# 1

# The Economy in Perspective

*A low probability event moves center stage*…The Tuesday, August 30 New York Times carried the front-page headline, "Hurricane Slams into Gulf Coast… "New Orleans Escapes a Direct Hit." We now know that the optimistic reports were premature; New Orleans was later devastated when levees holding back floodwaters collapsed, releasing walls of water onto the city. The ensuing paralysis of its critical infrastructure brought hunger, death, desperation, and lawlessness. Catastrophes of this magnitude are so rare that many people regard their probability as essentially zero. But as the New Orleans disaster reveals, our civilization relies on the interacting operation of several large-scale, complex infrastructure systems. When key elements of one system cease to function, disruptions can spread into the others. Through these linkages, events that appeared remote can become more likely.

We now know that Hurricane Katrina destroyed or impaired critical parts of the area's industrial infrastructure, especially its energy infrastructure. The Gulf Coast region contains sea ports, oil refineries, drilling rigs, and pipeline hubs that send petroleum products and natural gas to customers throughout the United States. Katrina's damage to the power grid, shipping facilities, and refineries has already sent energy prices spiraling upward. But surely that picture is incomplete. People whose business and responsibilities concern the nation's economic performance want to understand the implications of Katrina's destruction for the short, intermediate, and longer term.

In the short term, there is little doubt that the storm will harm the nation's economy through its effect on energy prices. Before Katrina hit, high energy prices already were thought to be taking a toll on consumer spending for other goods and services. But the truth is that it will take some weeks to assess the full extent of the damage to the energy infrastructure and months before it can all be repaired. Consider that the storm destroyed warehouses that contained essential supplies and that skilled labor will be scarce. Moving people and material through the area will be challenging.

Unpredictably, U.S. stock markets actually posted slight gains for the week of the storm. The fact that they did not sell off could be interpreted as a sign of confidence in the nation's ability to overcome the shock over the medium term. It might also signal a belief that interest rates could follow a lower track than had previously been priced into the market. Interest rates declined across the board last week, but the steepest declines occurred at the short end of the yield curve. In fact, last week, financial market participants sharply revised their opinion about the probability of future hikes in the federal funds rate. Before Katrina, traders were expecting, with near certainty, an increase of 25 basis points in the funds rate at the September 20 FOMC meeting; they considered the probability of another 25 basis point hike at the November 1 meeting to be roughly 80 percent. But by Thursday, September 1, prices on financial instruments implied a probability of only 50 percent that the funds rate would advance 25 basis points at each of those FOMC meetings.

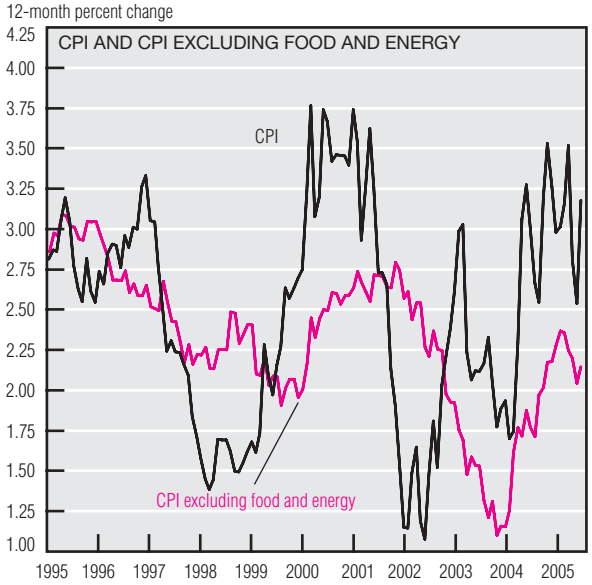
Before the storm struck, most market analysts were expecting the pace of economic activity to remain in the range of 3 to 4 percent for the next year or so, despite higher energy prices. They saw high energy prices as the result of strong global demand for energy resources rather than disruptions of supplies. Now that the nation has sustained a supply shock, rising energy prices have a different connotation. If the energy infrastructure proves to be highly resilient, the effects on GDP should be moderate and largely transitory.

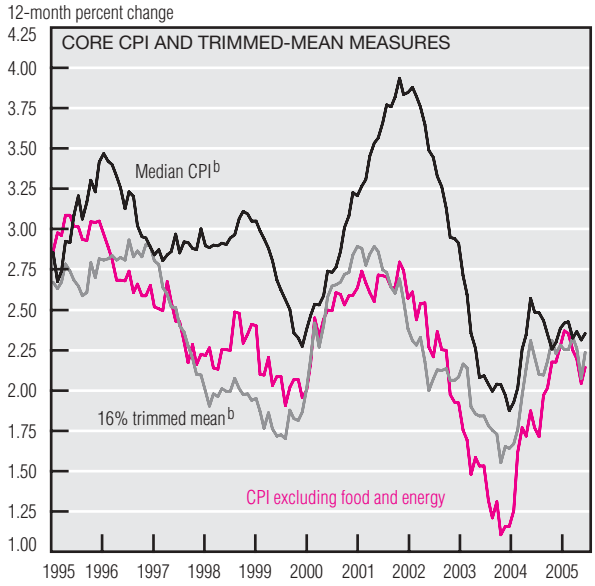
What is clear at this point is that not much is known about damage to the energy infrastructure and the other critical systems such as power, transportation, and communication that also must function in order to keep commerce and energy flowing in the Gulf region. As this information arrives, financial markets will assess and price it, as they always do. Although not always correct in the final analysis, financial markets are excellent aggregators of information. For the time being, it should be comforting that they do not signal dire economic prospects for the nation.

# Inflation and Prices

**July Price Statistics**

| | Percent change, last: 1 mo.[a] | 3 mo.[a] | 12 mo. | 5 yr.[a] | 2004 avg. |
|---|---|---|---|---|---|
| Consumer prices | | | | | |
| All items | 6.4 | 1.9 | 3.2 | 2.5 | 3.4 |
| Less food and energy | 1.8 | 1.6 | 2.1 | 2.1 | 2.2 |
| Median[b] | 2.6 | 2.6 | 2.3 | 2.8 | 2.3 |
| Producer prices | | | | | |
| Finished goods | 13.3 | 1.6 | 4.6 | 2.3 | 4.4 |
| Less food and energy | 4.7 | 1.5 | 2.8 | 1.1 | 2.2 |




**State Energy Statistics**

| | Thousands of barrels per day: Crude oil production, 2004 daily average | Crude oil distillation capacity 1-1-05 | Operating refineries 1-1-05 | Natural gas production, 2003 (billions of cubic feet) |
|---|---|---|---|---|
| Alabama | 20 | 130 | 2 | 346 |
| Arkansas | 18 | 77 | 2 | 170 |
| Louisiana | 228 | 2,773 | 17 | 1,350 |
| Mississippi | 47 | 365 | 4 | 134 |
| Texas | 1,073 | 4,628 | 25 | 5,244 |
| U.S. total | 5,419 | 17,125 | 144 | 19,912 |

a. Annualized.
b. Calculated by the Federal Reserve Bank of Cleveland.
SOURCES: U.S. Department of Labor, Bureau of Labor Statistics; U.S. Department of Energy, Energy Information Administration; and Federal Reserve Bank of Cleveland.

The Consumer Price Index, which was unchanged in June, rose at a 6.4% annualized rate in July. After falling for two months, energy costs rose a sharp 56.8% (annualized), accounting for over half of the rise in the overall CPI. Meanwhile, growth in the core retail price measures was relatively moderate: the core CPI rose 1.8%, and the median CPI rose 2.6% (annualized).

The 12-month growth rate of CPI-measured inflation rose from 2.5% in June to 3.2% in July, but longer-term inflation trends were stable among the core retail price measures. The 12-month growth rate in the core CPI remained at 2.1%, and the median CPI held at 2.3%, while the 12-month growth rate in the 16% trimmed-mean CPI inched upward to 2.2%. These measures have fluctuated between 2.0% and 2.5% for about a year, despite the dramatic rise in energy prices.

Price pressures from rising energy costs are likely to worsen in the aftermath of Hurricane Katrina. As this text is being written, the full extent of the damage to the Louisiana and Mississippi oil refineries, the U.S. oil fields in the Gulf of Mexico, and the natural gas pipelines across the Gulf Coast region is unknown. Indeed, the condition of these facilities may not be clear for some time. The federal government has reported that in Louisiana alone, eight oil refineries have suspended production. As of September 1, the Department of Energy estimated that 91% of the Gulf region's daily petroleum production was still shut in, as was 83% of its

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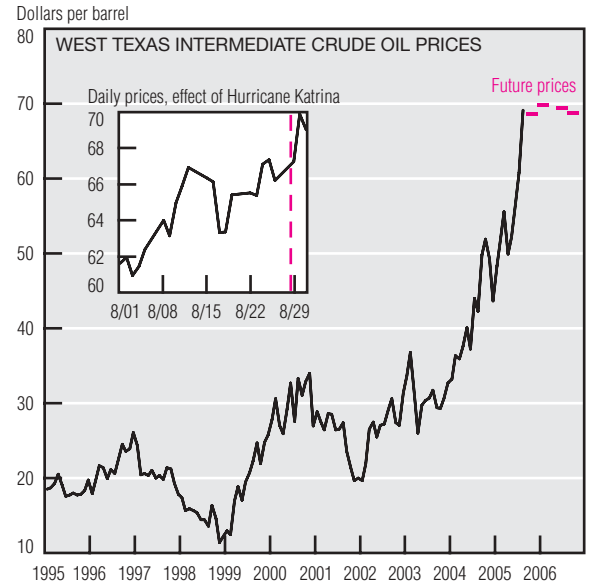
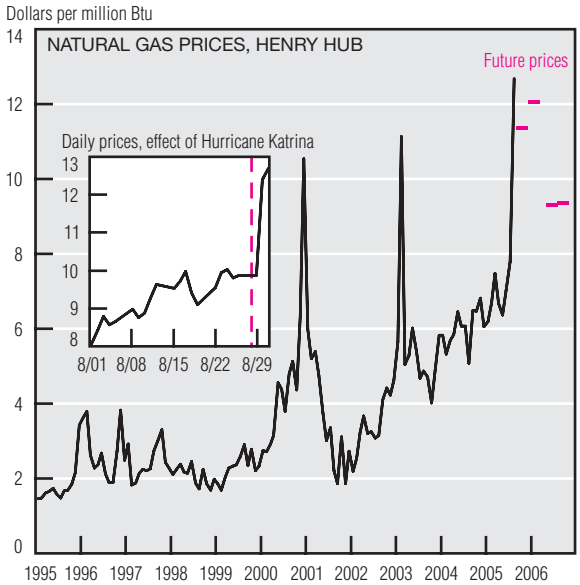
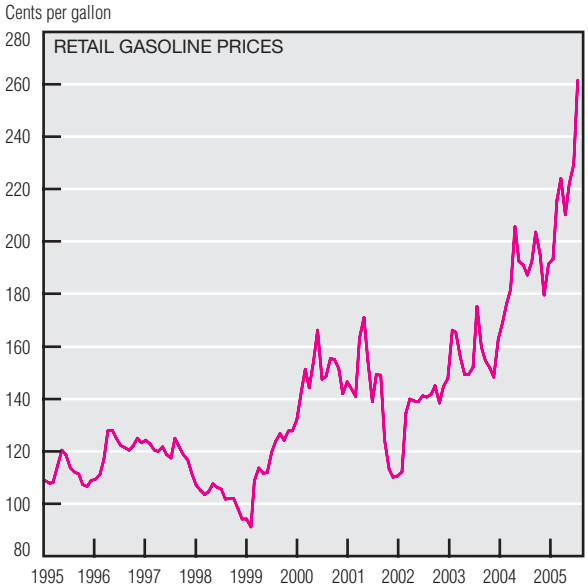
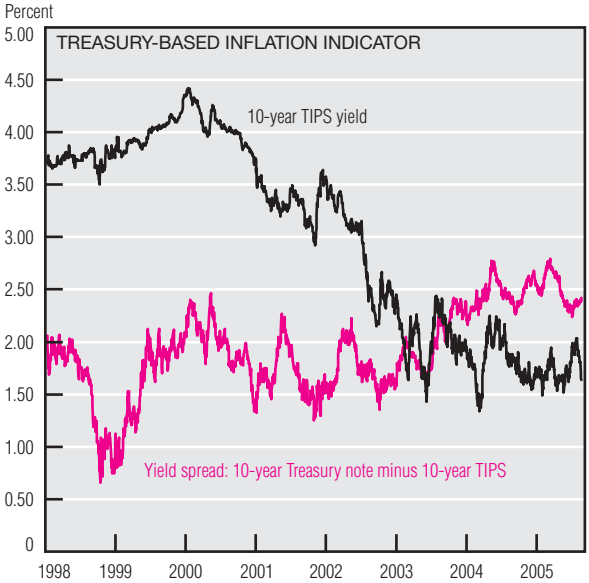
# Inflation and Prices (cont.)



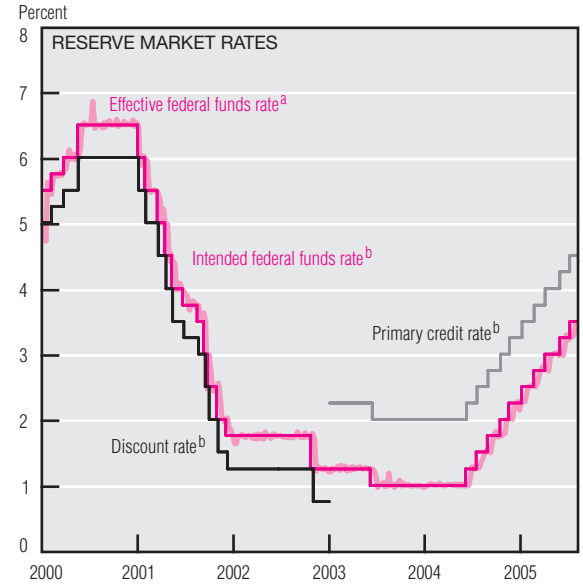

SOURCES: U.S. Department of Energy, Energy Information Administration; the *Wall Street Journal*; and Bloomberg Financial Information Services.

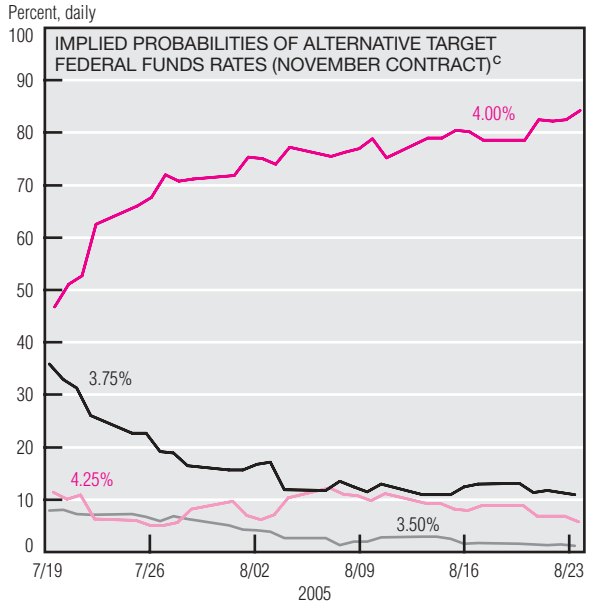
natural gas production. The futures markets indicate that crude oil prices, which rose from $67.2 to $69.8 per barrel directly after the most dramatic hurricane damage, are expected to remain at around $70 over the next 12 months. These markets also suggest that natural gas prices, which surged from $9.80 to $12.40 per million Btu after the disaster, may remain high throughout the home heating season before falling late next year.

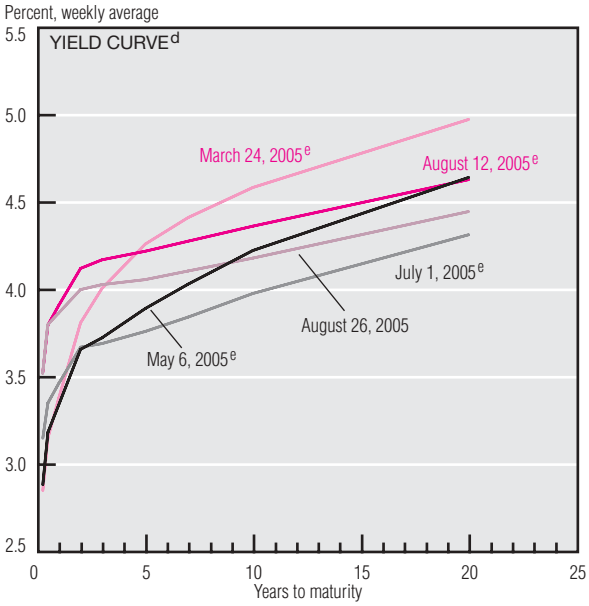
Meanwhile, retail gasoline prices, which have leaped nearly 40% in 2005 alone and generally mirror crude oil prices, are expected to remain high; by some reports, they may climb even higher. While the market for gasoline is about to enter a season when demand traditionally declines, gasoline inventories are at relatively low levels. Damage to the Gulf region's refineries will almost certainly aggravate the volatile market for gasoline even further.

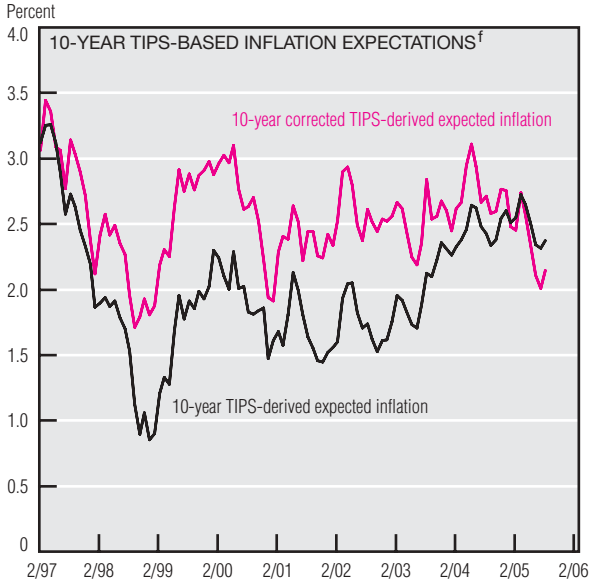
For now, long-term inflation expectations in financial markets remain well contained. Average annual inflation expectations (over the next 10 years) are reflected by the yield spread between 10-year Treasury notes and 10-year, inflation-protected securities. This spread, which has fluctuated between $2\frac{1}{4}$% and $2\frac{3}{4}$% since late 2003, suggests that securities market participants currently anticipate an average annual inflation rate of 2.4% over the next 10 years.

# Monetary Policy



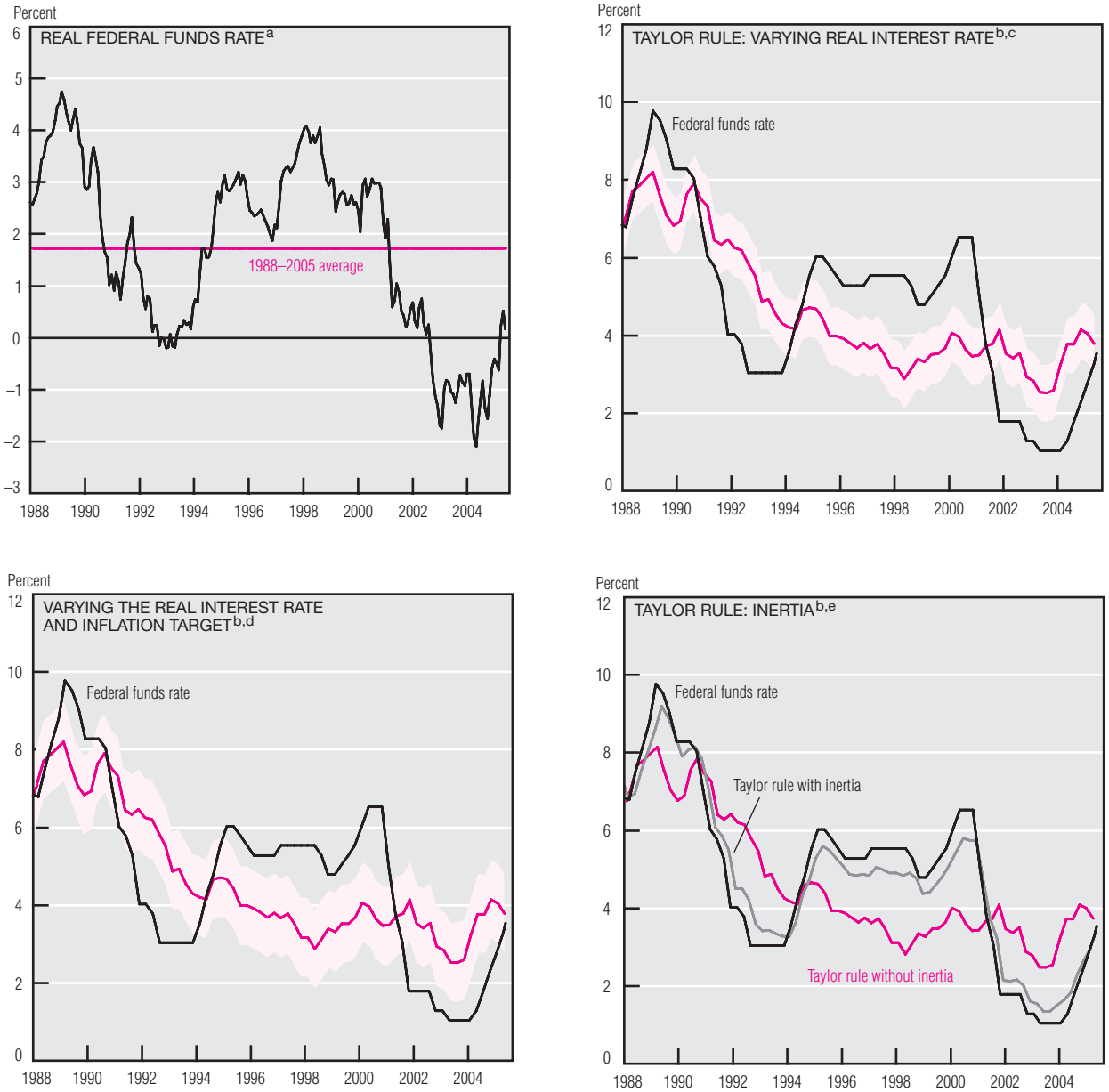

a. Weekly average of daily figures.
b. Daily observations.
c. Probabilities are calculated using trading-day closing prices from options on November 2005 federal funds futures that trade on the Chicago Board of Trade.
d. All yields are from the constant-maturity series.
e. First Friday after the FOMC meeting.
f. Treasury inflation-protected securities.
SOURCES: U.S. Department of Commerce, Bureau of Economic Analysis; Board of Governors of the Federal Reserve System, "Selected Interest Rates," *Federal Reserve Statistical Releases*, H.15; and Bloomberg Financial Information Services.

At its August 9 meeting, the Federal Open Market Committee (FOMC) raised its federal funds rate target from 3.25% to 3.50%. This widely anticipated increase of 25 basis points (bp) was the tenth in a row since June 2004. The most recent press release stated again that "policy accommodation can be removed at a pace that is likely to be measured." Given this language, market participants expect that the FOMC will continue to raise rates by 25 basis points at each of its next two meetings. Data from the options on federal funds futures indicate that nearly 80% of participants expect the federal funds rate to rise to 4.00% at the November 1 meeting.

The yield curve continued to flatten in August. Since the August 9 FOMC meeting, long-term rates have fallen slightly. Ten-year Treasury bonds are currently trading at 4.20%, down from 4.36% on August 12 and only 0.32 percentage point above the one-year Treasury note (3.88%), possibly because of declining long-term inflation expectations.

Long-term inflation expectations can be estimated by subtracting yields on real Treasury inflation-protected securities (TIPS) from yields on nominal Treasuries. By this measure, 10-year inflation expectations rose slightly in August to 2.36%. However, corrected TIPS-derived inflation expectations have fallen, and now predict that the CPI will average 2.14% over the next 10 years. The Personal Consumption Index, which many believe the FOMC watches more closely, is usually about 50 bp lower.

# Taylor Rules and Communication




a. Defined as the effective federal funds rate deflated by the Consumer Price Index.
b. The formula for the Taylor rule is from Sharon Kozicki, "How Useful Are Taylor Rules for Monetary Policy?" Federal Reserve Bank of Kansas City, *Economic Review*, 1999:IIQ. The baseline Taylor rule assumes the inflation target is 1.50% and the real interest rate is 1.75%.
c. The shaded band corresponds to an inflation target of 1.5%, with the real rate varying from 1% to 2.5%.
d. The shaded band corresponds to an inflation target varying from 1% to 2%, with the real rate varying from 1% to 2.5%.
e. The inertia component is 0.76.
SOURCES: U.S. Department of Commerce, Bureau of Economic Analysis; U.S. Department of Labor, Bureau of Labor Statistics; and Board of Governors of the Federal Reserve System, "Selected Interest Rates," *Federal Reserve Statistical Releases*, H.15.

The FOMC statement continues to assert that "monetary policy remains accommodative," but it is difficult to judge whether or not this is the case. One approach is to calculate what the funds rate would have been in the past under similar conditions. The Taylor rule, which posits that the Federal Reserve sets the funds rate on the basis of inflation and the output gap (deviations of output from potential), provides such a benchmark.

Unfortunately, calculating the Taylor rule also requires one's best guess on the Fed's (implicit) long-term inflation target and on the underlying long-term real funds rate, neither of which is observable. The short-term real funds rate varies substantially over time. Economic theory suggests that the underlying or long-term real funds rate may also vary. For example, it may be affected by both long-term productivity growth and monetary policy.

Since Chairman Greenspan took office, the real funds rate has averaged slightly less than 1.75%, but it could conceivably be as low as 1% or as high as 2.5%. This creates a band of uncertainly around the Taylor rule. The Fed's implicit long-term inflation target is likewise uncertain and plausibly ranges from 1% to 2%, creating another band of uncertainty.

The evidence suggests, however, that the Fed adjusts the funds rate more slowly than the Taylor rule predicts. Instead of adjusting immediately to the rate predicted by the Taylor rule, it appears to adjust only partially. This type of Taylor rule is called inertial because it changes slowly, and today's funds rate depends on yesterday's. Both the regular and the inertial

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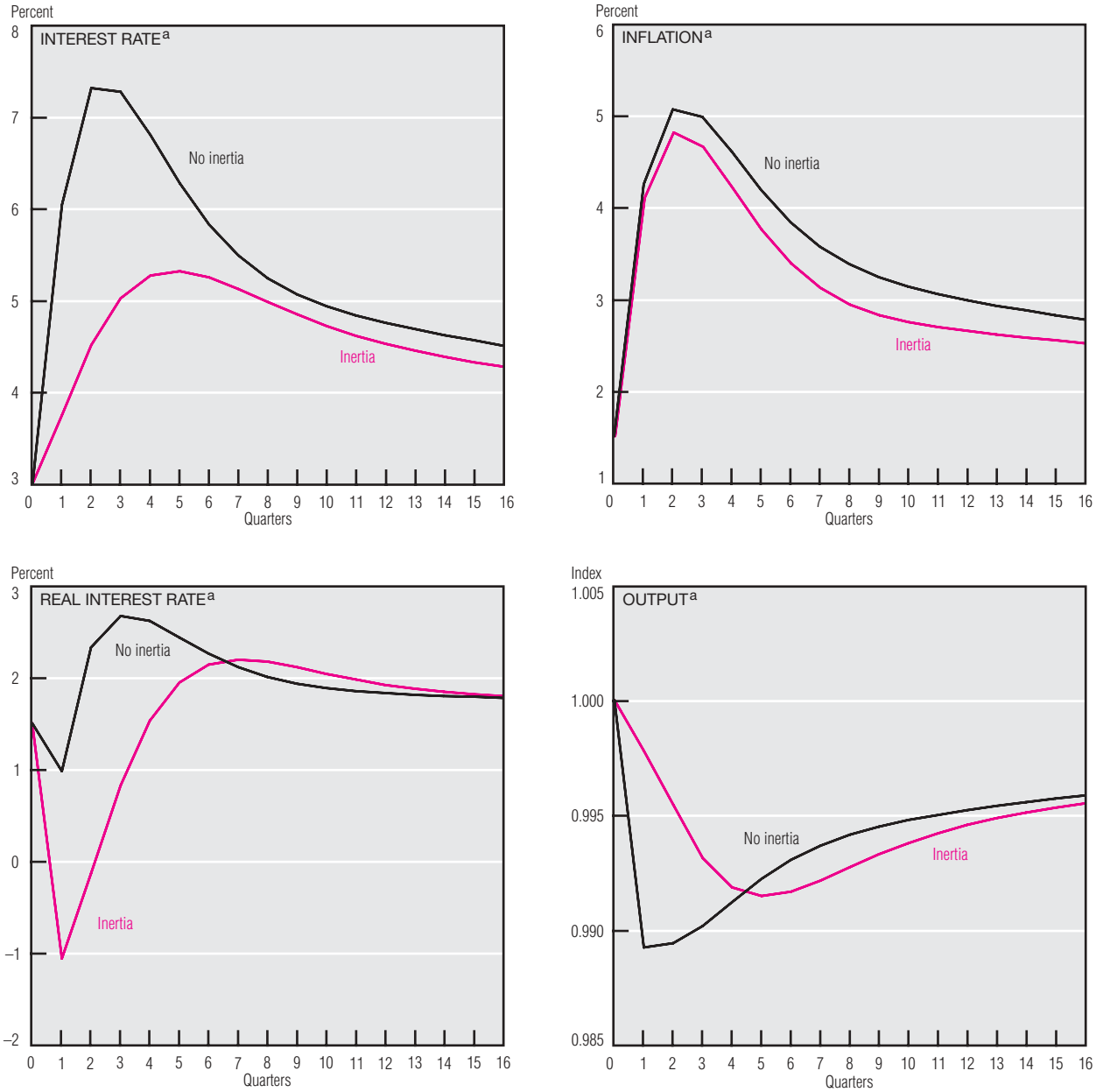
# Taylor Rules and Communication *(cont.)*




a. Simulations are hypothetical responses to a 30% oil price shock, given that future oil prices behave as they have in the past.
SOURCES: U.S. Department of Commerce, Bureau of Economic Analysis; U.S. Department of Labor, Bureau of Labor Statistics; Board of Governors of the Federal Reserve System, "Selected Interest Rates," H.15, *Federal Reserve Statistical Releases*; and author's simulations.

Taylor rule suggest that the recent period of accommodation may have just about ended. According to history, whether the funds rate rises or falls from here depends on future inflation and output behavior.

But why adjust only part way (that is, with inertia)? The funds rate increased 25 basis points at each of the last 10 policy meetings, instead of making five moves of 50 bp each. These moves were arguably predictable, given the unwinding of the earlier monetary stimulus and the unfolding of past energy shocks.

Model simulations suggest that there may be an advantage to adjusting the funds rate slowly. The following pictures answer a hypothetical question: Holding everything else constant, how would inflation, interest rates, and output be expected to behave after a one-time increase in oil prices? How would these variables behave if the Fed followed a non-inertial, rather than an inertial, Taylor rule?

With inertia, the nominal funds rate lags behind the non-inertial rule and peaks at a much lower level as well. Surprisingly, the funds rate with inertia is always lower than the non-inertial Taylor rule, yet inflation too is always lower. This is because the stance of monetary policy is not given by the nominal funds rate but by the real inflation-adjusted funds rate. In the quarters immediately following an oil price increase, policy is much easier (the real rate is lower) for the inertial rule, but in later quarters it is slightly tighter. A long period, sometime in the distant future, when policy is expected to be slightly tighter, more than compensates (in terms of inflation outcomes) for the shorter period when policy

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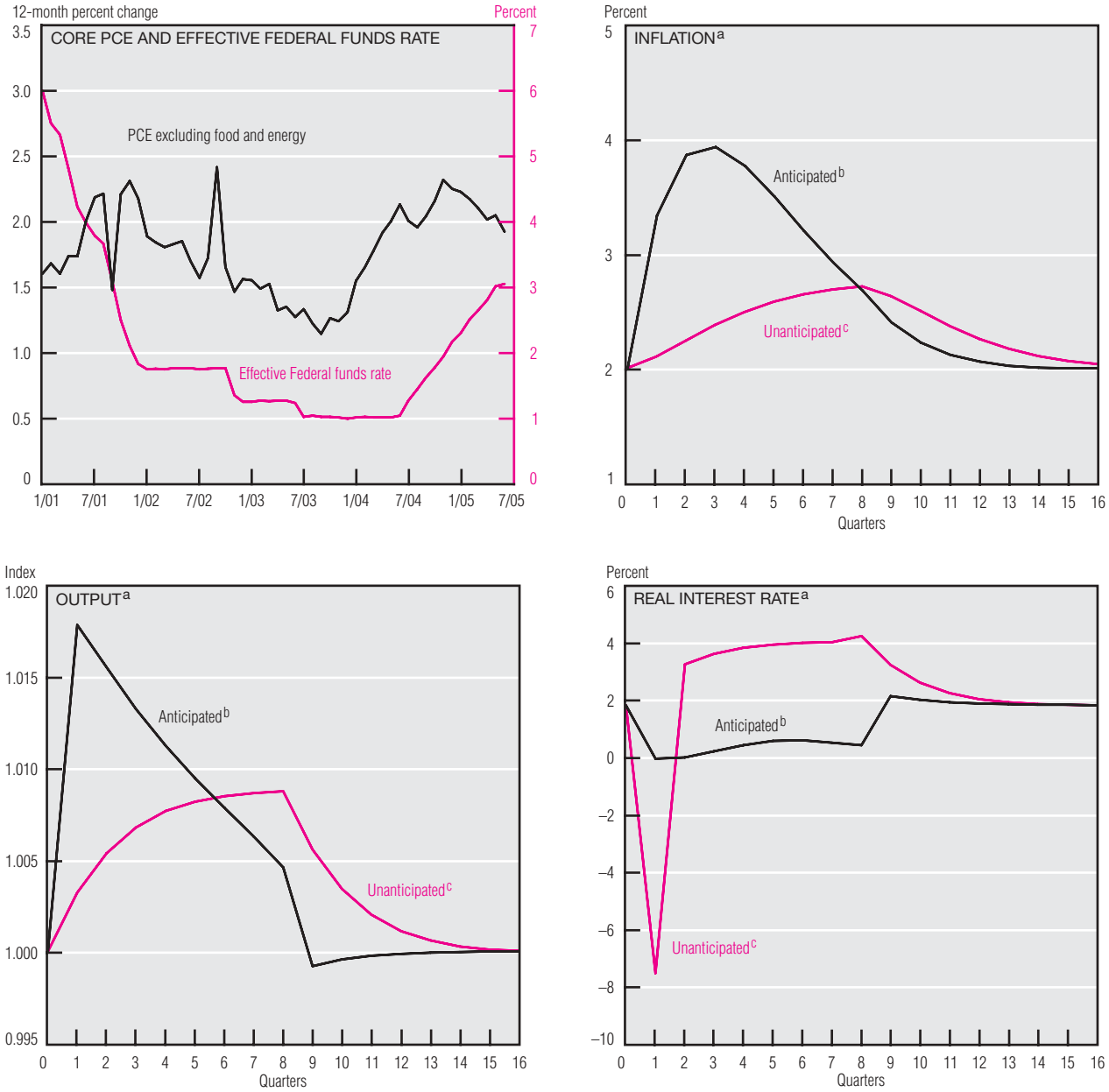
# Taylor Rules and Communication (cont.)




a. Simulations are hypothetical responses to policy being kept 20 basis points below the inertial Taylor rule for eight quarters.
b. Anticipated implies that the public believes monetary policy will deviate from the Taylor rule for eight quarters.
c. Unanticipated implies that the public believes monetary policy will be conducted according to the Taylor rule, but the funds rate is unexpectedly kept low.
SOURCES: U.S. Department of Commerce, Bureau of Economic Analysis; U.S. Department of Labor, Bureau of Labor Statistics; Board of Governors of the Federal Reserve System, "Selected Interest Rates," H.15, *Federal Reserve Statistical Releases*; and author's simulations.

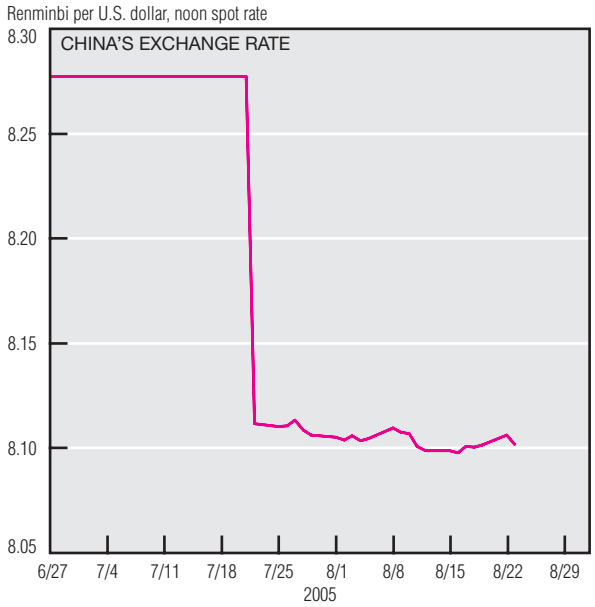
was substantially easier. Although inversely related, output's response closely mirrors movements in the real funds rate.

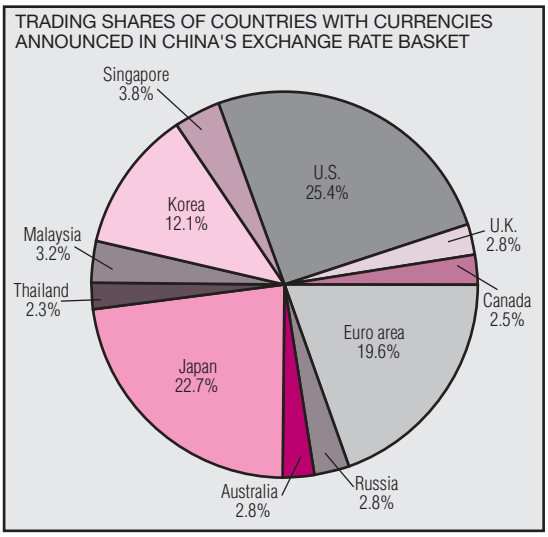
The Taylor rule with inertia clearly tracks the funds rate, but during some periods, the funds rate consistently deviated from both the normal and the inertial Taylor rule. Why might the Fed act differently than it has historically? The most recent period, when the funds rate was consistently below the inertial Taylor rule for more than two years, is an example.

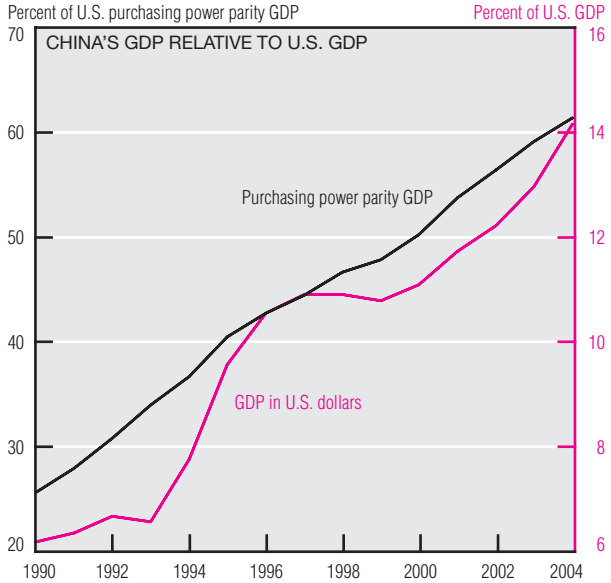
Inflation had been falling since the beginning of 2001, reaching nearly 1% by mid-2003, and the Fed was concerned that there would be deflation if this trend continued. They responded by decreasing rates continually until June 25, 2003, when the funds rate reached an unprecedented 1%. Because interest rates cannot go negative, they were reluctant to further decrease the funds rate. This led to a fairly dramatic change in language starting with the August 2003 meeting, when the FOMC said that "the Committee believes that policy accommodation can be maintained for a considerable period." The goal was to condition expectations that the funds rate would remain low for a "considerable period."

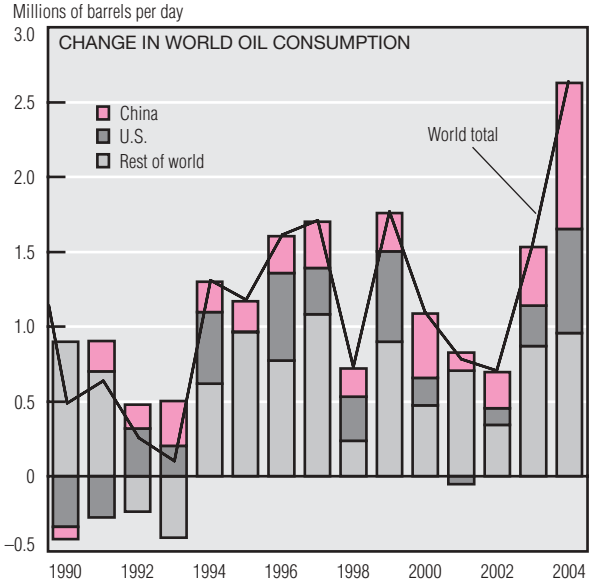
Model simulations suggest the importance of such language. A funds rate that is expected to remain low has far more impact on inflation and output than a rate at which accommodation is expected to be gradually removed. Inflation and output grow more rapidly and are much larger when policy accommodation is anticipated. By influencing expectations, monetary policy operates through both short- and long-term rates.

# China's Trade, the Dollar, and the Renminbi




SOURCES: U.S. Department of Energy, Energy Information Administration; Board of Governors of the Federal Reserve System; International Monetary Fund, "Direction of Trade Statistics;" and the World Bank.

On July 21, China ended its 10-year policy of pegging the renminbi against the U.S. dollar and announced that it will use a basket of currencies to guide its exchange rate. On August 10, China's Central Bank Governor Zhou Xiaochuan said that trade shares are the "fundamental considerations in the selection of the basket currencies and the weights assigned." Referring to this criterion, he announced the 11 currencies in the basket, four of which—the dollar, euro, yen, and Korean won—are designated as "major currencies." Other considerations for basket weighting and composition include the currency structure of China's debt and sources of foreign direct investment.

After the policy change was announced, the dollar declined 2% against the renminbi. Many analysts do not think this will have a significant impact on the U.S. trade deficit, but some believe a larger decline could. The broader issue is how China affects the U.S. and world economies in general. Assessing its impact is difficult, partly because the size of China's economy is sensitive to the valuation method. In 2004 China's GDP in dollars, at 14% of U.S. GDP, was the seventh largest in the world. This measure had risen sharply in 1995, when China revalued the renminbi–dollar exchange rate. Using the World Bank's purchasing power parity GDP, which values goods and services at the same prices across countries, China's GDP, at over 60% of U.S. purchasing power parity, was the world's second largest in 2004.

In some ways, China's influence in the U.S. and world economies is less ambiguous. Although China accounted for only 7% of oil consumption in 2003, it was responsible for 37% of oil consumption growth in 2004 (1.0 out of 2.6 million barrels per day),

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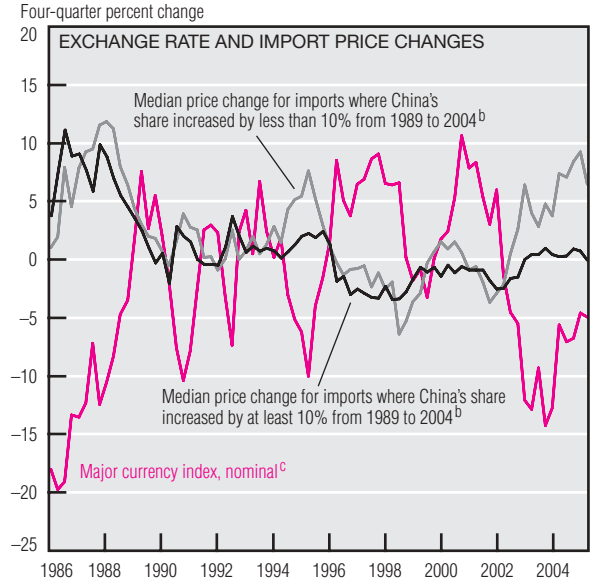
# China's Trade, the Dollar, and the Renminbi (cont.)

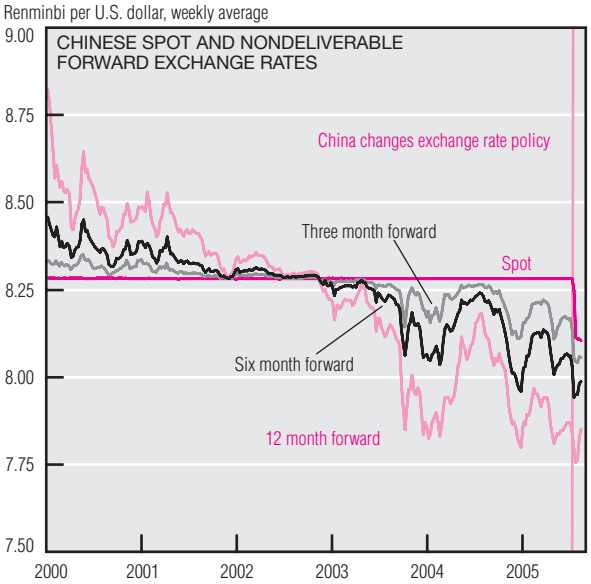

**China's Economic Growth and External Accounts**

**China's Real Economic Growth (percent change)**

| | 2002 | 2003 | 2004 | 2005[d] |
|---|---|---|---|---|
| GDP | 8.0 | 9.3 | 9.5 | 9.0 |
| Consumption | 7.4 | 6.1 | 6.4 | 6.5 |
| Gross capital formation | 13.2 | 19.1 | 14.3 | 11.7 |
| Fixed capital formation | 14.1 | 19.9 | 16.8 | 13.5 |
| Exports | 29.4 | 26.8 | 28.4 | 23.0 |
| Imports | 28.2 | 24.4 | 22.9 | 12.0 |

**China's External Account (billions of dollars)**

| | | | | |
|---|---|---|---|---|
| Current account balance | 35 | 46 | 72 | 102 |
| Capital account balance | 32 | 71 | 135 | 118 |
| Change in foreign exchange reserves | 76 | 117 | 206 | 220 |
| Foreign exchange reserves | 286 | 403 | 610 | 830 |




a. Shares are calculated over the most recent 12-month period.
b. Three-digit end-use categories.
c. Trade weighted exchange rate of dollar against major currencies.
d. World Bank forecast.
SOURCES: U.S. Department of Labor, Bureau of Labor Statistics; U.S. Bureau of the Census; U.S. International Trade Commission; Board of Governors of the Federal Reserve System; "Exchange Rate Pass-through to U.S. Import Prices: Some New Evidence," April 2005; World Bank, *China Quarterly Update*, August 2005; and Bloomberg Financial Information Services.

making it that year's largest contributor to this growth.

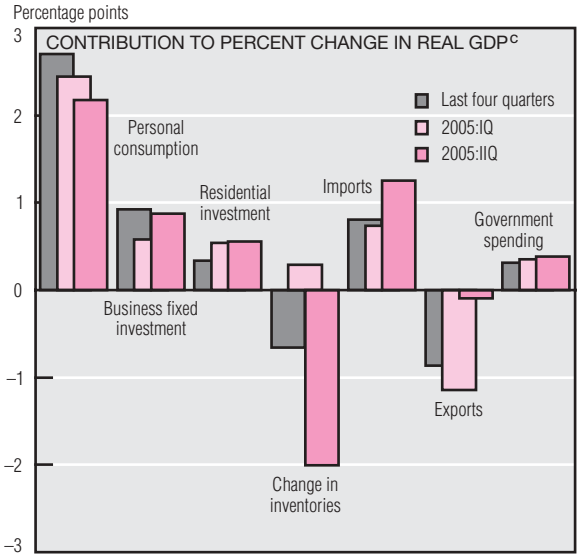
The share of U.S. imports coming from China jumped from 2.5% in 1989 to 14.0% in the 12 months ending June 2005. As long as China pegged the renminbi, its local currency price of exports to the U.S. did not fluctuate with the dollar. Thus, one might think that for the import categories in which China's share grew most dramatically, import prices may be less responsive to declines in the dollar than in the 1980s. Since the dollar began declining in 2002, prices have been relatively flat for imports in which China's share grew more than 10 percentage points since 1989; for other imports they have been increasing. When the dollar declined in the late 1980s, the two import categories had similar patterns of increase.

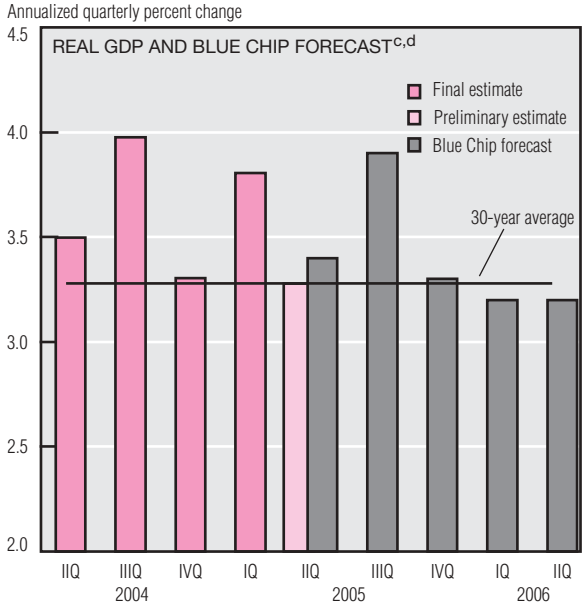
The World Bank forecasts that China's current account surplus will increase from $72 billion in 2004 to $102 billion by the end of 2005, largely because they expect China's import growth to decline more than its export growth. China also runs a capital account surplus. It exactly offsets these surpluses by accumulating foreign exchange reserves, some of which are dollar-denominated. If the renminbi were to appreciate against the dollar, the value of these reserves would fall. Nevertheless, for the renminbi–dollar exchange rate, nondeliverable forward rates remain below the spot rate, suggesting that some expect the renminbi to strengthen further against the dollar.

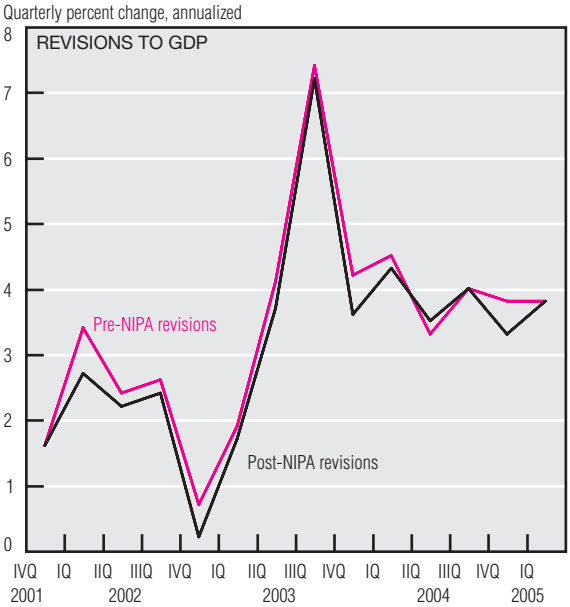
# Economic Activity

**Real GDP and Components, 2005:IIQ[a,b]**
**(Preliminary estimate)**

| | Change, billions of 2000 $ | Annualized percent change: Current quarter | Annualized percent change: Four quarters |
|---|---|---|---|
| Real GDP | 89.3 | 3.3 | 3.6 |
| Personal consumption | 58.3 | 3.0 | 3.8 |
| Durables | 21.0 | 7.7 | 6.6 |
| Nondurables | 19.5 | 3.5 | 4.5 |
| Services | 20.7 | 1.9 | 2.9 |
| Business fixed investment | 25.6 | 8.4 | 9.1 |
| Equipment | 25.4 | 10.4 | 11.6 |
| Structures | 1.7 | 2.7 | 1.7 |
| Residential investment | 13.8 | 9.8 | 5.8 |
| Government spending | 13.1 | 2.7 | 1.8 |
| National defense | 2.9 | 2.4 | 2.7 |
| Net exports | 34.2 | — | — |
| Exports | 36.6 | 13.2 | 8.3 |
| Imports | 2.4 | 0.5 | 5.9 |
| Change in business inventories | –55.6 | — | — |




a. Chain-weighted data in billions of 2000 dollars.
b. Components of real GDP need not add to the total because the total and all components are deflated using independent chain-weighted price indexes.
c. Data are seasonally adjusted and annualized.
d. Blue Chip panel of economists.
SOURCES: U.S. Department of Commerce, Bureau of Economic Analysis; and *Blue Chip Economic Indicators*, August 10, 2005.

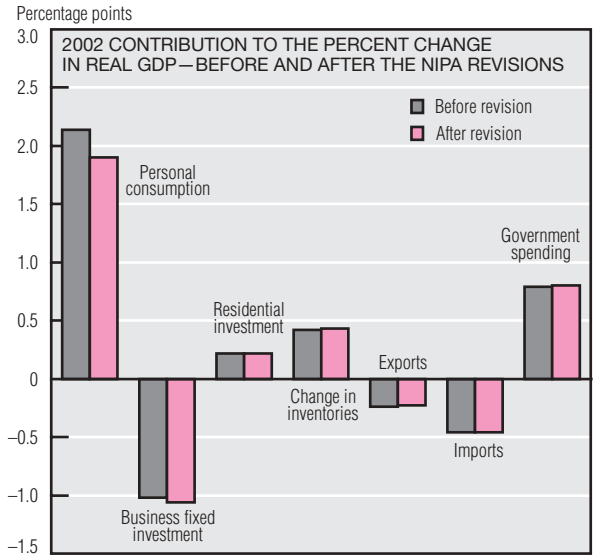
On August 31, the Department of Commerce released its preliminary estimate of GDP and its components for 2005:IIQ. Compared to the advance estimate, real GDP growth was revised down from 3.4% to 3.3% for the quarter. These revisions, based on more complete data than the earlier estimate, were largest for imports, personal consumption expenditures, and inventory investment. According to the revisions, imports exerted a small negative drag on GDP of –0.05 percentage point (pp), rather than the positive effect of 0.33 pp reported in the advance estimate. Personal consumption expenditures contributed 2.12 pp to GDP growth, compared to the advance estimate of 2.30 pp. Inventory investment was a drag of –1.99 pp on GDP growth, revised up from –2.32 pp.

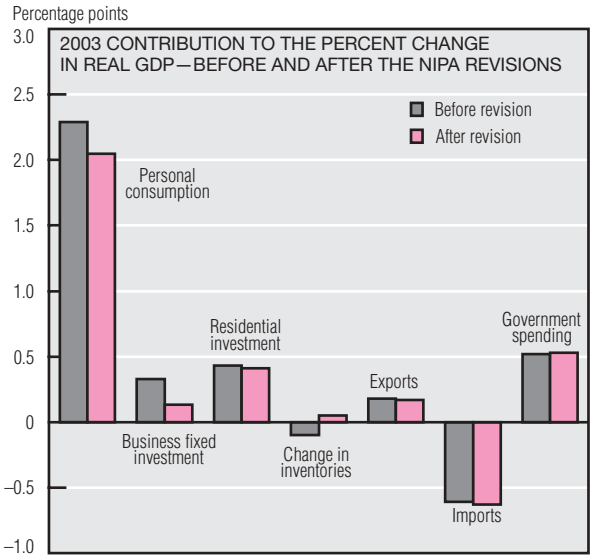
Real GDP growth for 2005:IIQ was down from the 3.8% pace recorded in 2005:IQ. The largest factor in this 0.5 pp reduction was inventory investment, which exerted a slight positive effect on growth in 2005:IQ and a large negative effect in 2005:IIQ. The contribution of personal consumption expenditures also fell between the quarters. These negative influences were offset by a larger positive contribution for exports and government spending, and a smaller negative contribution for imports.

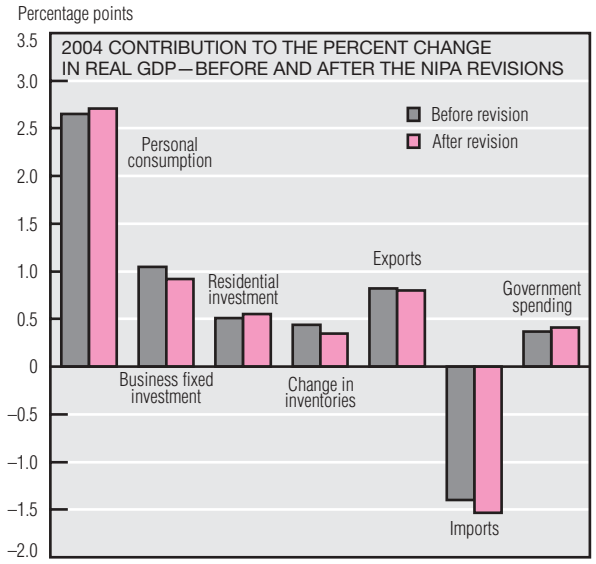
GDP growth for 2005:IIQ is now estimated to be virtually the same as its 30-year average. At 3.3%, the growth rate was slightly below the Blue Chip forecast of 3.4% for 2005:IIQ that was given on August 10; this forecast was revised up 0.2 pp relative to July. The Blue Chip forecast for 2005:IIIQ was

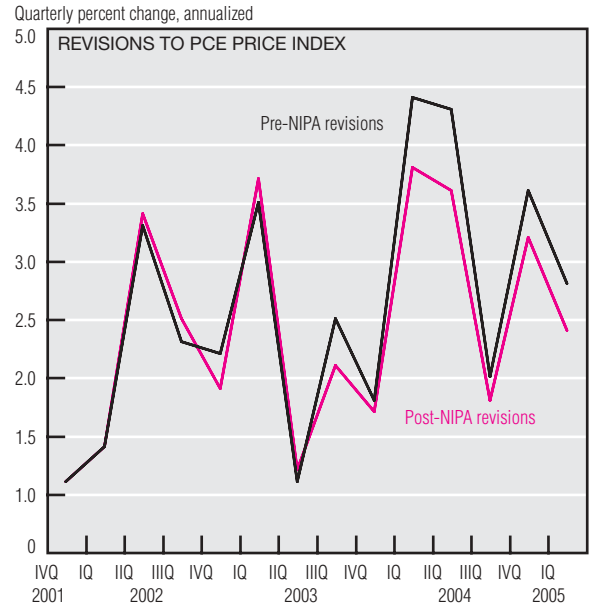
*(continued on next page)*

# Economic Activity *(cont.)*




SOURCE: U.S. Department of Commerce, Bureau of Economic Analysis.

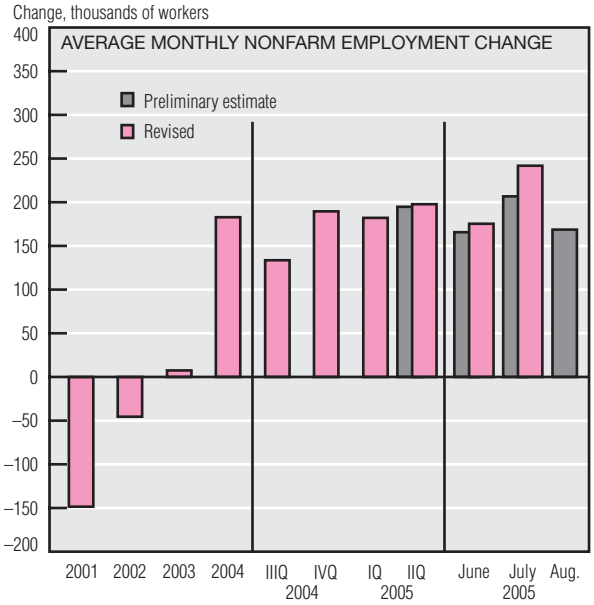
revised up 0.6 pp, from 3.3% to 3.9%. Forecasts for the subsequent quarters were unchanged.

Late in July, the Commerce Department released its annual revision of the national income and product accounts. Substantial revisions to real GDP growth were made as far back as 2001, the largest being the 0.7 pp downward revision in 2001:IQ.

How much did the annual revision change the various components' contributions to the percent change in real GDP? In the annual data, the largest changes occurred in personal consumption and business fixed investment. For 2002 and 2003, personal consumption contributed roughly 0.2 pp less to GDP growth, and it added an extra 0.05 pp in 2004. Business fixed investment accounted for an additional 0.05 pp drag in 2002; its contributions to growth were marked down 0.2 pp in 2002 and 0.1 pp in 2004. Changes in the contributions of GDP's other components were modest in 2002 and 2003. Even the differences in 2004 were fairly modest: The contribution of inventory investment was reduced 0.1 pp, the drag caused by imports increased by 0.1 pp, and the contributions of residential investment and government spending grew less than 0.05 pp.

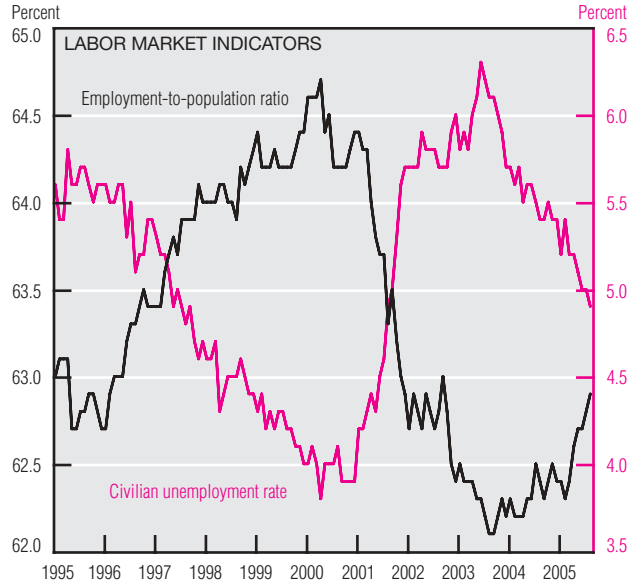
The annual revision also affected price deflators. For the personal consumption expenditure (PCE) price deflator, large upward revisions were made in 2004 and 2005. For 2004 as a whole, the PCE Price Index was revised up 0.5 pp, from 2.6% to 3.1%. It posted upward revisions of 0.4 pp for each of the first two quarters of 2005, rising from 2.7% to 3.1% in the first quarter and from 1.9% to 2.3% in the second.

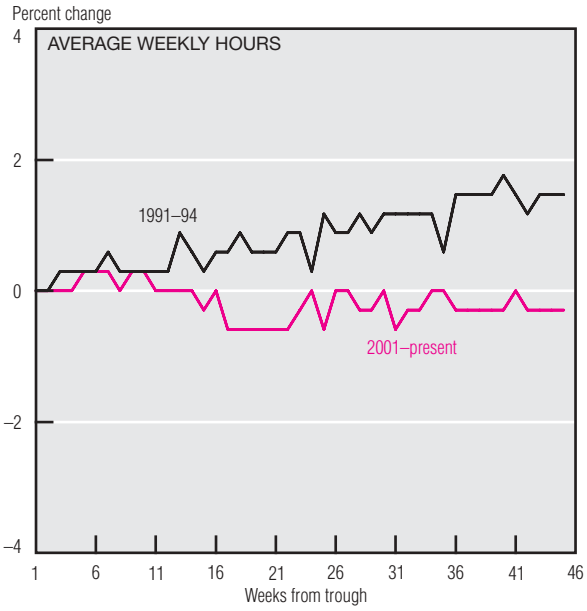
# Labor Markets




## Labor Market Conditions

| | Average monthly change (thousands of employees, NAICS) | | | | |
|---|---|---|---|---|---|
| | 2001 | 2002 | 2003 | 2004 | Aug. 2005 |
| **Payroll employment** | –148 | –45 | 8 | 183 | 169 |
| **Goods producing** | –124 | –76 | –42 | 29 | 13 |
| Construction | –1 | –7 | 10 | 23 | 25 |
| Manufacturing | –123 | –67 | –51 | 3 | –14 |
| Durable goods | –88 | –48 | –32 | 9 | –4 |
| Nondurable goods | –35 | –19 | –19 | –6 | –10 |
| **Service providing** | –25 | 30 | 50 | 154 | 156 |
| Retail trade | –24 | –10 | –5 | 13 | 12 |
| Financial activities[a] | 8 | 6 | 7 | 12 | 15 |
| PBS[b] | –63 | –17 | 22 | 45 | 29 |
| Temporary help svcs. | –37 | 2 | 12 | 15 | 7 |
| Education & health svcs. | 50 | 40 | 30 | 33 | 43 |
| Leisure and hospitality | –1 | 12 | 18 | 22 | 34 |
| Government | 46 | 21 | –4 | 12 | 15 |
| | Average for period (percent) | | | | |
| Civilian unemployment rate | 4.8 | 5.8 | 6.0 | 5.5 | 4.9 |




a. Financial activities include the finance, insurance, and real estate sector and the rental and leasing sector.
b. Professional and business services include professional, scientific, and technical services, management of companies and enterprises, administrative and support, and waste management and remediation services.
SOURCE: U.S. Department of Labor, Bureau of Labor Statistics.

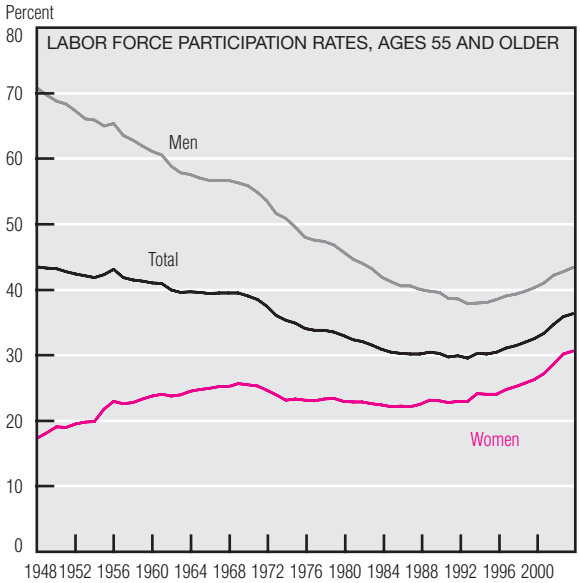
Total nonfarm payroll employment increased by 169,000 in August. Although the month's gains were below the consensus estimate, the economy's average monthly job gain of 195,000 over the last three months remains strong. June and July payrolls were revised up by a combined 44,000.

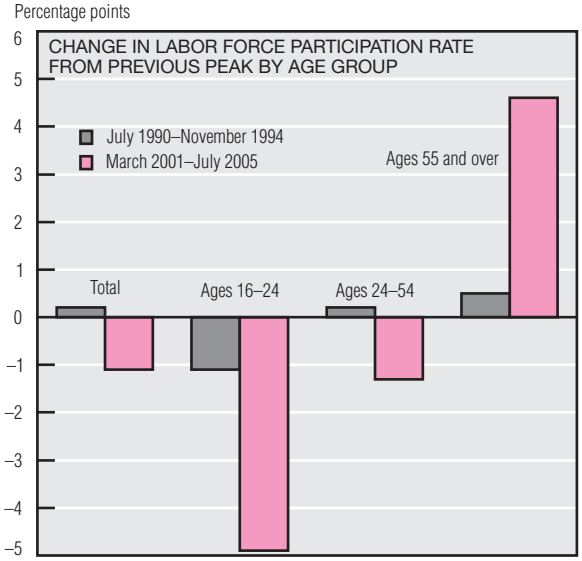
Gains in August were fairly widespread across sectors, with the exception of manufacturing. Notable increases were in construction (25,000), accommodations and food services (26,700), and health care (26,300). Manufacturing employment fell by 14,000 jobs in August, its third consecutive monthly decrease. Employment by motor vehicle and parts manufacturers fell by 8,000 jobs; this sector has accounted for almost half of all manufacturing jobs lost since August 2004.

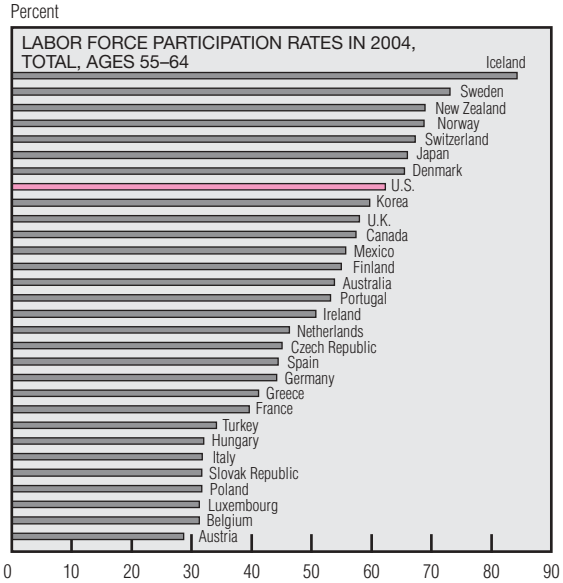
The household survey, from which the unemployment rate is derived, continued to show an improving economy. The unemployment rate dropped to a four-year low of 4.9%, down ½ percentage point since February. The employment-to-population ratio rose to 62.9%, having risen 0.6 percentage point over the past six months.

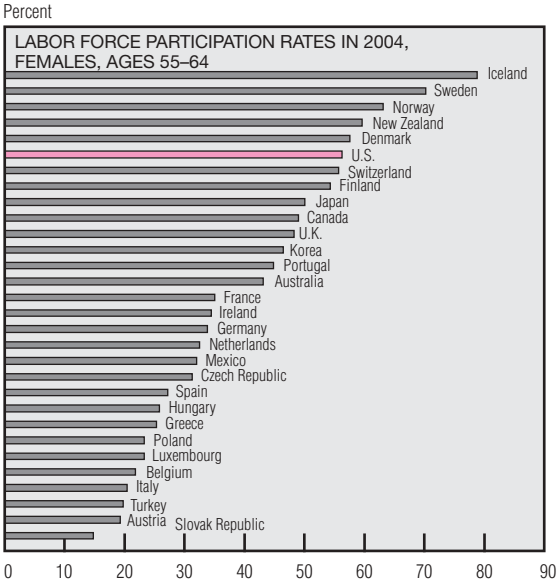
One interesting aspect of the current business cycle is the pattern of average weekly hours. When compared to the previous "jobless" recovery of the early 1990s, the most recent recovery has brought little change in average weekly hours.

# Older Americans in the Workforce



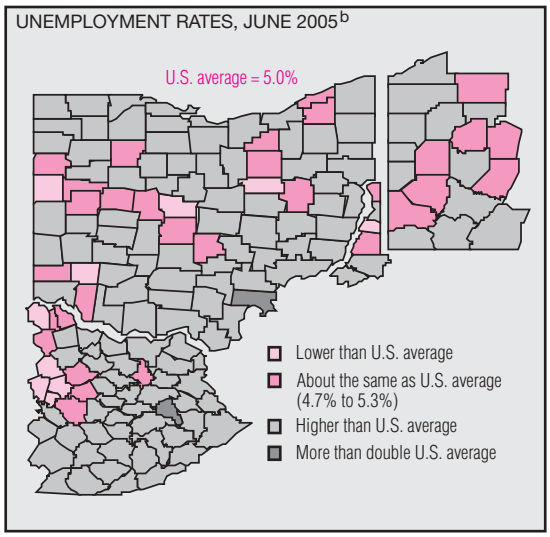

SOURCES: U.S. Department of Labor, Bureau of Labor Statistics; and Organisation for Economic Co-operation and Development, *OECD Employment Outlook 2005*.

Labor force participation among workers 55 and older declined significantly from the late 1940s to the mid-1990s. Participation rates for older males dropped from roughly 70% in 1948 to about 38% in 1993, possibly because rising wealth has allowed them to retire earlier. Accordingly, the average retirement age fell from around 71 in 1960 to around 64 in 1993. In contrast, older women's participation rose 6 percentage points, reflecting the increased presence of women generally in the labor force.

Since the mid-1990s, however, older workers' participation has picked up. The increase after the last recession was dramatically higher than in the last recovery: Their participation has jumped nearly 5 percentage points since March 2001. This trend can be partly explained by a change in the composition of the work force as the baby boomers age. However, while older workers' participation rate has risen, the youngest group's rate has dropped nearly 5 percentage points, and even the rate for ages 24–54 has fallen since the recession. This suggests a substantial change in older Americans' preferences.

Despite its long-term downward trend, the participation of older workers is higher in the U.S. than in most OECD countries. This is the result of older women's comparatively high participation rate in the U.S. In addition, many of the countries with lower participation rates are in Western Europe, which are more likely to have relatively older populations, subsidized early retirement, and more generous welfare programs.

# Fourth District Employment


**Payroll Employment by Metropolitan Statistical Area**

| | 12-month percent change, July 2005 | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| | Cleveland | Columbus | Cincinnati | Dayton | Toledo | Pittsburgh | Lexington | U.S. |
| Total nonfarm | –0.3 | 0.6 | 0.4 | –1.0 | 0.1 | 0.2 | 1.9 | 1.6 |
| Goods-producing | 1.2 | 0.2 | 1.7 | –2.8 | –3.3 | –3.0 | 1.7 | 1.0 |
| Manufacturing | 1.2 | –2.1 | 1.5 | –3.6 | –6.0 | –2.7 | 0.9 | –0.5 |
| Natural resources, mining, and construction | 1.5 | 4.4 | 2.2 | 0.0 | 4.8 | –3.5 | 3.8 | 3.8 |
| Service-providing | –0.6 | 0.7 | 0.1 | –0.6 | 1.0 | 0.8 | 1.9 | 1.8 |
| Trade, transportation, and utilities | –1.7 | –0.8 | –0.8 | –3.1 | 1.1 | 0.5 | 0.5 | 1.5 |
| Information | –2.9 | 0.0 | –1.2 | –5.3 | –4.2 | –2.1 | –2.2 | 0.1 |
| Financial activities | 0.1 | 0.3 | –0.5 | –4.2 | 0.0 | 0.1 | 0.9 | 2.3 |
| Professional and business services | –0.8 | 0.1 | 1.2 | –0.6 | 3.4 | 1.8 | 2.4 | 2.8 |
| Education and health services | 0.9 | 2.6 | 2.6 | 2.5 | 0.2 | 1.5 | 0.7 | 2.2 |
| Leisure and hospitality | –0.4 | 2.2 | –3.0 | 0.3 | 0.6 | 0.9 | 1.6 | 2.4 |
| Other services | –0.2 | 0.0 | 0.9 | 3.5 | 4.5 | 1.0 | 1.0 | 0.8 |
| Government | –1.2 | 1.1 | 0.5 | –0.3 | 0.0 | –0.3 | 5.8 | 0.8 |
| 12-month change in unemployment rate (June) | 0.0 | –0.1 | 0.1 | –0.1 | –0.5 | –0.6 | 0.3 | –0.5 |

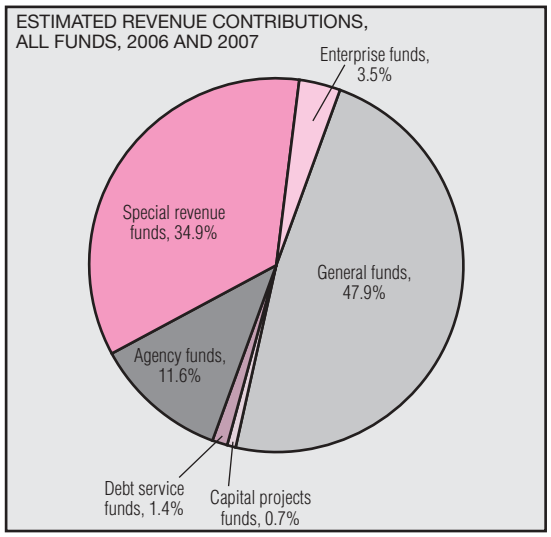
a. Shaded bars represent recessions.
b. Seasonally adjusted using the Census Bureau's X-11 procedure.
SOURCE: U.S. Department of Labor, Bureau of Labor Statistics.

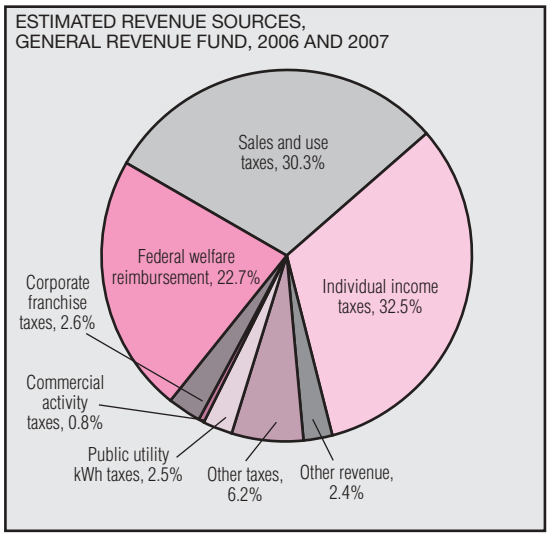
In June, the Fourth District's unemployment rate held steady at 5.8% for the third consecutive month. The U.S. unemployment rate was 5.0% in both June and July. The 0.8 percentage point difference between the nation's rate and the District's matches the largest recorded divergence between the two, previously reached only in March 2005.

June unemployment rates in most Fourth District counties were higher than the U.S. average. However, when compared to the recent past, there are signs of improvement. Between May and June, 93 counties' unemployment rates fell, 28 stayed the same, and 48 rose. The trend holds over the last year as well: from June 2004 to June 2005, 103 counties' unemployment rates improved, 19 stayed the same, and 47 worsened. Similarly, unemployment rates in most of the District's major metropolitan areas decreased over the year.

Regarding specific metropolitan areas, Lexington's growth in nonfarm payrolls outpaced the nation's, increasing by almost 2% over the past year. Its employment growth was broad, with every major industry except information adding jobs. In contrast, Cleveland lost 3,200 jobs over the year, although employment growth in goods-producing sectors (manufacturing, natural resources, mining, and construction) outpaced the nation's. Employment in the information industry was down or flat in every major metropolitan area in the District for the 12 months ending in July.

# The Ohio State Budget




**Recommended Appropriations for Fiscal Years 2006 and 2007**

| | All funds | | Total general revenue fund | |
|---|---|---|---|---|
| | Total (millions) | Percent | Total (millions) | Percent |
| Medicaid | 19,499.6 | 18.1 | 19,499.6 | 38.0 |
| Higher and other education | 5,142.8 | 4.8 | 5,056.2 | 9.9 |
| Primary and secondary education | 19,615.2 | 18.2 | 14,002.6 | 27.3 |
| Executive, legislative, and judicial | 1,098.9 | 1.0 | 616.6 | 1.2 |
| Environment and natural resources | 1,070.7 | 1.0 | 268.5 | 0.5 |
| Transportation and development | 8,125.3 | 7.5 | 641.4 | 1.2 |
| General government and tax relief | 24,699.6 | 22.9 | 3,129.0 | 6.1 |
| Public safety and protection | 5,528.8 | 5.1 | 3,602.9 | 7.0 |
| Other health and human services | 22,915.7 | 21.3 | 4,503.0 | 8.8 |
| **Total** | **107,696.6** | **100.0** | **51,319.8** | **100.0** |

SOURCE: Ohio Office of Budget and Management.

In February 2005, Governor Taft presented his biennial executive budget for the state of Ohio's fiscal years 2006 and 2007. The biennial budget is the state's financial plan, providing historical revenue and spending information as well as projections for the next two years. Introduced as House Bill 66, the executive budget was amended by the House and became effective June 30, 2005.

In his final executive budget, Governor Taft named four hallmarks: tax reform, programs to support economic development, improvements in education, and more efficient government. The tax code changes are particularly interesting: they include a new tax on businesses' gross revenues, called the commercial activity tax, which replaces elements of the existing tax structure. The Governor's office hopes these changes will lighten the tax burden and broaden the tax base.

State revenues are deposited in many different types of funds. An estimated 47.9% of the state's revenue in fiscal years 2006 and 2007 will be deposited in general funds, which traditionally are associated with government expenditures that are not required to be accounted for in other funds. Special revenue funds, which are legally restricted for specific purposes, are projected to comprise 34.9% of state revenues.

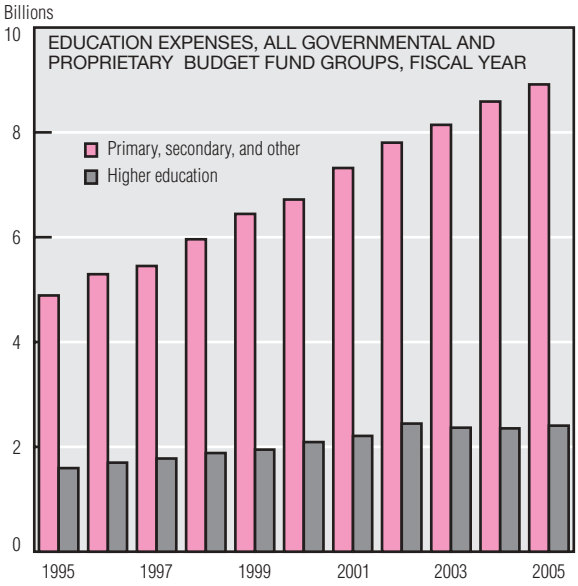
The budget's primary operating fund is the general revenue fund (GRF). Because there are few restrictions on GRF use, much of the budget's focus is on the recommended

*(continued on next page)*

# The Ohio State Budget (cont.)

**General Revenue Fund Expenses, Shares and Millions of Dollars**

| | FY2004[a] | FY2005[b] | FY2006 | | FY2007 | |
|---|---|---|---|---|---|---|
| | Percent of total | Percent of total | Recom-mended | Percent of total | Recom-mended | Percent of total |
| Education | 37.7 | 36.9 | 9,409.9 | 37.1 | 9,648.7 | 37.2 |
| Health and human services | 45.6 | 46.5 | 11,814.5 | 46.6 | 12,188.3 | 47.0 |
| Public safety and protection | 7.1 | 7.0 | 1,784.6 | 7.0 | 1,818.3 | 7.0 |
| General government and tax relief | 6.6 | 6.6 | 1,602.2 | 6.3 | 1,526.8 | 5.9 |
| Executive, legislative, and judicial agencies | 1.2 | 1.2 | 305.5 | 1.2 | 311.1 | 1.2 |
| Transportation and development | 1.1 | 1.2 | 311.6 | 1.2 | 329.8 | 1.3 |
| Environment and natural resources | 0.6 | 0.6 | 135.4 | 0.5 | 133.1 | 0.5 |
| Capital and other | 0.0 | 0.0 | — | 0.0 | — | 0.0 |
| **Total** | **100.0** | **100.0** | **25,363.7** | **100.0** | **25,956.1** | **100.0** |




**Full-Time Undergraduate Fees at Ohio's Public Universities[c]**

| | 2002–2003 | 2003–2004 | 2004–2005 |
|---|---|---|---|
| Bowling Green State University | 6,742 | 7,408 | 8.072 |
| Central State University | 4,044 | 4,287 | 4,710 |
| Cleveland State University | 5,496 | 6,072 | 6,822 |
| Kent State University | 6,374 | 6,882 | 7,504 |
| Miami University | 7,600 | 8,353 | 9,042 |
| Ohio State University | 5,691 | 6,651 | 7,542 |
| Ohio University | 6,336 | 7,128 | 7,770 |
| Shawnee State University | 4,347 | 4,734 | 5,202 |
| University of Akron | 6,098 | 6,809 | 7,510 |
| University of Cincinnati | 6,936 | 7,623 | 8,379 |
| University of Toledo | 5,849 | 6,426 | 7,054 |
| Wright State University | 5,361 | 5,892 | 6,477 |
| Youngstown State University | 4,996 | 5,448 | 5,884 |

a. Total GRF spending for fiscal year 2004 was $23,838.9 million.
b. Estimated total GRF spending for fiscal year 2005 was $25,363.7 million.
c. Figures are for new, full-time, in-state students at main campuses only. Figures are based on fall full-time charges or 15 credit hours and either two semesters or three quarters. Amounts shown include instructional as well as general and facilities fees.
SOURCES: Ohio Board of Regents; and Ohio Office of Budget and Management.

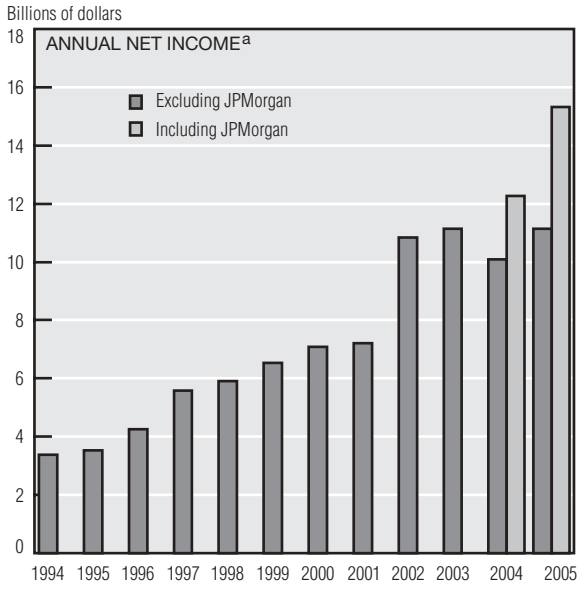
GRF appropriations. The shares of all funds and the GRF for various purposes differ because of restrictions on special revenue funds, which are part of the total but not of the GRF. The GRF receives revenue primarily from state sources such as the personal income tax (32.5%) and the sales and use tax (30.3%). The fund also receives significant federal revenues, primarily in support of social welfare projects.

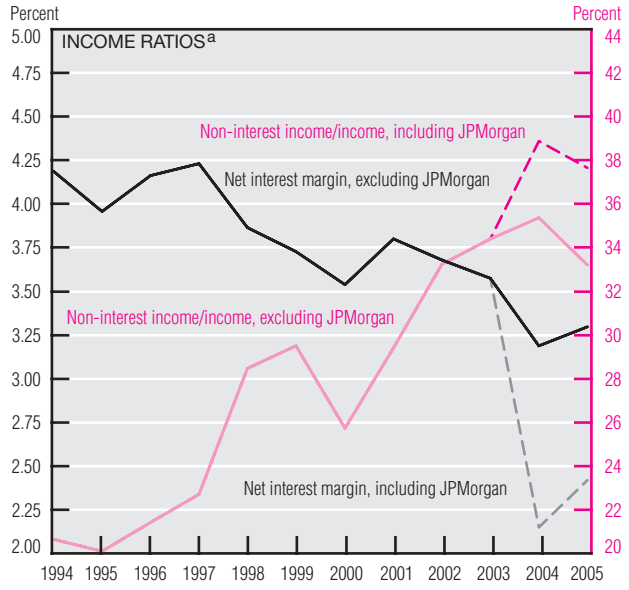
Recommended spending on health and human services now comprises a slightly larger share of the total GRF than it has in recent years. Education's share of spending will also increase modestly from the estimated level for fiscal year 2005.

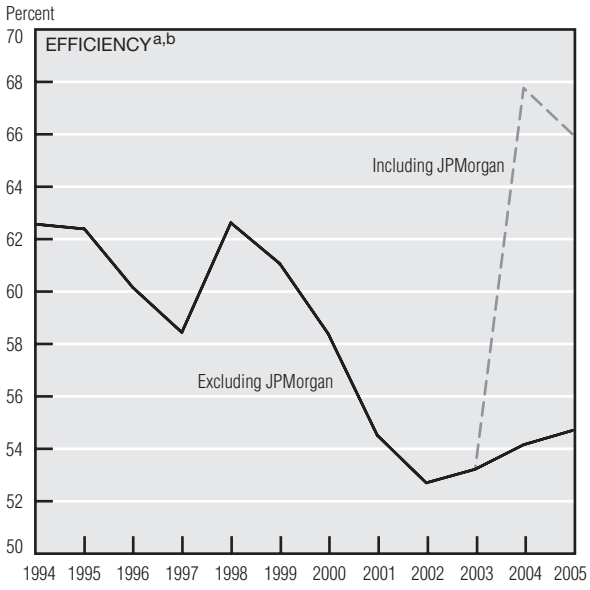
Total spending from all governmental and proprietary budget fund groups on primary, secondary, and other education has been increasing since fiscal year 1995. Higher education, on the other hand, took cutbacks in 2003 and 2004. Nevertheless, higher education expenditures averaged a 4% annual increase over the past 10 years; the combined increases in primary, secondary, and other education spending averaged around 6% per year.

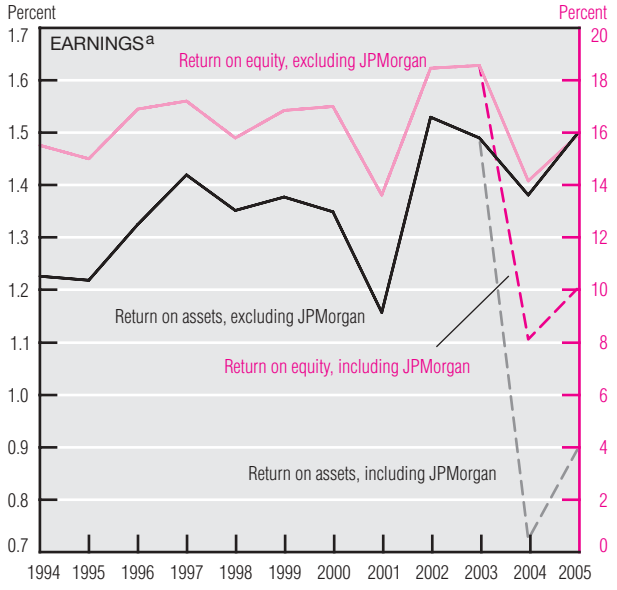
Recently, Governor Taft also recommended a 6% cap on tuition increases, with special allowances for funding need-based scholarships. This is because Ohio's public universities have raised tuitions at rapid rates over the past several years. In-state tuitions have increased by about 10% in each of the past two years.

# Fourth District Banks




a. Through 2005:IIQ only. Data for 2005 are annualized.
b. Efficiency is operating expenses as a percent of net interest income plus non-interest income.
SOURCE: Author's calculations from Federal Financial Institutions Examination Council, *Quarterly Bank Reports of Condition and Income*.

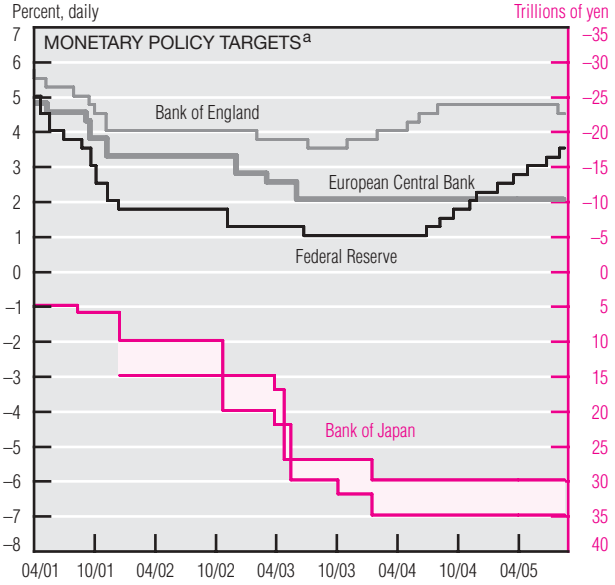
FDIC-insured commercial banks headquartered in the Fourth Federal Reserve District posted net income of $5.56 billion for the first two quarters of 2005 or $11.13 billion on an annual basis. (JPMorgan Chase, chartered in Columbus, is not included in this discussion because its assets are mostly outside the District and its size—roughly $1 trillion—dwarfs other District institutions.) The U.S. banking industry as a whole posted earnings of $59.16 billion for the same period or $118.31 billion on an annual basis.

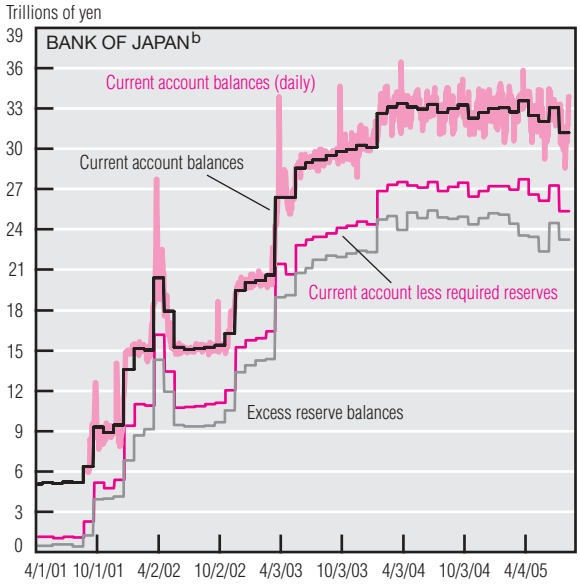
Fourth District banks' net interest margin (interest income minus interest expense divided by average earning assets) at the end of 2005:IIQ rose slightly to 3.29%, exceeding the 3.25% U.S. average. Non-interest income, however, fell to 33.15% of total income. This resembled the performance of U.S. banks, whose net interest margin rose from the end of 2004 and whose non-interest income fell to 32.55% of total income.

Fourth District banks' efficiency (operating expenses as a percent of net interest income plus non-interest income) deteriorated slightly to 54.64% by the end of 2005:IIQ from the 52.64% record set in 2002. (Lower numbers correspond to greater efficiency.) Efficiency deteriorated nationwide as well, increasing to 57.56% from 56.62% at the end of 2004.

At the end of 2005:IIQ, District banks posted a 1.50% return on assets (up from 1.38% at the end of 2004) and a 15.83% return on equity (up from 14.12% at the end of 2004). The District's performance was better than the nation's: At the end of 2005:IIQ, the U.S. banking industry's return on assets had edged up to 1.15% (from 1.12% at the end of 2004); return on equity had climbed to 12.70% (from 11.56% at the end of 2004).

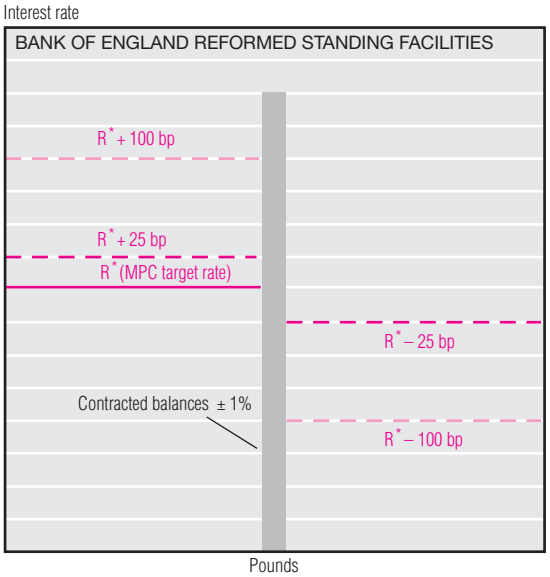
# Foreign Central Banks




**Bank of England Monetary Policy Implementation**

| | Current | 2006 |
|---|---|---|
| Depositors | Large settlement banks | Banks and building societies |
| Deposits | No interest; voluntary daily balance | MPC target rate paid on average balance within ± 1% of voluntary contracted amount |
| Averaging | None | Over MPC inter-meeting period |
| Open market operations | Two-week RPs at MPC target rate twice daily; overnight RPs at 100 bp over MPC target rate late in day | One-week RPs at MPC target rate weekly: overnight RPs at MPC target rate on last day |
| Standing facilities | Deposits at 100 bp below MPC target rate; loans at 100 bp to 150 bp over MPC target rate | Loans/deposits at 100 bp above/ below MPC target rate; but last day at 25 bp above/below MPC target rate |




a. Federal Reserve: overnight interbank rate. Bank of Japan: a quantity of current account balances (since December 19, 2001, a range of quantity of current account balances). Bank of England and European Central Bank: repo rate.

b. Current account balances at the Bank of Japan are required and excess reserve balances at depository institutions subject to reserve requirements plus the balances of certain other financial institutions not subject to reserve requirements. Reserve requirements are satisfied on the basis of the average of a bank's daily balances at the bank of Japan starting the sixteenth of one month and ending the fifteenth of the next.

SOURCES: Board of Governors of the Federal Reserve System; Bank of England; Bank of Japan; European Central Bank; and Roger Clews,"Implementing Monetary Policy: Reforms to the Bank of England's Operations in the Money Market," *Bank of England Quarterly Bulletin*, Summer 2005.

The Federal Reserve recently raised its interest rate target by another 25 basis points (bp) and the Bank of England lowered its rate target by 25 bp; the Bank of Japan displayed less rigor than heretofore, maintaining current account balances in the range of ¥30–¥35 trillion.

The Bank of England will reform its monetary policy operations in 2006. It intends to equalize rates on maturities out to the next Monetary Policy Committee (MPC) meeting and to reduce the daily variability of money market rates. The Bank currently uses as many as three operations each day to maintain the daily supply of non–interest bearing deposits needed to square the accounts of a handful of settlement banks. The reform will supplant these frequent Bank operations with a more active interbank market based on balance averaging by a larger set of banks and building societies. These will contract to hold a self-selected average account balance (plus or minus 1%) between MPC meetings, earning interest at the MPC target rate. The Bank will supply these balances using weekly operations in one-week instruments plus an overnight operation on the last day of a period, all at the prevailing MPC target interest rate. The Bank will provide a deposit/loan facility for liquidity insurance during a period at 100 bp above/below the MPC target rate. On the last day of a period, however, the margin will be only 25 bp. Averaging and interbank trading should keep money market rates close to the MPC target because the Bank can be counted on to absorb or supply funds at the 25 bp margin on the last day.