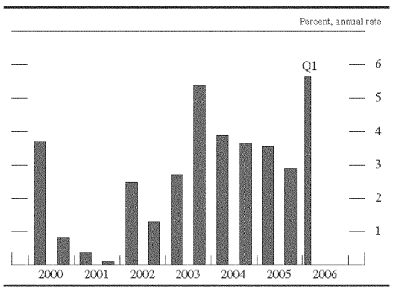
Over the next year and a half, FOMC participants expect the economy to achieve a sustainable rate of economic expansion. That rate will be determined in large part by the rate of increase in productivity. Productivity has been rising at a solid rate over the past two years, albeit more slowly than the especially rapid pace that prevailed during the first three years of the expansion. A strong trend in productivity is likely to be maintained as businesses take advantage of new investment in facilities and equipment, as diffusion of technology continues, and as organizational advancements and business process improvements yield further increases in efficiency.

Economic and Financial Developments in 2006

Although last year's hurricanes caused the pace of aggregate economic activity around the turn of the year to be uneven, real GDP increased at an average annual rate of 3.6 percent in the final quarter of 2005 and first quarter of 2006—about the same pace that prevailed during the preceding year and a half. Over this period, payroll employment posted additional solid gains, and the unemployment rate declined further. In recent months, the incoming information on real activity has suggested that the pace of the expansion is moderating, with the deceleration in spending most apparent in the household sector. Still, as of midyear, resource utilization in labor and in product markets remained high.

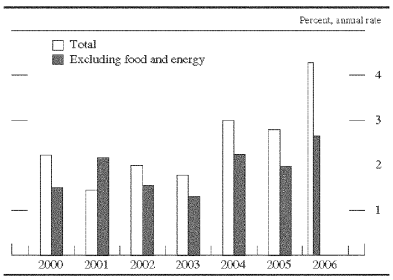
Inflation picked up over the first five months of the year, boosted importantly by the effects of rising energy prices. Long-term inflation expectations fluctuated over the period but remained contained, and increases in unit labor costs were subdued. Although short-term market interest rates rose in line with the FOMC's firming of monetary policy, financial market conditions were still generally supportive of economic expansion in the first

Change in real GDP, 2000–06



Note: Here and in subsequent figures, except as noted, change for a given period is measured to its final quarter from the final quarter of the preceding period.
Source: Department of Commerce, Bureau of Economic Analysis.

Change in PCE chain-type price index, 2000–06



Note: The data are for personal consumption expenditures (PCE). Through 2005, change is from December to December; for 2006, change is from December to May.
Source: Department of Commerce, Bureau of Economic Analysis.

half of 2006. Long-term interest rates rose but were still moderate by historical standards, and credit spreads and risk premiums stayed narrow.

The Household Sector

Consumer Spending

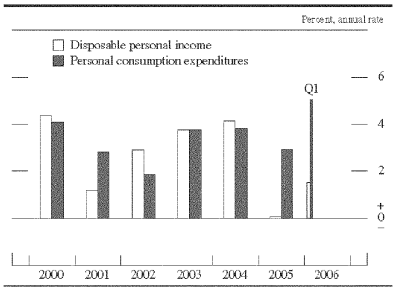
After increasing at a robust rate around the turn of the year, consumer spending has been rising at a more moderate pace in recent months. Over the first half of 2006, rising employment and the lagged effect of increases in wealth continued to provide support for spending by households. However, consumers' purchasing power was restrained by a further run-up in energy costs in the spring.

Sales of new cars and light trucks bounced back sharply at the turn of the year; those sales had slackened in late 2005 after manufacturers ended the special "employee discount" programs that had boosted sales last summer. New light vehicles sold at an annual rate of 16.8 million units between January and April, about the same as the average rate in 2004 and 2005. However, elevated gasoline prices affected the composition of demand, and consumers shifted their purchases away from light trucks and sport-utility vehicles (SUVs) and toward autos. That shift led to an increase in the market share captured by foreign producers. As households' concerns about the higher price of gasoline weighed on their attitudes toward buying vehicles, sales dipped to an annual rate of 16.2 million units in May and June.

Spending for other household goods, such as furniture, electronic equipment, food, and clothing, was quite strong in the first quarter of 2006; real outlays for goods other than motor vehicles increased at an annual rate of 8¾ percent. Some moderation was to be expected after such a surge in spending. Estimates of retail sales, which are available through June, suggest that real expenditures for these goods rose more slowly in the second quarter. In contrast to the uneven pattern of spending for goods, real outlays for consumer services remained on a moderate upward trend over the first half of 2006; they rose at an annual rate of 2½ percent from the fourth quarter of 2005 through May 2006.

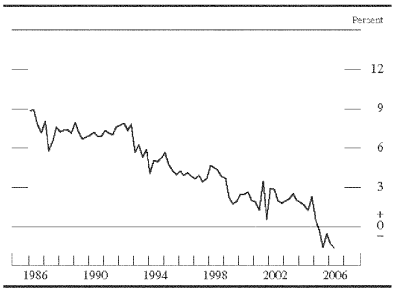
Boosted by gains in nominal wage and salary income, after-tax aggregate personal income rose at an annual rate of 4 percent over the first five months of 2006. However, the acceleration in consumer prices held real income about constant. As a result, the steep decline in the personal saving rate, which began in 2004, extended into 2006. Since 2003, rising household wealth has provided

Change in real income and consumption, 2000–06



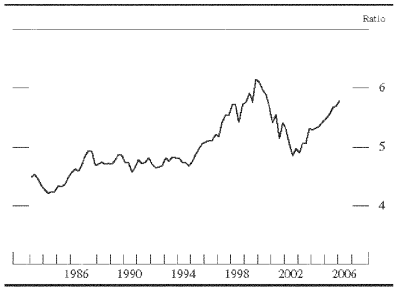
SOURCE: Department of Commerce, Bureau of Economic Analysis.

Personal saving rate, 1986–2006



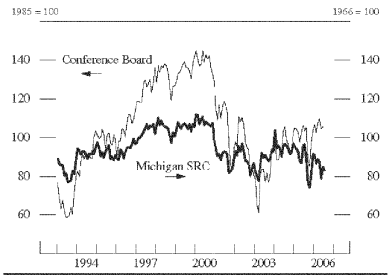
NOTE: The data are quarterly and extend through 2006:Q2; the reading for 2006:Q2 is the average for April and May.
SOURCE: Department of Commerce, Bureau of Economic Analysis.

Wealth-to-income ratio, 1983–2006



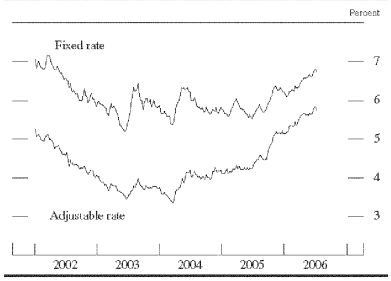
NOTE: The data are quarterly and extend through 2006:Q1. The wealth-to-income ratio is the ratio of household net worth to disposable personal income.
SOURCES: For net worth, Federal Reserve Board, flow of funds data; for income, Department of Commerce, Bureau of Economic Analysis.

Consumer sentiment, 1993–2006



NOTE: The Conference Board data are monthly and extend through June 2006. The Michigan SRC data are monthly and extend through a preliminary estimate for July 2006.
SOURCE: The Conference Board and University of Michigan Survey Research Center.

Mortgage rates, 2002–06



NOTE: The data, which are weekly and extend through July 12, 2006, are contract rates on thirty-year mortgages.
SOURCE: Federal Home Loan Mortgage Corporation.

important support for spending, even as gains in real income have been damped by increases in energy prices. In 2005 and the first part of 2006, much of the increase in wealth was the result of the rapid appreciation in the value of homes.

According to the survey by the University of Michigan Survey Research Center (SRC), the run-up in energy prices contributed importantly to the deterioration in consumer confidence this spring. Consumers' pessimism peaked in May and then lessened somewhat, on average, in June and early July. Nonetheless, at midyear, households indicated that they were still concerned about the effect of the high cost of energy on their financial situation. In addition, households' assessments of current and expected business conditions remained considerably less optimistic than they were at the beginning of the year.

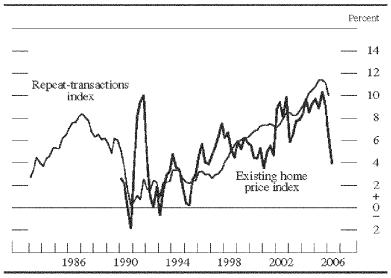
Residential Investment

The demand for homes had begun to soften in the summer of 2005, and, by the spring of 2006, starts of new single-family homes were well below the very rapid pace that had prevailed in the preceding two years. The reduced level of activity in real estate markets also led to some easing in house-price appreciation early this year.

Sales of new and existing single-family homes, which had been climbing steadily since 2003, stopped rising during the third quarter of 2005. By May, sales of new and existing homes together were 7¼ percent below their peak in June 2005. The cooling in sales caused inventories of unsold homes to rise. In May, the backlog of unsold new homes equaled 5½ months' supply at that month's selling rate, and the backlog of existing homes on the market was 6½ months' supply; in 2005, the stocks of both unsold new and existing homes averaged roughly 4½ months of supply.

An increase in mortgage rates contributed to the slackening in the demand for housing. Since the middle of 2005, the average rate for a thirty-year fixed-rate mortgage has increased about 1 percentage point, to 6¾ percent, and the average for a one-year adjustable-rate mortgage has risen a bit more, to 5¾ percent. According to respondents to the Michigan SRC survey, the rise in borrowing costs has been an important consideration damping their assessment of buying conditions for homes since mid-2005; the rise in home prices has apparently also weighed on consumers' attitudes.

Change in prices of single-family houses, 1983–2006



NOTE: The data are quarterly, and change is from one year earlier. The repeat-transactions index extends through 2006:Q1. For the years preceding 1991, that index includes appraisals associated with mortgage refinancings; beginning in 1991, it includes purchase transactions only. The existing home price index extends through 2006:Q2, and the reading for Q2 is the average for April and May compared with the same period a year earlier.
SOURCE: For repeat transactions, Office of Federal Housing Enterprise Oversight; for existing home prices, National Association of Realtors.

Although recent increases in house prices have been smaller than those that accompanied the robust real estate markets of 2004 and 2005, the deceleration thus far appears to have been modest. The repeat-transactions index of house prices, which is published by the Office of Federal Housing Enterprise Oversight, increased at an annual rate of 7¼ percent in the first quarter of 2006, the smallest quarterly increase since the fourth quarter of 2001; that index attempts to control for the quality of existing single-family homes sold by using prices of homes involved in repeat transactions (excluding refinancings). The first-quarter reading brought the year-over-year change in this measure to 10 percent; in the second and third quarters of 2005, purchase prices according to this index were up 11½ percent from the level of a year earlier. An alternative measure of house prices is the average price of existing single-family homes sold, which is published by the National Association of Realtors. This measure, which does not control for the type of homes sold, showed that the year-over-year change in prices peaked at 11½ percent in August 2005 and then fell to 4 percent in April and May of this year. The greater deceleration in the latter measure suggests that, in addition to some softening in prices, the mix of existing units sold may have shifted toward lower-priced homes.

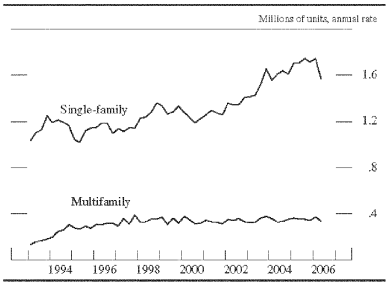
The effect of the slowdown in demand on new construction became apparent during the second half of 2005, when the number of permits issued for new single-family homes began to fall. This year, the decline in permit issuance was relatively steady from January to May. Nonetheless, new single-family homes were started at an exceptionally high annual rate of 1.75 million units during the first quarter, when builders were able to begin work on scheduled projects earlier than normal because of favorable weather conditions. With some starts having been advanced into the first quarter, single-family starts dropped to an average rate of 1.57 million units in April and May. In contrast to the recent trend in the single-family sector, construction of new multifamily homes averaged an annual rate of 360,000 units from January to May, about where it has been for more than four years.

Housing activity, as measured by real expenditures on residential structures, contributed almost ½ percentage point per year to the annual rate of increase in real GDP in 2004 and 2005. In the first quarter of 2006, that contribution dropped to 0.2 percentage point; with the reduced pace of sales and construction since the winter, a decline in residential investment is likely to have held down the rise in real GDP in the second quarter.

Household Finance

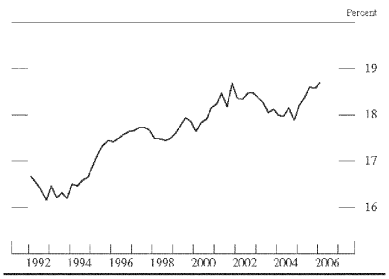
Household debt expanded at an annual rate of about 11½ percent in the first quarter of 2006, about the same pace as in 2005. Despite the rise in mortgage rates and the slowing in housing activity, home mortgage debt expanded rapidly again early in the year as homeowners apparently continued to extract some of the substantial gains in equity that they have accumulated on their homes in the past several years. Indeed, according to industry estimates, although the number of homeowners refinancing their mortgages has remained well below that seen during the refinancing boom of several years ago, a large fraction of homeowners who have refinanced so far this year have chosen to withdraw equity from their homes. As has been the case in recent years, this mortgage-related borrowing likely replaced, in part, some consumer

Private housing starts, 1993–2006



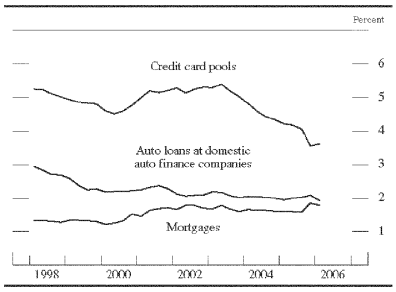
NOTE: The data are quarterly and extend through 2006:Q2; the readings for 2006:Q2 are the averages for April and May.
SOURCE: Department of Commerce, Bureau of the Census.

Household financial obligations ratio, 1992–2006



NOTE: The data are quarterly and extend through 2006:Q1. The financial obligations ratio equals the sum of required payments on mortgage and consumer debt, automobile leases, rent on tenant-occupied property, homeowner's insurance, and property taxes, all divided by disposable personal income.
SOURCE: Federal Reserve Board.

Delinquency rates on selected types of household loans, 1998–2006



NOTE: The data are quarterly and extend through 2006:Q1.
SOURCE: For credit cards, Moody's Investors Service; for auto loans, the financing subsidiaries of the three major U.S. automobile manufacturers; for mortgages, Mortgage Bankers Association.

credit borrowing, which, at an annual rate of a bit less than 3 percent, continued to expand modestly in the first five months of 2006.

The ratio of household financial obligations to disposable income rose 0.1 percentage point in the first quarter to about 18¾ percent, narrowly exceeding the top of its historical range. Nonetheless, the evidence points to only limited pockets of financial distress in the household sector. Delinquency rates on residential mortgages were low by historical standards in the first quarter, though they have edged higher since the middle of last year, particularly in the subprime sector. Delinquency rates on consumer debt also continued to be low. Meanwhile, household bankruptcy filings remained subdued in the first half of 2006, running at a pace well below the average of recent years. Bankruptcies have likely been damped this year in part by the decision of some households in the fall of 2005 to accelerate their filings to avoid the implementation of a stricter bankruptcy law in October. More recently, they may also have been restrained by the greater costs of bankruptcy under the new law.

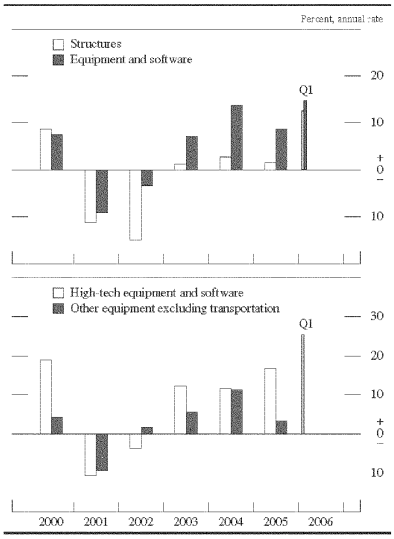
The Business Sector

Fixed Investment

Real business fixed investment increased at a solid rate, on average, during the final quarter of 2005 and the first quarter of 2006. Over that period, real business spending for new equipment and software rose at an annual rate of 9¾ percent, a pace similar to that over the first three quarters of 2005. In addition, investment in nonresidential structures, which had remained weak in 2005, turned up noticeably in early 2006. The underlying determinants of capital spending have stayed quite positive: Businesses have seen steady increases in sales, robust profits, and declining user costs for equipment; they have ample liquid assets; and, despite the rise in interest rates, credit quality is strong.

Real outlays for equipment and software rose at an annual rate of 14¾ percent in the first quarter after having risen at a 5 percent rate in the fourth quarter of 2005. As can often be the case, the timing of spending for a number of types of equipment was uneven between these two quarters. Business purchases of cars and trucks slowed in late 2005, after manufacturers reduced their special discounts on light vehicles, and then recovered in the first quarter. The first-quarter rebound was strengthened by a further acceleration of outlays for medium and heavy trucks. According to industry analysts, businesses have been pulling forward these purchases because the engines in the 2007 models will be required to meet new emission regulations by the Environmental Protection Agency that will make the new vehicles more costly to operate. Deliveries of commercial aircraft to domestic

Change in real business fixed investment, 2000–06



NOTE: High-tech equipment consists of computers and peripheral equipment and communications equipment.
SOURCE: Department of Commerce, Bureau of Economic Analysis.

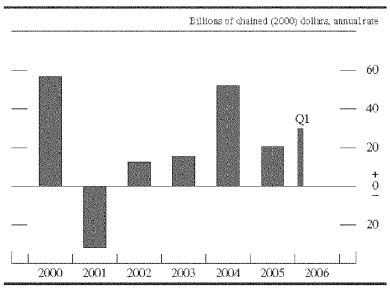
customers also rebounded in the first quarter from a very low level in the fourth quarter.

Demand for high-technology equipment stepped up noticeably in the first quarter because of a sharp jump in outlays for communications equipment. Providers of telecommunications services appear to be investing heavily in fiber-optic networks, which will allow them to offer a wider range of Internet services; the recent spurt likely also includes some replacement demand for equipment damaged by last year's hurricanes. In contrast, business demand for computing equipment, while still increasing at a double-digit pace in real terms, has been relatively modest by historical standards so far this year. Industry analysts suggest that firms may be delaying investment in anticipation of introductions, later this year and in early 2007, of several products that will allow faster and more energy-efficient processing. Spending on equipment other than transportation and high-tech goods continued to trend up at a solid pace, on average, during the fourth and first quarters. Demand was particularly strong for metalworking and general industrial machinery as well as for equipment used in construction, energy extraction, and services industries.

Demand for equipment and software appears to have risen again in the second quarter. The information from U.S. manufacturers on their orders and shipments of nondefense capital goods and the data on imports of capital goods suggest that business spending for equipment other than transportation and high-tech items remained on a strong upward trajectory in April and May. The elevated backlog of unfilled orders at domestic firms likely provided support for factory production of capital equipment in the second quarter. The indicators of demand for high-tech equipment suggest that spending for communications equipment remained at a high level, and real outlays for computing equipment were still rising slowly. Sales of medium and heavy trucks continued to be robust in the second quarter, although they eased slightly from the exceptional rate at the beginning of the year.

Real expenditures for nonresidential construction increased at an annual rate of 12½ percent in the first quarter after having edged up slightly during 2005. Last year, the small net increase in this sector reflected a sharp upturn in spending on structures used in domestic energy exploration; construction of new office and industrial buildings was restrained by elevated vacancy rates. However, vacancy rates for office and industrial properties gradually declined over the course of 2005, and, by the turn of the year, nonresidential construction began to firm. As a result, the increase in nonresidential investment in the first quarter of 2006 was broadly based; it included pickups in outlays in the office, retail, and industrial sectors in addition to another steep rise in spending on structures associated with energy exploration.

Change in real business inventories, 2000–06



SOURCE: Department of Commerce, Bureau of Economic Analysis.

Inventory Investment

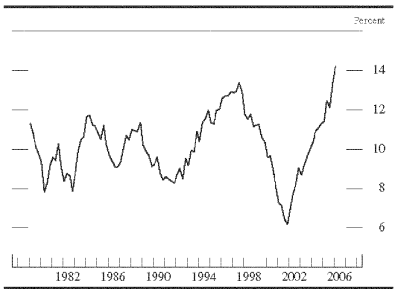
Business inventories appear generally to be well aligned with sales. In surveys taken during the first six months of 2006, about two-thirds of purchasing managers at manufacturing firms who responded characterized the level of their customers' inventories as about right. A similar proportion of respondents at nonmanufacturing firms reported that they were comfortable with their own levels of inventories. However, dealer stocks of new light motor vehicles, particularly trucks (including SUVs), have risen noticeably as sales have slowed; inventories of light trucks reached an uncomfortable 89 days' supply in May. In late June, a number of manufacturers introduced a new round of incentives aimed at reducing dealer stocks in advance of the introduction of their new models this fall.

Corporate Profits and Business Finance

Corporate profits were again strong in the first quarter of 2006, and earnings per share for S&P 500 firms rose about 15 percent from the same time last year. Gains were widespread but were especially large for firms in the energy sector. Before-tax profits of nonfinancial corporations measured as a share of sector GDP rose to about 14 percent in the first quarter, above the previous peak reached in 1997.

The expansion of business debt picked up to an annual rate of nearly 10 percent in the first quarter of this year, and data in hand suggest a robust pace in the second quarter. A substantial fraction of borrowing proceeds reportedly went to finance mergers and acquisitions in the first half of the year. Net bond issuance has been strong so far in 2006. Short-term borrowing by nonfinancial corporations stepped up in the first quarter of 2006 after slowing somewhat in the fourth quarter of last year; it

Before-tax profits of nonfinancial corporations as a percent of sector GDP, 1979–2006

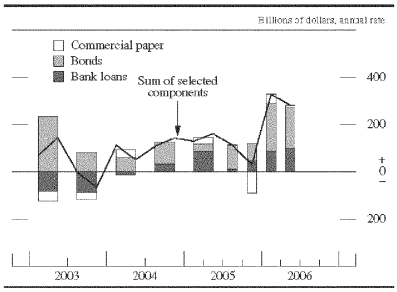


NOTE: The data are quarterly and extend through 2006:Q1. Profits are from domestic operations of nonfinancial corporations, with inventory valuation and capital consumption adjustments.
SOURCE: Department of Commerce, Bureau of Economic Analysis.

appears to have remained strong in the second quarter as well. Commercial paper outstanding started rising again, on balance, after edging lower in 2005. Bank business loans outstanding expanded at an annual rate of 15½ percent in the first quarter. Businesses benefited from a more accommodative lending environment: For example, a significant net fraction of respondents to the Federal Reserve's Senior Loan Officer Opinion Survey on Bank Lending Practices in April 2006 noted that their institutions had eased both standards and terms on commercial and industrial loans in the first three months of the year. The most commonly cited reasons for the easing of lending policies were more-aggressive competition from other banks and nonbank lenders, increased liquidity in the secondary market for business loans, and increased tolerance for risk.

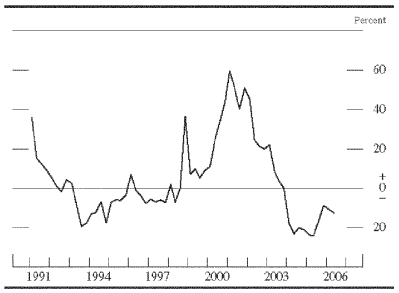
Gross equity issuance has remained moderate so far this year, while an elevated level of cash-financed merg-

Selected components of net financing for nonfinancial corporate businesses, 2003–06



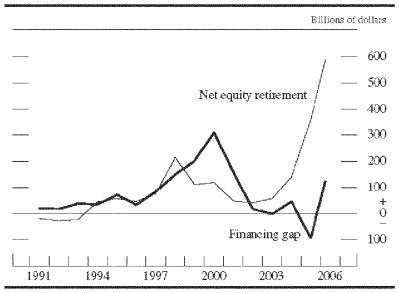
NOTE: The data for the components except bonds are seasonally adjusted. The data for the sum of selected components are quarterly. The data for 2006:Q2 are estimated.
SOURCE: Federal Reserve Board; Securities Data Company; and Federal Financial Institutions Examination Council, Consolidated Reports of Condition and Income (Call Report).

Net percentage of domestic banks tightening standards on commercial and industrial loans to large and medium-sized borrowers, 1991–2006



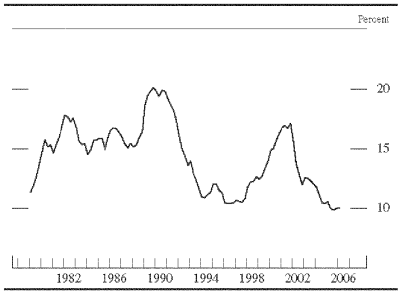
NOTE: The data are drawn from a survey generally conducted four times per year; the last observation is from the April 2006 survey. Net percentage is the percentage of banks reporting a tightening of standards less the percentage reporting an easing. The definition for firm size suggested for, and generally used by, survey respondents is that large and medium-sized firms have sales of $50 million or more.
SOURCE: Federal Reserve, Senior Loan Officer Opinion Survey on Bank Lending Practices.

Financing gap and net equity retirement at nonfinancial corporations, 1991–2006



NOTE: The data are annual through 2005; for 2006, they are as of Q1. The financing gap is the difference between capital expenditures and internally generated funds, adjusted for inventory valuation. Net equity retirement is the difference between equity retired through share repurchases, domestic cash-financed mergers, or foreign takeovers of U.S. firms and equity issued by domestic companies in public or private markets. Equity issuance includes funds invested by venture capital partnerships and stock option proceeds.
SOURCE: Federal Reserve Board, flow of funds data.

Net interest payments of nonfinancial corporations as a percent of cash flow, 1979–2006



NOTE: The data are quarterly and extend through 2006:Q1.
SOURCE: Department of Commerce, Bureau of Economic Analysis.

ers along with record share repurchases has produced further sizable net equity retirements. Taken together, net funds raised by nonfinancial corporations in the credit and equity markets have been slightly negative in 2006, an indication that nonfinancial corporations have financed their increased investment spending with internal funds.

With profitability strong and balance sheets flush with liquid assets, credit quality in the nonfinancial business sector generally has remained quite high. The six-month trailing default rate on corporate bonds dropped after some large firms in the troubled airline and automobile sectors defaulted during the past fall and winter. Delinquency rates on business loans have stayed near the bottom of their historical range.

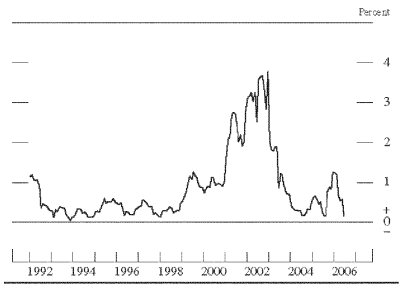
Commercial real estate debt expanded briskly in the first half of 2006, albeit not as quickly as during 2005. Spreads on BBB-rated commercial-mortgage-backed securities have fallen this year. The decline reversed an increase that took place at the end of last year, when issuance surged; these spreads are now back in line with those of comparable-quality corporate bonds. With rents climbing and vacancy rates falling, delinquency rates on commercial real estate loans have been low, and credit quality has remained generally good.

The Government Sector

Federal Government

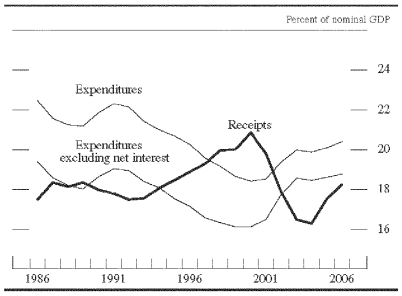
The deficit in the federal unified budget narrowed further during the past year. Over the twelve months ending in June, the unified budget recorded a deficit of $276 billion, about $60 billion less than during the comparable period last year. The federal deficit over the twelve months ending in June was approximately 2 percent of nominal GDP and was significantly lower than its recent fiscal year peak of 3.6 percent of GDP in 2004. Although outlays increased faster than nominal GDP over the past year, the rise in receipts was even larger. Thus, in its recent *Mid-Session Review* of the budget, the Administration estimated that the federal government will finish fiscal 2006 with a deficit of $296 billion; that figure marks a decline from the fiscal 2005 deficit of $318 billion and is much lower than most analysts had projected at the beginning of this year.

Default rate on outstanding corporate bonds, 1992–2006



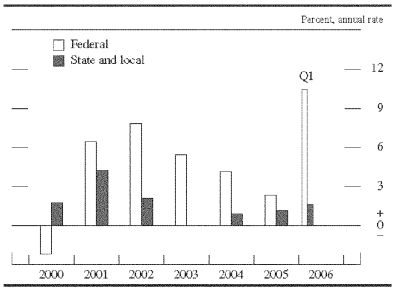
NOTE: The data are monthly and extend through June 2006. The rate for a given month is the face value of bonds that defaulted in the six months ending in that month, multiplied by two to annualize the defaults and then divided by the face value of all bonds outstanding at the end of the calendar quarter immediately preceding the six-month period.
SOURCE: Moody's Investors Service.

Federal receipts and expenditures, 1986–2006



NOTE: Through 2005, the receipts and expenditures data are on a unified-budget basis and are for fiscal years (October through September); GDP is for the four quarters ending in Q3. For 2006, the receipts and expenditures data are for the twelve months ending in June, and GDP is the average of 2005:Q4 and 2006:Q1.
SOURCE: Office of Management and Budget.

Change in real government expenditures on consumption and investment, 2000–06



SOURCE: Department of Commerce, Bureau of Economic Analysis.

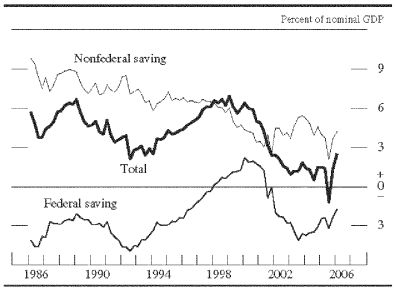
During the twelve months ending in June, federal receipts were 13¼ percent higher than over the same period a year earlier and equivalent to almost 18¼ percent of nominal GDP. Income tax receipts from individuals have outpaced the rise in nominal income; final tax payments on income from 2005 were especially strong in April and May. Corporate tax payments continued to rise at a robust rate, even faster than corporate profits.

Nominal federal outlays rose 9 percent between June 2005 and June 2006 and were about 20½ percent of nominal GDP. The rise in outlays was bolstered by increases in several components of federal spending. Net interest payments increased 20 percent over the year ending in June as federal debt continued to rise and interest rates increased. Medicare outlays were up 14½ percent; since the inception of the new Part D prescription drug program in January, outlays for benefits have added more than $20 billion to spending in this category. Legislative actions related to the hurricanes in the Gulf Coast region last autumn have added significantly to spending for disaster relief over the past ten months. Although defense spending has slowed from the annual double-digit rates of increase from 2002 to 2004, it still has increased about 8 percent per year in the past two years.

As measured in the national income and product accounts (NIPA), real federal expenditures on consumption and gross investment—the part of federal spending that is a direct component of real GDP—increased at an annual rate of 3¾ percent, on average, during the final calendar quarter of 2005 and the first calendar quarter of 2006 and contributed roughly 0.3 percentage point to the annualized change in real GDP over the period. Over these two quarters, real defense purchases were about constant, on average, while spending related to disaster relief from the hurricanes contributed importantly to a rise in real nondefense purchases.

The narrowing of the federal deficit recently has reduced its drain on national saving. However, net national saving excluding the federal government has remained low relative to historical norms. Although the saving rate for private business has moved up during the past two years, the improvement has been offset by the further decline in personal saving. Overall, national saving, net of depreciation, stood at 2½ percent of nominal GDP in the first quarter of 2006. Although the recent rate is a noticeable improvement from the lows of the preceding few years, it has been insufficient to avoid an increasing reliance on borrowing from abroad to finance the nation's capital spending.

Net saving, 1986–2006



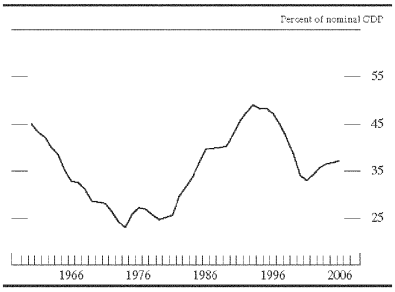
NOTE: The data are quarterly and extend through 2006:Q1. Nonfederal saving is the sum of personal and net business saving and the net saving of state and local governments.
SOURCE: Department of Commerce, Bureau of Economic Analysis.

Federal Borrowing

Federal debt rose at an annual rate of 13 percent in the first quarter, a bit less than in the corresponding quarter of 2005. In February, federal debt subject to the statutory limit reached the ceiling of $8.184 trillion, and the Treasury resorted to accounting devices to avoid breaching the limit. The Congress subsequently increased the debt ceiling to $8.965 trillion in March. In the second quarter, federal debt likely declined temporarily because of a surge in tax receipts. On net, the Treasury has raised substantially less cash in the market so far this year than in the comparable period of 2005.

In February, the Treasury conducted an auction of thirty-year bonds for the first time since 2001. The issue generated strong interest, especially from investment funds; foreign investors were awarded only a small fraction of the total. In general, foreign demand for Treasury

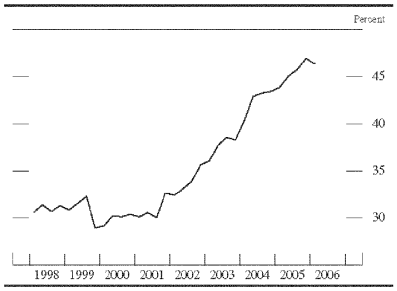
Federal government debt held by the public, 1960–2006



NOTE: The final observation is for 2006:Q1. For previous years, the data for debt are as of year-end, and the corresponding values for GDP are for Q4 at an annual rate. Excludes securities held as investments of federal government accounts.
SOURCE: Federal Reserve Board, flow of funds data.

securities appears to have eased somewhat in 2006. The proportion of nominal coupon securities bought at auction by foreign investors has continued to fall from its peak of 24 percent in 2004; it averaged about 14 percent in the first six months of 2006. Data from the Treasury International Capital system generally suggested subdued demand from both foreign private investors and foreign official institutions over this period. The amount of Treasury securities held in custody at the Federal Reserve Bank of New York on behalf of foreign official and international accounts has changed little since the end of 2005.

Treasury securities held by foreign investors as a share of total outstanding, 1998–2006



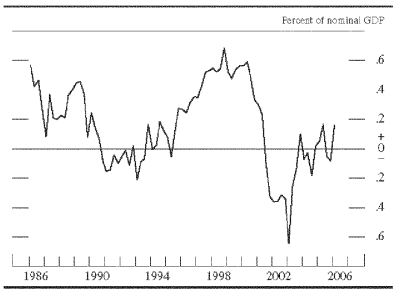
NOTE: The data are quarterly and extend through 2006:Q1.
SOURCE: Federal Reserve Board, flow of funds data.

State and Local Governments

The fiscal positions of states and localities continued to improve through early 2006. In particular, revenues are on track to post a relatively strong gain for a third consecutive year. Tax receipts from sales, property, and personal and corporate income were up 8¼ percent during the year ending in the first quarter of 2006, a rate similar to the increase in the preceding year. The sustained strength in revenues has enabled these jurisdictions to increase their nominal spending somewhat while rebuilding their reserve funds. On a NIPA basis, net saving by state and local governments—a measure that is broadly similar to the surplus in an operating budget—rose to an annual rate of $21½ billion in the first quarter of 2006 after having been close to zero in 2005. Although most states have seen improvement, a number of states are still struggling with structural imbalances in their budgets, and those in the Gulf Coast region are coping with demands related to damage from last year's hurricanes. In addition, local governments may face pressure to hold the line on property taxes after the sharp increases in the past several years, and governments at all levels will have to contend with the need to provide pensions and health benefits to a rising number of retirees in coming years.

Real expenditures by state and local governments on consumption and gross investment, as estimated in the NIPA, rose at an annual rate of 1½ percent in the first quarter of 2006 after having increased roughly 1 percent per year in 2004 and 2005. Real expenditures for investment turned up in the first quarter after having fallen during the second half of 2005. Real outlays for current consumption posted a moderate increase in the first quarter, and that trend appears to have continued into midyear.

State and local government net saving, 1986–2006



NOTE: The data, which are quarterly, are on a national income and product account basis and extend through 2006:Q1. Net saving excludes social insurance funds.
SOURCE: Department of Commerce, Bureau of Economic Analysis.

Hiring by state and local governments was slow early in the year but appears to have firmed in the spring. Of the cumulative increase in employment of 100,000 between December and June, 40 percent of the jobs were in education.

State and Local Government Borrowing

Borrowing by state and local governments has slowed thus far in 2006. The deceleration likely reflects the general improvement in budget conditions and a decline in advance refundings, which have dropped below their 2005 pace amid rising interest rates and a dwindling pool of eligible securities. Credit quality in the state and local sector has continued to improve, and upgrades of credit ratings have far outnumbered downgrades. Consistent with the improvement in credit quality, yields on long-dated municipal bonds have increased substantially less than those on comparable-maturity Treasury securities, and the yield ratio has accordingly fallen sharply.

The External Sector

The U.S current account deficit narrowed in the first quarter of 2006 to $835 billion at an annual rate, or about 6½ percent of nominal GDP, from $892 billion in the fourth quarter of 2005. The narrowing resulted from three factors. Unilateral transfer payments to foreigners dropped, largely because of a decrease in government grants. The trade deficit narrowed, primarily because the value of imported oil and natural gas declined. In addition, higher direct investment receipts and lower direct investment payments produced an increase in the investment income balance.

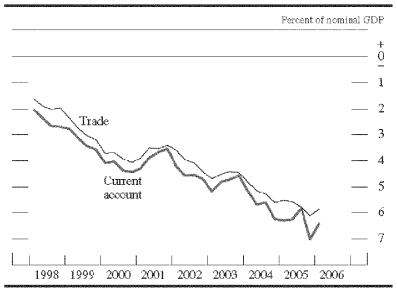
International Trade

Real exports of goods and services increased 14¾ percent at an annual rate in the first quarter of 2006, far faster than the 6½ percent rate recorded in 2005. The surge in export growth in the first quarter resulted in part from a recovery in exports of many types of industrial supplies following a period of hurricane-related disruptions late last year. Exports of capital goods also increased rapidly in the first quarter, with deliveries of aircraft to foreign carriers exhibiting particular strength. The first-quarter increase in exports was widespread across destinations, a sign of robust economic activity in many parts of the world, and exports to Mexico and Canada showed especially large increases. Real exports of services rose at an annual rate of about 6½ percent in the first quarter after increasing just 2¾ percent in 2005. Available data for nominal exports in April and May suggest that the increase in real exports was smaller in the second quarter, held down in part by a drop in aircraft exports after a strong first quarter.

Prices of exported goods increased at an annual rate of 2¾ percent in the first quarter of 2006, a pace somewhat faster than in the second half of 2005. Prices of nonagricultural industrial supplies continued to increase steadily in the first quarter, driven importantly by higher prices for oil and metals. An acceleration in prices for finished goods, especially for capital and consumer goods, contributed to the faster pace of export price inflation in the first quarter. The available data for the second quarter point to further increases in export prices on the strength of additional run-ups in the prices of nonagricultural industrial supplies, especially metals.

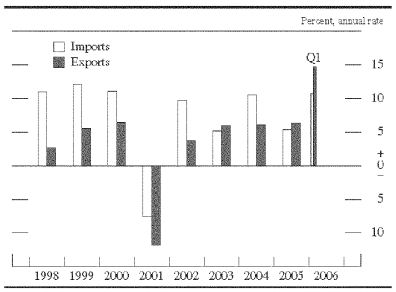
Real imports of goods and services rose at an annual rate of 10¾ percent in the first quarter, slightly slower

U.S. trade and current account balances, 1998–2006



NOTE: The data are quarterly and extend through 2006:Q1.
SOURCE: Department of Commerce.

Change in real imports and exports of goods and services, 1998–2006

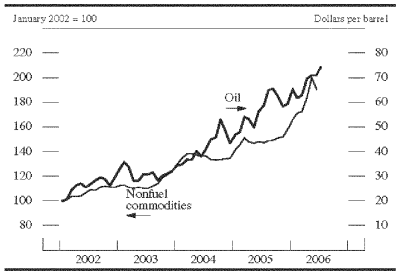


SOURCE: Department of Commerce.

than in the fourth quarter but still considerably faster than the 5¼ percent rate observed for 2005 as a whole. Robust growth of real GDP in the United States supported the first-quarter increase in imports. Among categories of goods, large increases in imports of consumer goods, automotive products, and capital goods, particularly computers, more than offset declines in imports of oil and some other industrial supplies. The rise in imports in the first quarter was widely distributed across countries, and the increases for China and Mexico were especially large. Real imports of services jumped at an annual rate of 8½ percent in the first quarter. Nominal imports in April and May point to an abrupt slowing of real imports in the second quarter from the first quarter's rapid pace.

Prices of imported goods excluding oil and natural gas rose at an annual rate of about 1 percent in the first quarter of 2006, ¾ percentage point faster than the pace in the second half of 2005. Prices of material-intensive goods, such as nonfuel industrial supplies and foods, increased steadily in the last quarter of 2005 and in the first quarter of 2006. Also in the first quarter, prices of finished goods, such as consumer goods and many kinds of capital goods, turned up slightly. Available data for the second quarter indicate that prices of finished goods kept rising at a subdued pace. However, prices of material-intensive goods continued to increase sharply, a development reflecting higher prices for metals. The International Monetary Fund's index of global metals prices rose 46 percent between December 2005 and May 2006, largely because of robust global demand. In June, metals prices retreated about 8 percent, although they remained well above the levels of earlier this year.

Prices of oil and of nonfuel commodities, 2002–06



NOTE: The data are monthly. The last observation for the oil price is the average for July 3 through July 12, 2006. The prices of nonfuel commodities extend through June 2006. The oil price is the spot price of West Texas intermediate crude oil. The price of nonfuel commodities is an index of forty-five primary-commodity prices.

SOURCE: For oil, the Commodity Research Bureau; for nonfuel commodities, International Monetary Fund.

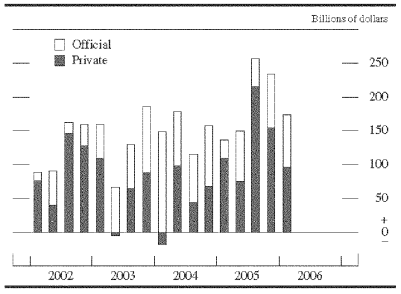
The spot price of West Texas intermediate crude oil increased from around $60 per barrel at the end of last year to more than $75 per barrel in July, higher than the peak that followed last year's hurricanes. Oil prices have been highly sensitive to news about both supply and demand, particularly in light of the narrow margin of worldwide spare production capacity. Global oil demand has continued to grow as the foreign economic expansion has spread, and developing countries have posted the largest increases in oil consumption. Recent events in the Middle East—including concerns over Iran's nuclear program, violence in Iraq, and the recent conflict in Lebanon—have put additional upward pressure on oil prices. In Nigeria, attacks against oil infrastructure have reduced oil production for most of this year. Government intervention in energy markets also raised concerns about supply from some countries: In recent months, Bolivia nationalized its natural gas reserves, and Venezuela and Russia continued to tighten governmental control of their energy industries.

The rise in the price of the far-dated NYMEX oil futures contract (currently for delivery in 2012) to more than $70 per barrel likely reflects a belief by oil market participants that the balance of supply and demand will remain tight over the next several years.

The Financial Account

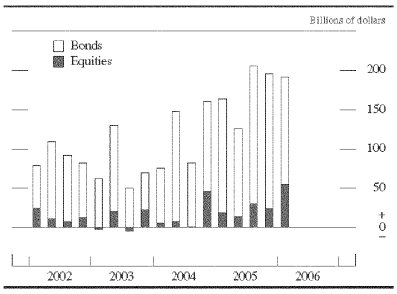
The U.S. current account deficit continues to be financed primarily by foreign purchases of U.S. debt securities. Foreign official inflows in the first quarter maintained the strength exhibited in 2005 but remained below the record levels of 2004. As in recent years, the majority of these official inflows were attributable to Asian central banks and have taken the form of purchases of U.S. government securities.

U.S. net financial inflows, 2002–06



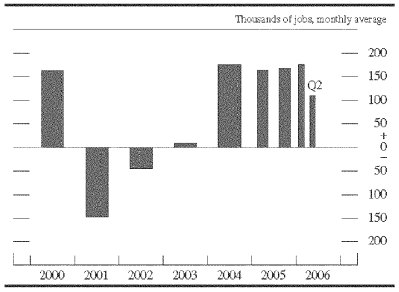
SOURCE: Department of Commerce.

Net private foreign purchases of long-term U.S. securities, 2002–06



SOURCE: Department of Commerce and the Treasury International Capital reporting system.

Net change in payroll employment, 2000–06



NOTE: Nonfarm business sector.
SOURCE: Department of Labor, Bureau of Labor Statistics.

Foreign private purchases of U.S. securities continued in the first quarter at the extraordinary pace set in the second half of 2005. Although private flows into U.S. Treasury bonds were significantly smaller than in recent quarters, this slowing was more than offset by larger flows into agency bonds and equities. Preliminary data for April and May suggest a slowdown in foreign purchases of U.S. securities relative to the first quarter. Foreign direct investment flows into the United States continued in the first quarter near last year's average levels.

Net purchases of foreign securities by U.S. residents, which represent a financial outflow, strengthened slightly in the first quarter and continued at a solid pace in April and May. In addition, significant outflows were associated with U.S. direct investment abroad, a reversal of some unusual inflows in the second half of 2005. These second-half inflows were prompted by the partial tax holiday offered under the 2004 Homeland Investment Act (HIA), which induced the foreign affiliates of U.S. firms to repatriate a portion of earlier earnings that had been retained abroad. In the first quarter, the foreign affiliates partially unwound the HIA-induced flows by retaining an unusually large portion of their first-quarter earnings. Increased merger activity abroad also boosted direct investment outflows in the first quarter.

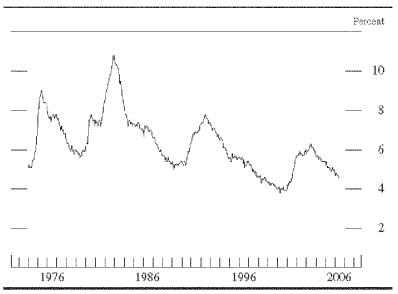
The Labor Market

Employment and Unemployment

Conditions in the labor market continued to improve in the first half of 2006, although the pace of hiring has slowed in recent months. Nonfarm payroll employment increased 176,000 per month during the first quarter, a rate roughly in line with the relatively brisk pace that prevailed during 2004 and 2005. During the second quarter, hiring slowed, and monthly gains in payrolls averaged 108,000 jobs per month. Over the two quarters, the civilian unemployment rate edged down further, to the lowest quarterly level of joblessness in five years.

In the first quarter, with homebuilding quite strong, hiring continued to be particularly robust at construction sites; part of this strength was the result of favorable weather, which allowed more construction activity than is typical during the winter months. Although nonresidential construction activity was firming by the spring, the pullback in housing starts slowed the demand for residential contractors and workers in the building trades. As a result, monthly additions to construction industry payrolls declined from more than 25,000 per month in the first quarter to just 3,000 per month in the second quarter. Cutbacks at retailers also were an important factor holding down the overall gain in employment in the

Civilian unemployment rate, 1974–2006



NOTE: The data are monthly and extend through June 2006.
SOURCE: Department of Labor, Bureau of Labor Statistics.

second quarter. After having been stable early in 2006, employment at retail outlets fell almost 30,000 per month between March and June; most of the cutbacks occurred at general merchandisers.

In other sectors, employment remained on a solid upward trend during the first half of the year. As has been the case since mid-2004, establishments providing education and health services, those offering professional and technical business services, and those involved in financial activities, taken together, added more than 60,000 jobs per month. Employment in manufacturing, which had turned up at the end of 2005, rose further over the first half of 2006. Expanding industrial production was also associated with further job gains in related industries, such as wholesale trade and transportation. In addition, the increase in energy production led to a sustained rise in employment in the natural resources and mining industry over the first half of the year.

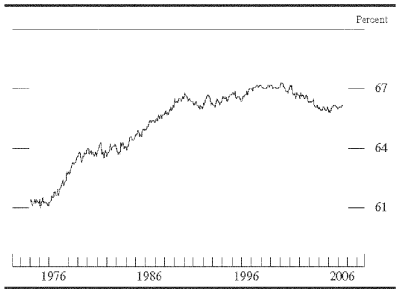
The increase in job opportunities so far in 2006 led to a further reduction in the civilian unemployment rate, from an average of 5.0 percent in the second half of 2005 to 4.7 percent in the second quarter of 2006. Although hiring moderated in the spring, layoffs remained low. New claims for unemployment insurance (UI) dipped below 300,000 per week in January and February and then fluctuated around a still-low level of about 315,000 per week for most of the period from March through early July. Over the first half of 2006, longer-term unemployment (fifteen weeks or more) also moved down, and the proportion of UI claimants who remained on the unemployment rolls until the exhaustion of their benefits continued to recede.

After having edged up during 2005, the labor force participation rate was relatively stable over the first half of 2006 despite the ongoing improvement in labor market conditions. Rates for most broad age groups were little changed from last year's levels. From a longer perspective, developments during the past decade highlight the importance of structural as well as cyclical influences on participation. The rise in the attachment of adult women to the workforce, which was a significant factor in the secular rise in participation over much of the post–World War II period, appears to have leveled off. And the aging of the population is increasing the proportion of the workforce that is 55 years and older; it rose from less than 12 percent in 1996 to 16¾ percent in recent months. Although older workers have tended in recent years to stay in the labor force longer, their participation rate, at 38 percent in the second quarter, was less than half the rate for workers who are age 25 to 54. Thus, the demographic shift to an older population has already begun to reduce the overall rate of labor force participation and has offset part of the rise in participation that has been associated with the cyclical upturn in job creation. The secular forces that are slowing the expansion of the labor force imply that the increase in employment that is consistent with a stable unemployment rate will, over time, be smaller than it was during the period when labor force participation was rising steadily.

Productivity and Labor Costs

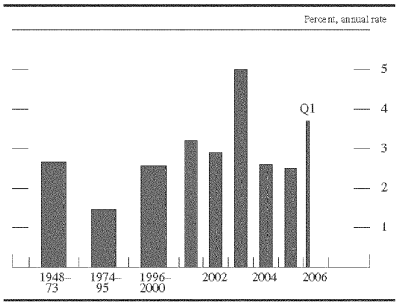
After having advanced at an unusually rapid rate from 2001 to mid-2004, labor productivity in the nonfarm business sector increased at a more moderate annual rate of 2½ percent from mid-2004 to early 2006. Nonetheless, by historical standards, productivity performance recently

Labor force participation rate, 1974–2006



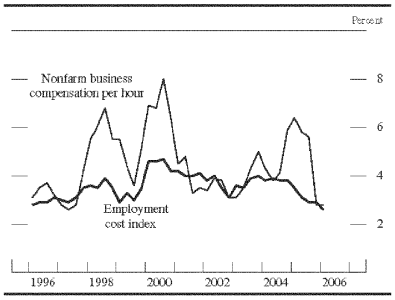
NOTE: The data are monthly and extend through June 2006.
SOURCE: Department of Labor, Bureau of Labor Statistics.

Change in output per hour, 1948–2006



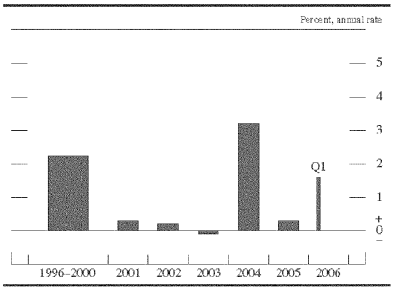
NOTE: Nonfarm business sector. Change for each multiyear period is measured from the fourth quarter of the year immediately preceding the period to the fourth quarter of the final year of the period.
SOURCE: Department of Labor, Bureau of Labor Statistics.

Measures of change in hourly compensation, 1996–2006



NOTE: The data are quarterly and extend through 2006:Q1. For nonfarm business compensation, change is over four quarters; for the employment cost index (ECI), change is over the twelve months ending in the last month of each quarter. The nonfarm business sector excludes farms, government, nonprofit institutions, and households. The sector covered by the ECI used here is the same as the nonfarm business sector plus nonprofit institutions. A new ECI series was introduced for data as of 2001, but the new series is continuous with the old.
SOURCE: Department of Labor, Bureau of Labor Statistics.

Change in unit labor costs, 1996–2006



NOTE: Nonfarm business sector. The change for 1996 to 2000 is measured from 1995:Q4 to 2000:Q4.
SOURCE: Department of Labor, Bureau of Labor Statistics.

has still been solid, with gains at a rate matching those during the second half of the 1990s. In an environment of a sustained expansion of aggregate demand, businesses have gradually adjusted their use of labor, capital, and services to achieve ongoing gains in efficiency. Productivity has continued to benefit importantly from investment in new technologies, organizational changes, and improvements in business processes, although the contribution from capital deepening has been smaller in recent years than it was during the capital investment boom of the late 1990s.

Broad measures of hourly labor compensation, which include both wages and the costs of benefits, posted moderate gains over the year ending in early 2006 despite the run-up in headline price inflation and the further tightening of labor markets. Both the employment cost index (ECI) and the estimate of compensation per hour that uses data from the national income and product accounts increased 2¾ percent between the first quarter of 2005 and the first quarter of 2006.[1] Both series had reported higher rates of change in hourly labor compensation a year earlier.

The deceleration in labor compensation appears to have been associated largely with smaller increases in employers' benefit costs. The benefits component of the ECI was up just 3 percent between March 2005 and March 2006, compared with an increase of 5.5 percent between March 2004 and March 2005. The cost of health insurance, which typically accounts for about one-fourth of overall benefit costs, rose just 4¾ percent during the year ending in March 2006; between 2000 and 2005, these costs increased, on average, 8¾ percent per year. Another likely contributor to the slower rise in benefit costs over the past year was smaller employer contributions to their defined-benefit pension plans; those costs dropped back somewhat after employers made sizable payments to bolster those pension assets in 2004.

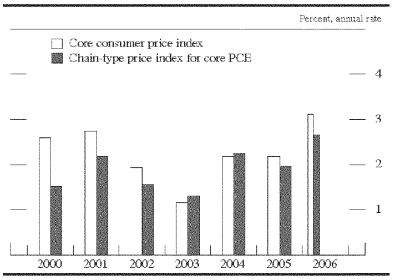
Indicators of the recent trend in the wage component of worker compensation have been providing mixed signals. As measured in the ECI, wages rose 2.4 percent between March 2005 and March 2006, slightly less than in the preceding two years. In contrast, the year-over-year change in average hourly earnings of production or nonsupervisory workers—which refers to a narrower group of private nonfarm employees and has tended to show greater cyclical variation than the ECI—has increased steadily over the past three years. Average hourly earnings rose 3.9 percent over the twelve months ending in June 2006, compared with an increase of 2.7 percent over the twelve months ending in June 2005.

Prices

Inflation pressures were elevated during the first half of 2006. The chain-type price index for personal consumption expenditures (PCE) rose at an annual rate of 4¼ percent between December 2005 and May 2006. Over the same period, core PCE prices increased at an annual rate of 2.6 percent, nearly 0.6 percentage point faster than over the twelve months of 2005.

1. The Bureau of Labor Statistics (BLS) developed a new ECI series and has provided data for the changes in that series beginning in 2001. The BLS considers the new ECI to be continuous with the old series.

Change in core consumer prices, 2000–06



NOTE: Through 2005, change is from December to December; for 2006, change is from December to May.
SOURCE: For core consumer price index, Department of Labor, Bureau of Labor Statistics; for core PCE price index, Department of Commerce, Bureau of Economic Analysis.

Although energy prices eased temporarily in February, they turned up sharply again from March to May; as a result, the PCE price index for energy increased 13 percent (not at an annual rate) over the first five months of 2006, a rise that marked a continuation of the steep climb in prices that began in 2004. This year, almost the entire rise in energy prices has been associated with higher prices for petroleum-based products. The PCE price index for gasoline and motor fuel, which increased more than 16½ percent last year, climbed another 24 percent (not at an annual rate) by May. Although recent data from the Department of Energy indicate that gasoline prices fell back in June, they moved up again in early July. Retail prices of gasoline this year have risen faster than the cost of crude oil in part because of the additional cost of producing and distributing reformulated product with ethanol. Also, the demand for fuel ethanol has been strong relative to the current capacity to produce it. In contrast, the consumer price of natural gas has turned down this year as inventories have remained relatively high; the price decline between January and May almost completely reversed the steep run-up that occurred last autumn.

Food price inflation remained moderate during the first five months of 2006; between December 2005 and May 2006, the PCE price index for food and beverages increased at an annual rate of 2¼ percent. Retail prices of meat and poultry have fallen so far this year. Domestic supplies of meat have been ample. Production has been expanding at a time when export demand for beef has been soft largely because of bans on imports of U.S. beef by Japan and Korea. Prices of processed food have continued to rise at only a moderate rate despite higher prices for grains; export demand for grains has been strong, and the price of corn has been boosted by demand from producers of ethanol. Prices for food consumed away from home, which typically are influenced heavily by labor and other business costs, have continued to increase relatively rapidly, rising at an annual rate of 3¾ percent over the first five months of the year.

The pickup in core inflation in the first half of 2006 was evident in the indexes for both goods and services. Prices of consumer goods excluding food and energy, which were unchanged in 2005, edged up at an annual rate of ¾ percent this year. Prices of consumer services also accelerated this spring; as a result, the PCE price index for non-energy services increased at an annual rate of 3½ percent between December 2005 and May 2006, compared with a rise of 2¾ percent in 2005. In the three months ending in May, increases in housing rents were especially steep; the rise may reflect, in part, a shift in demand toward rental units because home purchases have become less affordable. Another contributor to the higher inflation rate for consumer services has been the acceleration in the index for nonmarket services to an annual rate of 4 percent over the first five months of the year from 3 percent last year.[2] More broadly, the pickup in core consumer price inflation over the first five months of 2006 likely is the result of the pass-through of higher energy costs to a wide range of goods and services.

The cost pressures from the increase in energy costs during the past three years have been apparent in rising prices of inputs used in the production and sale of final goods and services. The producer price index for intermediate goods, excluding food and energy, rose at an annual rate of 7¼ percent between December 2005 and May 2006; this index rose 4¾ percent in 2005 and 8¼ percent in 2004. In particular, prices of industrial chemi-

2. These are services—such as foreign travel or the financial services provided by banks—for which no prices based on market transactions are available; the Bureau of Economic Analysis must impute or estimate these price indexes.

Alternative measures of price change

Percent

Price measure	2004 to 2005	2005 to 2006
Chain-type (Q1 to Q1)		
Gross domestic product (GDP)	2.8	3.1
Gross domestic purchases	3.1	3.5
Personal consumption expenditures (PCE)	2.7	3.0
Excluding food and energy	2.2	1.9
Market-based PCE excluding food and energy	1.8	1.5
Fixed-weight (Q2 to Q2)		
Consumer price index	3.0	4.0
Excluding food and energy	2.1	2.4

NOTE: Changes are based on quarterly averages of seasonally adjusted data. For the consumer price index, the 2006:Q2 value is calculated as the average for April and May compared with the average for the second quarter of 2005 and is expressed at an annual rate.
SOURCE: For chain-type measures, Department of Commerce, Bureau of Economic Analysis; for fixed-weight measures, Department of Labor, Bureau of Labor Statistics.

cals, fertilizer, and stone and clay products, for which energy represents a relatively high share of the total costs of production, accelerated over the past several years. The costs of a number of important business services, particularly transportation by air, rail, and truck, have also been boosted by higher energy costs. The pass-through of the costs of energy to consumer prices is clear for a few items, such as airfares. For other components of core consumer price indexes, however, the extent of the pass-through is harder to trace. Quantifying the extent of the pass-through is difficult, in part because it is diffused through a wide range of retail goods and services. In addition, the cost of energy is a small share of overall costs—and that share has been declining over time as businesses adopt more energy-efficient technologies and households reduce their consumption of energy. Nonetheless, the cumulative rise in energy costs in recent years has been large enough to show through to pricing of final goods and services even as businesses have seen their labor costs, which represent roughly two-thirds of their costs, remain restrained.

Near-term inflation expectations were also influenced importantly over the first half of 2006 by movements in energy prices, but, as of midyear, they were only slightly higher than they were at the turn of the year. The Michigan SRC survey measure of the median expectation of households for inflation over the next twelve months held steady at 3 percent during the first three months of the year but then rose sharply to 4 percent in May as gasoline prices climbed. By early July, this measure of near-term inflation expectations dropped back to 3.1 percent. Longer-term inflation expectations remained within the ranges in which they have fluctuated in recent years. On average over the first half of 2006, the median respondent to the Michigan SRC survey continued to expect the rate of inflation during the next five to ten years to be just under 3 percent. In June, the Survey of Professional Forecasters, conducted by the Federal Reserve Bank of Philadelphia, reported expected inflation at a rate of 2½ percent over the next ten years, an expectation that has been roughly unchanged for the past eight years. Inflation compensation implied by the spread of yields on nominal Treasury securities over their inflation-protected counterparts rose slightly, on net, over the first half of the year; in early July it was just above 2½ percent.

TIPS-based inflation compensation, 2003–06

NOTE: The data are daily and extend through July 12, 2006. Based on a comparison of the yield curve for Treasury inflation-protected securities (TIPS) with the nominal off-the-run Treasury yield curve.

SOURCE: Federal Reserve Board calculations based on data provided by the Federal Reserve Bank of New York and Barclays.

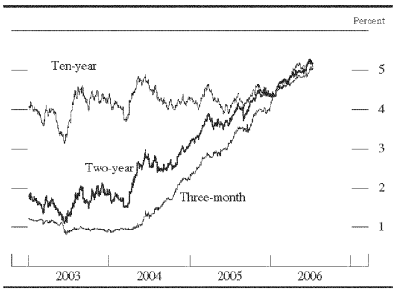
U.S. Financial Markets

U.S. financial markets functioned smoothly in the first half of 2006 against the backdrop of increased volatility in some asset prices. Yields on nominal Treasury coupon securities rose about 70 basis points, on net, through early July as investors came to appreciate that economic conditions and inflation pressures required more monetary policy tightening than they had expected at the end of 2005. Equity prices advanced until mid-May but then reversed those gains. Apparently, evidence of increased inflationary pressures and some softer-than-expected data on economic activity induced market participants to revise down their longer-term outlook for business profits and to perceive greater risks to that outlook. With corporate balance sheets remaining strong and liquid, risk spreads on corporate bonds stayed low, an indication that the revision to the outlook had not sparked broad concerns about credit quality. Firms had ample access to funds, and business-sector debt expanded rapidly in the first quarter. The need to finance brisk merger and acquisition activity was one factor that reportedly induced nonfinancial businesses to tap the credit markets heavily. Bond issuance picked up noticeably, and commercial and industrial loans increased robustly. Banks continued to ease terms and standards on such loans. Household debt expanded further in the first quarter amid rising house prices and brisk cash-out refinancing activity. As was the case in 2005, the M2 monetary aggregate has advanced moderately so far in 2006.

Interest Rates

The FOMC increased the target federal funds rate 25 basis points at each of its four meetings this year. These actions brought the rate to 5¼ percent, about 60 basis points above the rate expected at the end of last year for early July. In contrast to the situation earlier in the tightening cycle, when it was evident to investors that consid-

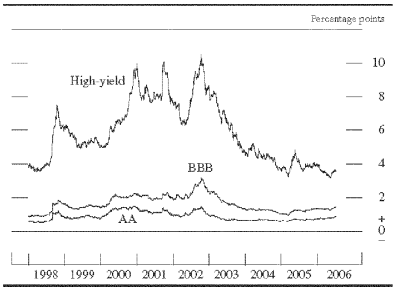
Interest rates on selected Treasury securities, 2003–06



NOTE: The data are daily and extend through July 12, 2006.
SOURCE: Department of the Treasury.

erable monetary policy accommodation was in place and had to be removed, market participants more recently have had to focus to a greater degree on economic data releases and their implications for the outlook for economic growth and inflation to form expectations about near-term policy. Although the information currently available suggests that growth of real output slowed appreciably in the second quarter, incoming price data have pointed to greater-than-expected inflationary pressures throughout the first half of the year. Investors anticipated that the FOMC would act to counter such pressures, and the expected policy path moved upward, on balance, over the first half of 2006. Nevertheless, market participants currently appear to expect the target federal funds rate to ease after the end of the year. Despite investors' apparent awareness that monetary policy decisions increasingly depend on the implications of incoming information for the economic outlook, the implied volatility on short-term Eurodollar rates calculated from option prices has remained near the low end of its historical range.

Spreads of corporate bond yields over comparable off-the-run Treasury yields, 1998–2006



NOTE: The data are daily and extend through July 12, 2006. The high-yield index is compared with the five-year Treasury yield, and the BBB and AA indexes are compared with the ten-year Treasury yield.
SOURCE: Derived from smoothed corporate yield curves using Merrill Lynch bond data.

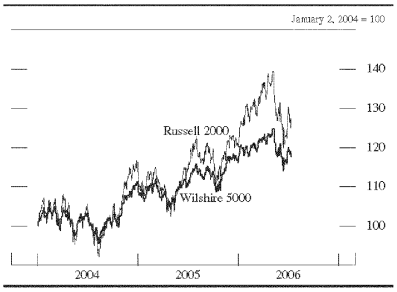
Yields on nominal Treasury coupon securities rose about 70 basis points across the maturity spectrum through early July, in part because of the expectations for firmer policy. In addition, it appears that a modest rebound in term premiums, including investor compensation for inflation risk, may have contributed to the rise in longer-term rates; still, estimated premiums remain low by historical standards. Yields on inflation-indexed Treasury securities rose less than those on their nominal counterparts, leaving inflation compensation at medium- and long-term horizons 20 to 30 basis points higher than at the turn of the year.

In the corporate bond market, yields on investment-grade securities moved about in line with those on comparable-maturity Treasury securities through early July. In contrast, those on speculative-grade securities rose only about 40 basis points; as a result, risk spreads were 30 basis points lower in that segment of the market. The narrowness of high-yield spreads was likely a reflection of investors' sanguine views about corporate credit quality over the medium term, given the strength of business balance sheets and the outlook for continued economic expansion.

Equity Markets

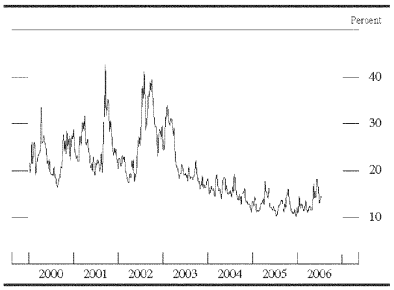
Broad equity indexes changed little, on net, through early July. Stock prices were boosted up to the first part of May

Stock price indexes, 2004–06



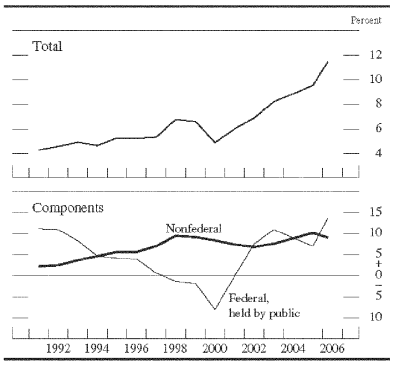
NOTE: The data are daily and extend through July 12, 2006.
SOURCE: Frank Russell Company; Dow Jones Indexes.

Implied S&P 500 volatility, 2000–06



NOTE: The data are weekly and extend through July 12, 2006. The series shown is the implied thirty-day volatility of the S&P 500 stock price index as calculated from a weighted average of options prices.
SOURCE: Chicago Board Options Exchange.

Change in domestic nonfinancial debt, 1991–2006



NOTE: For 2006, change is from 2005:Q4 to 2006:Q1 at an annual rate. For earlier years, the data are annual and are computed by dividing the annual flow for a given year by the level at the end of the preceding year. The total consists of components shown. Nonfederal debt consists of the outstanding credit market debt of state and local governments, households, nonprofit organizations, and nonfinancial businesses. Federal debt held by the public excludes securities held as investments of federal government accounts.
SOURCE: Federal Reserve Board, flow of funds data.

by an upbeat economic outlook and by strong corporate earnings in the first quarter. However, those gains were subsequently reversed as incoming data clouded the prospects for economic growth and continued to point to upward pressures on inflation; the drop in share prices was led by stocks that had logged the largest gains in the previous months, including those of firms with small capitalizations and of firms in cyclically sensitive sectors. A measure of the equity risk premium—computed as the difference between the twelve-month forward earnings–price ratio for the S&P 500 and an estimate of the real long-term Treasury yield—has increased slightly so far this year and remains near the high end of its range of the past two decades. The implied volatility of the S&P 500 calculated from option prices spiked temporarily in late May and early June and remained somewhat elevated compared with its levels earlier in the year.

Net inflows to equity mutual funds were very strong through April, as investors were evidently attracted by the solid performance of the equity market up to that point. In May and June, however, investors withdrew funds as share prices began to sag.

Debt and Financial Intermediation

In the first quarter of 2006, the total debt of domestic nonfinancial sectors expanded at an annual rate of 11 percent. The household, business, and federal government components all increased at double-digit rates, while state and local government debt advanced at about a 6 percent pace. Preliminary data suggest somewhat slower growth of the debt of nonfinancial sectors in the second quarter. The slowdown is particularly noticeable in the federal and state and local government sectors, where strong tax receipts held down borrowing. The available data also point to somewhat reduced growth of nonfinancial business debt in the second quarter.

Commercial bank credit increased at an annual rate of about 11 percent in the first quarter of 2006, a little faster than in 2005, and picked up further to an almost 13 percent pace in the second quarter. A continued rapid increase in business loans was likely supported by brisk merger and acquisition activity, rising outlays for investment goods, ongoing inventory accumulation, and an accommodative lending environment. Growth in commercial mortgages was also strong, as fundamentals in that sector continued to improve. Despite a slowing of housing activity in recent months, residential mortgage holdings expanded robustly. However, higher short-term interest rates likely contributed to a runoff in loans drawn down under revolving home-equity lines of credit. Consumer loans adjusted for securitizations decelerated in the second quarter after rising at a solid pace in the first quarter.

Bank profitability remained solid, and asset quality continued to be excellent in the first quarter. Profits were supported by gains in non-interest income and reductions in loan-loss provisions that more than offset a rise in non-interest expenses. Delinquency and charge-off rates remained low across all loan types. Delinquency rates on residential mortgages on banks' books edged lower in the first quarter after moving up during 2005. Charge-off

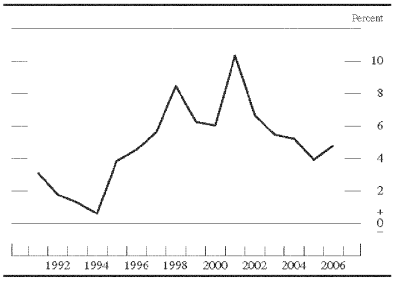
rates on consumer loans declined to the lowest level seen in recent years after a fourth-quarter surge in charge-offs on credit card loans that was associated with the implementation of the bankruptcy legislation in October of last year.

As the policy debate about the possibility of curbing the balance sheet growth of both Fannie Mae and Freddie Mac continued, the combined size of the mortgage investment portfolios at the two government-sponsored enterprises increased about 1 percent over the first five months of 2006.

The M2 Monetary Aggregate

In the first quarter of 2006, M2 increased at an annual rate of about 6½ percent, but its expansion moderated in the second quarter to a 2¾ percent pace, likely because of some slowing in the growth of nominal GDP. Rising short-term interest rates continued to push up the opportunity cost of holding M2 assets. Growth in liquid deposits, whose rates tend to adjust sluggishly to changes in market rates, was particularly slack. By contrast, the expansion in retail money market funds and, especially, small time deposits was brisk, as the yields on those instruments kept better pace with rising market interest rates. Despite apparently modest demand from abroad, currency growth was strong in the first quarter but has slowed since. The velocity of M2 rose at an annual rate of 2¼ percent in the first quarter and appears to have continued to rise in the second quarter.

M2 growth rate, 1991–2006



NOTE: Through 2005, the data are annual on a fourth-quarter over fourth-quarter basis; for 2006, change is calculated from 2005:Q4 to 2006:Q2 and annualized. M2 consists of currency, traveler's checks, demand deposits, other checkable deposits, savings deposits (including money market deposit accounts), small-denomination time deposits, and balances in retail money market funds.

SOURCE: Federal Reserve Board, Statistical Release H.6, "Money Stock Measures" (July 13, 2006).

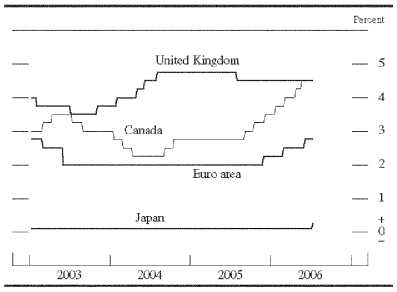
International Developments

Foreign economic growth was strong in the first quarter of 2006 as the expansion spread to all major regions of the world. Accelerating domestic demand boosted growth in the foreign industrial countries, especially Canada and the euro area. Emerging-market economies continued to benefit from rapid export growth, and Chinese economic activity was also spurred by a surge in investment spending. Data for the second quarter suggest continued strong growth abroad but with moderation in some countries. Rising energy prices have pushed up inflation in many countries this year, but upward pressure on core inflation has generally continued to be moderate.

Foreign monetary policy tightened in the first half of this year in the context of solid growth and some heightened inflation concerns. The European Central Bank (ECB) raised its policy rate ¼ percentage point in March and again in June, citing rapid credit growth and the ECB's expectation of above-target inflation. At its July policy meeting, the Bank of Canada kept its target for the overnight rate unchanged at 4¼ percent, but it had increased its target for the overnight rate ¼ percentage point at each of its previous seven policy meetings. On July 14, the Bank of Japan (BOJ) ended its zero-interest-rate policy by raising its target for the call money rate to ¼ percent for the first time since 2001. Earlier, on March 9, the BOJ, announcing an end to its five-year-old policy of quantitative easing, said that it would set policy in the future to control inflation over the medium to long run, defined as one to two years ahead.

Long-term bond yields abroad have risen along with U.S. bond yields on indications of robust global growth

Official or targeted interest rates in selected foreign industrial countries, 2003–06



NOTE: The data are weekly. The last observation for each series is July 14, 2006. The data shown are the call money rate for Japan, the overnight rate for Canada, the refinancing rate for the euro area, and the repurchase rate for the United Kingdom.

SOURCE: The central bank of each area or country shown.

and expectations of additional tightening of monetary policy. Ten-year sovereign yields have risen roughly 70 basis points in the euro area since the end of last year, while the increases on similar securities in Canada and the United Kingdom have been about 50 basis points. Part of the rise in yields abroad has been increased compensation for possible future inflation as measured by the difference in yield between ten-year nominal and inflation-indexed bonds. Yield spreads of emerging-market bonds over U.S. Treasuries narrowed somewhat early in the year, but that narrowing was more than reversed in the second quarter as investors apparently demanded greater compensation for risk amid uncertainties about economic growth and inflation.

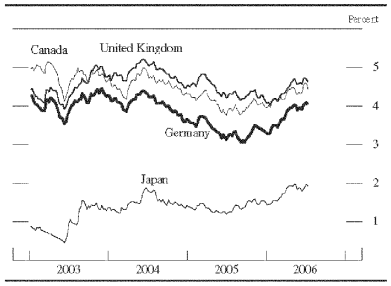
The foreign exchange value of the dollar has declined about 4½ percent, on net, this year against a basket of the currencies of the major industrial countries but is down only about 1 percent, on net, against the currencies of the other important trading partners of the United States. Much of the dollar's downward move occurred at times when the market was focused on concerns about global current account imbalances. The dollar has recovered some ground since early May, as investors reportedly have engaged in flight-to-safety transactions into dollar-denominated assets in conjunction with the volatility in global commodity and asset markets. On net, the dollar has depreciated since the turn of the year about 6½ percent against the euro and sterling, 3 percent against the Canadian dollar, and 1½ percent against the Japanese yen. In contrast, the dollar has risen roughly 4 percent, on balance, against the Mexican peso this year. During the first half of this year, several smaller countries experienced episodes of substantial financial volatility that in some cases involved sharp depreciations in the exchange value of their currencies.

Through the first four months of 2006, a favorable economic outlook and low interest rates supported gains in equity prices in all major foreign countries. During May and early June, however, equity prices registered widespread declines, as market participants grew more concerned about inflation, monetary policy, and global economic growth. More recently, developments in the Middle East have weighed further on stock prices. On net, equity price indexes are up between 1 percent and

U.S. dollar nominal exchange rate, broad index, 2003–06

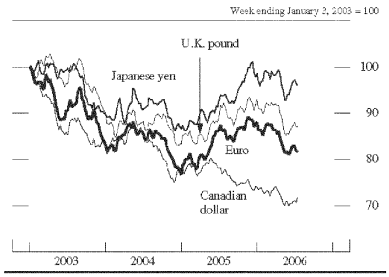
NOTE: The data are weekly and are in foreign currency units per dollar. The last observation is the average for July 10 through July 12, 2006. The broad index is a weighted average of the foreign exchange values of the U.S. dollar against the currencies of a large group of major U.S. trading partners. The index weights, which change over time, are derived from U.S. export shares and from U.S. and foreign import shares.
SOURCE: Federal Reserve Board.

Yields on benchmark government bonds in selected foreign industrial countries, 2003–06



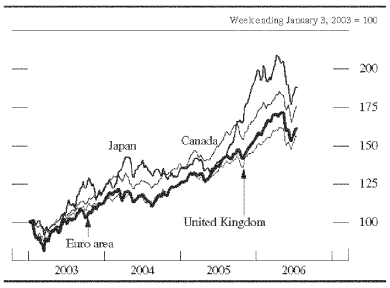
NOTE: The data are for ten-year bonds and are weekly. The last observation for each series is the average for July 10 through July 12, 2006.
SOURCE: Bloomberg L.P.

U.S. dollar exchange rate against selected major currencies, 2003–06



NOTE: The data are weekly and are in foreign currency units per dollar. The last observation for each series is the average for July 10 through July 12, 2006.
SOURCE: Bloomberg L.P.

Equity indexes in selected foreign industrial countries, 2003–06



NOTE: The data are weekly. The last observation for each series is the average for July 10 through July 12, 2006.
SOURCE: Bloomberg L.P.

4 percent so far in 2006 in Europe and Canada, but they have fallen roughly 8 percent since year-end in Japan. Latin American and Asian emerging-market equity indexes, which had generally gained more than industrial-country indexes early in the year, have fallen more sharply since early May. Equity indexes in Mexico, Brazil, and Argentina have dropped between 12 percent and 15 percent—leaving them still between 5 percent and 7 percent higher so far this year—while stock prices in Korea have fallen about 9 percent, on net, for the year.

Equity indexes in selected emerging-market economies, 2003–06

NOTE: The data are weekly. The last observation for each series is the average for July 10 through July 12, 2006. The Asian emerging-market economies are China, Hong Kong, India, Indonesia, Malaysia, Pakistan, the Philippines, Singapore, South Korea, Taiwan, and Thailand; each economy's index weight is its market capitalization as a share of the group's total.
SOURCE: For Asian emerging-market economies, Morgan Stanley Capital International (MSCI) index; for others, Bloomberg L.P.

Industrial Economies

The Japanese economy has continued to strengthen this year, although economic growth has stepped down a bit from the comparatively strong rate recorded in 2005. Household consumption maintained a solid rate of growth in the first quarter, and private investment spending rose 11 percent. However, net exports, which previously had been an additional source of strength, did not contribute to growth in the first quarter; the growth of imports increased while export growth remained firm. The labor market in Japan improved further in April and May: The unemployment rate fell to 4 percent, and the ratio of job offers to applicants reached a thirteen-year high. Although the GDP deflator has continued to decline, other signs indicate that deflation is ending. In the first quarter of 2006, land prices in Japan's six largest cities rose 3.8 percent over their year-ago level, the first increase since 1991. Core consumer prices have shown small twelve-month increases over the past several months.

Real GDP in the euro area accelerated in the first quarter, expanding 2½ percent, a rate of growth somewhat above its average in recent years. The acceleration was spurred by strength in domestic demand, especially private consumption spending, which increased in the first quarter at double its pace in 2005. Retail sales were also strong at the start of the second quarter. The revival in household spending has been supported by a small rise in the growth rate of employment and by an improvement in employer and consumer perceptions of employment prospects. Private investment spending has remained strong in the euro area, and business sentiment has continued to brighten in recent months. Energy price increases have pushed euro-area consumer price inflation to about 2½ percent recently, a level above the ECB's 2 percent ceiling, but core inflation has remained near 1½ percent.

In the United Kingdom, real GDP expanded at an annual rate of 3 percent in the first quarter after rising about 1¾ percent in 2005. Consumer spending grew about 1½ percent, the same moderate pace seen last year. House prices, which remained relatively flat during late 2004 and most of 2005, picked up in late 2005 and have continued to rise in the first half of this year. The twelve-month change in consumer prices was 2.2 percent in May. Consumer prices have been boosted importantly by increases in energy prices over the past several months.

In Canada, real GDP grew at an annual rate of nearly 4 percent in the first quarter, an increase led by a jump in spending on consumer durables and housing. Investment in residential structures grew at its fastest rate in more than two years, and business investment continued to exhibit the strength observed in the previous two quarters. Indicators for the second quarter point generally to a deceleration of GDP. Housing starts in the second quar-

ter were significantly below their elevated first-quarter levels; the merchandise trade balance declined, on balance, during the first five months of this year; and in the manufacturing sector, the volume of new orders and of shipments both fell in April. In contrast, in the second quarter, the labor market maintained its strength of the past year, and the unemployment rate has fallen to 6.2 percent, the lowest level in more than thirty years. Consumer prices rose 2.8 percent in the twelve months ending in May.

Emerging-Market Economies

In China, growth of real output was especially robust in the first half. Economic indicators suggest that fixed investment surged and that export growth continued to be strong. The rapid growth of investment prompted the Chinese government to impose a series of new measures to slow capital spending, including controls on credit and land use and stricter criteria for approving investment projects. In addition, to restrain credit, which has soared more than 15 percent over the past year, China's central bank raised the one-year bank lending rate in April and raised banks' reserve requirements ½ percentage point in June. The Chinese trade surplus widened in the first half of this year as exports accelerated. Chinese consumer price inflation is about 1½ percent, slightly above its pace in the second half of last year but well below the more than 5 percent rate seen in 2004.

Economic growth in India, Malaysia, and Hong Kong also was quite strong in the first quarter, although the pace of activity of some of the other Asian emerging-market economies has moderated a bit from last year's rapid rate. Concerns about inflationary pressures have increased, largely because of rising energy prices. In response, monetary policy has been tightened in some countries, including Korea, India, and Thailand.

In Mexico, strong performance in the industrial sector, an expansion in services output, and a recovery in agricultural production propelled real GDP growth to more than 6 percent at an annual rate in the first quarter. In addition, a surge in manufacturing exports boosted Mexico's trade and current account balances noticeably. Industrial production continued to increase early in the second quarter. In June, Mexican inflation was 3.2 percent, just above the center of the Bank of Mexico's target range of 2 percent to 4 percent. After easing policy nine times between August and April, the Bank of Mexico signaled in April that it would leave its policy rate unchanged for a time.

Real GDP growth in Brazil also increased in the first quarter, rising to 5¾ percent, and was supported by very strong performances in manufacturing, mining, and construction. The rate of inflation has been declining from a high of 8 percent reached in April 2005; in June, the twelve-month change in prices edged down to 4 percent. In late May, the central bank reduced its target for the overnight interest rate 50 basis points, to 15¼ percent, bringing the cumulative decline to 450 basis points since the current easing phase began last September. In the minutes of its late-May meeting, the policymaking committee said that the onset of market volatility over the past month had increased its uncertainty about the prospects for inflation and had thus prompted it to ease less than it would have otherwise.

In Argentina, output growth slowed slightly in the first quarter. Amid emerging capacity constraints, inflation rose to about 11 percent, up from 6 percent in 2004. The Argentine government has tried to hold down inflation, with limited success, through voluntary price agreements in several sectors.