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Board of Governors of the Federal Reserve System



Monetary Policy Report to the Congress

July 18, 2007

Board of Governors of the Federal Reserve System



# Monetary Policy Report to the Congress Submitted pursuant to section 2B of the Federal Reserve Act

July 18, 2007

## Letter of Transmittal



BOARD OF GOVERNORS OF THE FEDERAL RESERVE SYSTEM

Washington, D.C., July 18, 2007

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,

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Ben Bernanke, Chairman

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## Monetary Policy Report to the Congress

Report submitted to the Congress on July 18, 2007, pursuant to section 2B of the Federal Reserve Act

#### MONETARY POLICY AND THE ECONOMIC OUTLOOK

The U.S. economy generally performed well in the first half of 2007. Activity continued to increase moderately, on average, over the period; businesses added jobs at a steady pace; and the unemployment rate remained at 4½ percent. Overall inflation, however, picked up as a result of sizable increases in energy and food prices. At the same time, core inflation (which excludes the direct effects of movements in energy and food prices) held at about the same rate as in 2006; this measure smoothes through some of the volatility in the high-frequency data and thus is generally a better gauge of underlying inflation trends.

Although real gross domestic product appears to have expanded at about the same average rate thus far this year as it did in the second half of 2006, the pace of expansion has been uneven. In the first quarter, consumer expenditures and business fixed investment, taken together, posted a solid gain. However, homebuilding continued to contract, and manufacturing firms adjusted production to address stock imbalances in that sector that had emerged over the course of 2006. In the second quarter, housing activity declined further in response to the continued softness in home sales and still-elevated inventories of unsold new homes; personal consumption expenditures (PCE) also slowed. Even so, the available data point to solid gains overall in other components of final sales, and with manufacturing inventory imbalances significantly reduced, growth in real GDP apparently sped up.

Job growth in the first half of 2007 was driven by sizable increases in service-producing industries. In the goods-producing sector, manufacturing employment contracted, especially at firms closely tied to the construction industry and at producers of motor vehicles and parts. Employment in residential construction, which had turned down in mid-2006, decreased only modestly further over the first half of 2007 despite the substantial decline in homebuilding.

Real hourly compensation increased over the year ending in the first quarter, the most recent period for which complete data are available. In the second quarter, however, gains in real compensation were probably curtailed by a steep, energy-driven rise in consumer prices. Employment continued to rise apace in the first half of 2007 in the face of moderate growth in output. As a consequence, growth in labor productivity—which had slowed in 2006 from the rapid rate observed earlier in the decade—appears to have remained modest. The cooling of productivity growth in recent quarters likely reflects cyclical or other temporary factors, but the underlying pace of productivity gains may also have slowed somewhat.

Financial market conditions have continued to be generally supportive of economic expansion thus far in 2007, though there was a notable repricing in the subprime-mortgage sector. In recent weeks, the deterioration in that sector has been particularly marked, and markets for lower-quality corporate credits have also experienced some strains. Nonetheless, spreads on such corporate credits have remained narrow on the whole, and business borrowing has continued to be fairly brisk. On balance, equity markets posted sizable gains through mid-July, in part because of continued robust corporate profits and an upward revision to investors' outlook for the economy. The improved outlook led market participants to mark up their anticipated path for the federal funds rate, and intermediate- and long-term interest rates rose significantly. The foreign exchange value of the dollar has declined moderately this year as the pace of economic activity abroad has strengthened.

Overall consumer price inflation, as measured by the PCE price index, picked up noticeably in the first half of 2007, largely because of a sharp increase in energy prices. After moving down over the second half of 2006, the prices households pay for energy subsequently turned up and by May were 14 percent (not at an annual rate) above their level at the end of last year. Food prices also contributed to the step-up in overall inflation this year. The faster rate of increase in overall prices has had only a modest effect on inflation expectations: Surveys suggest that near-term inflation expectations have risen somewhat in recent months, but measures of long-term inflation expectations have remained within the range of recent years.

The rate of increase in the core PCE price index ticked down from 2.1 percent over the twelve months of 2006 to an annual rate of 2.0 percent over the first five months of 2007, primarily accounted for by more-favorable readings between March and May. Although higher energy prices this year added to the cost of producing a wide variety of goods and services that are included in the core index, these effects were offset by other factors—most notably, a slowdown in the rate of increase in shelter costs from the very high rates seen in 2006.

The U.S. economy seems likely to continue to expand at a moderate pace in the second half of 2007 and in 2008. The current contraction in residential construction will likely restrain overall activity for a while longer, but as stocks of unsold new homes are brought down to more comfortable levels, that restraint should begin to abate. In addition, the inventory correction that damped activity in the manufacturing sector around the turn of the year appears largely to have run its course. Thus, stock adjustment is unlikely to be a drag on production in coming quarters. Consumer spending should also keep moving up. Employment and real wages are on track to rise further, and, although the difficulties in the subprime-mortgage market have created severe financial problems for some individuals and families, the household sector is in good financial shape overall. Businesses are also continuing to enjoy favorable financial conditions, which, along with a further expansion in business output, should support moderate increases in business investment. The positive outlook for economic activity abroad bodes well for U.S. exports.

Core inflation is expected to moderate a bit further over the next year and a half. Longer-run inflation expectations are contained, pressures on resource utilization should ease slightly in an environment of economic expansion at or just below the rate of increase in the nation's potential to produce, and some of the other factors that boosted inflation in recent years have already receded or seem likely to do so. As noted, increases in shelter costs, which helped push up core inflation in 2006, have slowed appreciably this year. In addition, the paths for the prices of energy and other commodities embedded in futures markets suggest that the impetus to core inflation from these influences should diminish. And although unit labor costs in the nonfarm business sector have been rising, the average markup of prices over unit labor costs is still high by historical standards, an indication that firms could potentially absorb higher costs, at least for a time, through a narrowing of profit margins.

Nonetheless, the possibility that the expected moderation in inflation will fail to materialize remains the predominant risk to the economic outlook. The more-favorable readings on core inflation in recent months partly reflect some factors that seem likely to prove transitory. Moreover, the economy appears to be operating at a high level of resource utilization, which has the potential to sustain inflation pressures. In addition, an upward impetus to costs could emanate from other sources, including higher prices for energy and other commodities or a slower rate of increase in structural productivity. Another concern is that high rates of headline inflation, if prolonged, could cause longer-run inflation expectations to rise and could thus become another factor sustaining inflation pressures.

Significant risks also attend the outlook for real economic activity. On the downside, the fall in housing construction could intensify or last longer than expected. In addition, persistent weakness in the housing sector could spill over to other sectors, especially consumption. But upside risks also exist. For example, consumer spending appears to be rising less rapidly of late after a period of large increases that pushed the personal saving rate into negative territory; increases in consumption could return to their earlier pace. Exports could also boost aggregate demand more than anticipated, especially if economic conditions abroad continue to exceed expectations.

## The Conduct of Monetary Policy over the First Half of 2007

The Federal Open Market Committee (FOMC) left the stance of monetary policy unchanged over the first half of 2007. At the time of the January meeting, available economic information pointed to a relatively favorable outlook for both economic growth and inflation. While manufacturing activity had softened, the housing sector had shown tentative signs of stabilizing, and consumer spending remained strong. Readings on core inflation had improved some from the elevated levels reached in 2006, and inflation expectations continued to be stable. Nevertheless, the prevailing level of inflation was uncomfortably high, and elevated resource utilization had the potential to sustain inflation pressures. Against this backdrop, the Committee decided to leave its target for the federal funds rate unchanged at 51/4 percent and reiterated in its policy statement that some inflation risks remained. The Committee also explained that the extent and timing of any additional firming would depend on the evolution of the outlook for both inflation and economic growth as implied by incoming information.

When the Committee met in March, data suggested that the ongoing weakness in the housing market had not spilled over to consumption spending, and the strains in the subprime-mortgage market did not appear to be affecting the availability of other types of household or business credit. Although investment spending had been soft, it was expected to pick up, primarily because of strong corporate balance sheets, continued high profitability, and generally favorable financial conditions. Nevertheless, sluggish business spending and the deterioration in the subprime-mortgage market suggested that downside risks to growth had increased. At the same time, readings on core inflation had stayed somewhat elevated, and increases

#### Selected interest rates, 2004-07



NOTE: The data are daily and extend through July 13, 2007. 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.

in the prices of energy and non-energy commodities had boosted the risk that the expected deceleration in inflation would fail to occur. The FOMC decided to leave its target for the federal funds rate unchanged at 5¼ percent and noted in the accompanying statement that its predominant policy concern remained the risk that inflation would fail to moderate as expected. In light of the increased uncertainty about the outlook for both inflation and growth, the statement indicated that future policy adjustments would depend on the evolution of the outlook for both inflation and economic growth as implied by incoming information—a characterization that has been repeated in the two postmeeting FOMC statements since then.

In May, the data in hand indicated that the adjustment in the housing sector was continuing and appeared likely to persist for longer than previously anticipated. Moreover, growth in consumer spending seemed to have slowed in the early spring. Nonetheless, because the problems in the subprime-mortgage market apparently were contained and business spending indicators suggested improving prospects for investment, the economy seemed likely to expand at a moderate pace over coming quarters. Despite more-favorable readings for March, core inflation remained somewhat elevated from a longer perspective. Inflation pressures were expected to moderate over time, but the high level of resource utilization had the potential to sustain those pressures. As a result, the FOMC decided to leave its target for the federal funds rate unchanged at 5<sup>1</sup>/<sub>4</sub> percent and repeated in the statement that its predominant policy concern remained the risk that inflation would fail to moderate as expected.

At the June meeting, data appeared to confirm that economic growth had strengthened in the second quarter of 2007 despite the ongoing adjustment in the housing sector. Business spending on capital equipment, which had faltered around the turn of the year, firmed somewhat in the spring, and nonresidential construction advanced briskly. In addition, the inventory correction that had held down economic activity late last year and early this year seemed to have mostly run its course. Moreover, defense spending and net exports appeared poised to rebound after sagging in the first quarter. These factors more than offset a slowdown in the growth of consumer spending. Readings on core inflation remained favorable in April and May. Nonetheless, a sustained moderation of inflation pressures had yet to be convincingly demonstrated, and the high level of resource utilization had the potential to sustain those pressures. Under these circumstances, the Committee decided to leave its target for the federal funds rate unchanged at 5<sup>1</sup>/<sub>4</sub> percent. In its policy statement, the Committee repeated that its predominant policy concern remained the risk that inflation would fail to moderate as expected.

At their meetings over the first half of 2007, FOMC meeting participants continued the discussions they had formally initiated last year regarding their communications with the public. The discussions included a review of the role of the economic projections that are made twice a year by the members of the Board of Governors and the Reserve Bank presidents and which are included in the Board's *Monetary Policy Report to the Congress*. In addition, participants exchanged views on the possible advantages and disadvantages of specifying a numerical price objective for monetary policy. They also discussed the appropriate role of meeting minutes and policy statements. These discussions remain ongoing, as participants continue to evaluate the best available means for improv-

ing communication with the public in furtherance of the Committee's dual mandate for both maximum employment and stable prices.

#### Economic Projections for 2007 and 2008

In conjunction with the FOMC meeting at the end of June, the members of the Board of Governors and the Reserve Bank presidents, all of whom participate in the deliberations of the FOMC, provided economic projections for 2007 and 2008 for this report. The central tendency of the FOMC participants' forecasts for the increase in real GDP is 21/4 percent to 21/2 percent over the four quarters of 2007 and 2<sup>1</sup>/<sub>2</sub> percent to 2<sup>3</sup>/<sub>4</sub> percent in 2008. The civilian unemployment rate is expected to lie between 41/2 percent and 4<sup>3</sup>/<sub>4</sub> percent in the fourth quarter of 2007 and to be at about the top of that range in 2008. As for inflation, FOMC participants expect that the increase in the price index for personal consumption expenditures excluding food and energy (core PCE inflation) will total 2 percent to 21/4 percent over the four quarters of 2007 and will drift down to 1<sup>3</sup>/<sub>4</sub> percent to 2 percent in 2008.

Economic activity appears poised to expand at a moderate rate in the second half of 2007, and it should strengthen gradually into 2008. The ongoing correction in the housing market seems likely to continue to weigh on the rate of economic expansion over the near term. But as that process runs its course, the rate of growth of economic activity should move up somewhat. The pace of consumer spending may be restrained in the near term as households

#### Economic projections for 2007 and 2008 Percent

Indicator	Federal Reserve Governors and Reserve Bank presidents	
	Range	Central tendency
	2007	
Change, fourth quarter to fourth quarter <sup>1</sup> Nominal GDP Real GDP PCE price index excluding food and energy Average level, fourth quarter Civilian unemployment rate	$ \begin{array}{r} 4^{1/2}-5^{1/2}\\ 2-2^{3/4}\\ 2-2^{1/4}\\ 4^{1/2}-4^{3/4}\\ \end{array} $	4 <sup>1</sup> / <sub>2</sub> -5 2 <sup>1</sup> / <sub>4</sub> -2 <sup>1</sup> / <sub>2</sub> 2-2 <sup>1</sup> / <sub>4</sub> 4 <sup>1</sup> / <sub>2</sub> -4 <sup>3</sup> / <sub>4</sub>
	2008	
Change, fourth quarter to fourth quarter <sup>1</sup> Nominal GDP Real GDP PCE price index excluding food and energy	$\begin{array}{r} 4^{1/2} - 5^{1/2} \\ 2^{1/2} - 3 \\ 1^{3/4} - 2 \end{array}$	4 <sup>3</sup> / <sub>4</sub> -5 2 <sup>1</sup> / <sub>2</sub> -2 <sup>3</sup> / <sub>4</sub> 1 <sup>3</sup> / <sub>4</sub> -2
Average level, fourth quarter Civilian unemployment rate	41/2-5	About 4¾

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

continue to adjust to the latest run-up in energy prices and to softer house prices; still, household balance sheets are generally in good shape, and increases in employment and real wages over the next year and a half should be sufficient to sustain further gains in spending. Regarding business investment, solid gains in real outlays on equipment and software seem likely in light of the anticipated expansion in business output, continuing strong profits, and generally favorable financial conditions. Opportunities to realize significant gains in efficiency by investing in high-tech equipment should provide ongoing support to equipment spending as well. Investment in nonresidential buildings also seems to be expanding briskly. In addition, prospects are favorable for continued increases in demand for exports of U.S. goods and services.

FOMC participants generally expect core inflation to edge down a bit further over the next year and a half. In assessing the apparent slowing of core inflation this spring, participants recognized that the monthly price data are volatile and that some of the recent improvement may prove to have been transitory. Nonetheless, they believe that the current environment will be conducive to some further moderation in underlying price pressures. The participants' forecasts for real activity imply a slight easing over the next several quarters of the tightness in labor and product markets. And although core inflation is expected to remain under some upward pressure in the near term from the pass-through of the increases to date in the prices of energy and other commodities, those cost pressures should subsequently wane. Accordingly, with long-run inflation expectations contained, diminished cost pressures should result in some moderation in core inflation.

# Economic and Financial Developments in 2007

Real GDP increased at an annual rate of 2¼ percent in the second half of 2006, and it appears to have risen at roughly that pace, on average, over the first half of 2007. Although consumer spending and business fixed investment posted moderate gains, on balance, during the first half, the contraction in residential construction exerted significant restraint on economic activity. The rise in real GDP in the first quarter was also damped by a downswing in inventory investment, a dip in defense spending, and an unusually sharp drop in net exports. The available information suggests that GDP growth rebounded in the second quarter as the drag from inventory investment waned and as defense expenditures and net exports snapped back after their first-quarter declines. In the labor market, hiring continued at a steady pace throughout the first half,





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.

although job gains fell short of those recorded in 2006, and the unemployment rate remained at 41/2 percent. Headline consumer price inflation was boosted by a reversal of the downturn in energy prices in late 2006 and a step-up in retail food prices, while core inflation was little changed. Real hourly labor compensation increased over the year ending in the first quarter, although gains in the second quarter were probably eroded by the energy-driven pickup in overall inflation. Conditions in financial markets have remained generally supportive of economic expansion thus far this year despite deteriorating conditions in the subprime-mortgage sector. Investors seemed to become more optimistic about the outlook for the economy: Interest rates rose, credit spreads on corporate bonds stayed

Change in PCE chain-type price index, 2001-07



NOTE: The data are for personal consumption expenditures (PCE). Through 2006, change is from December to December; for 2007, change is from December to May

SOURCE: Department of Commerce, Bureau of Economic Analysis.



#### Change in real income and consumption, 2001-07



2003

narrow on the whole, and equity markets recorded sizable gains.

2005

2006

2007

#### The Household Sector

2002

#### **Consumer Spending**

2001

After exhibiting considerable vigor in late 2006, consumer spending slowed somewhat over the first half of 2007. Spending continued to be bolstered by the strong labor market and the lagged effects of earlier increases in household wealth. However, these positive influences were partly offset by the rise in energy prices this year, which drained consumers' purchasing power, and by reduced home-price appreciation, which limited recent gains in

#### Consumer sentiment, 1994-2007



NOTE: The Conference Board data are monthly and extend through June 2007. The Reuters/University of Michigan data are monthly and extend through a preliminary estimate for July 2007.

SOURCE: The Conference Board and Reuters/University of Michigan Surveys of Consumers.

wealth for many households. Surveys of consumer sentiment have remained in a favorable range this year.

Real PCE rose at an annual rate of 4<sup>1</sup>/<sub>4</sub> percent in the first quarter. Spending on light motor vehicles (cars, sportutility vehicles, and pickup trucks) got off to a fast start this year, expenditures on energy services were boosted by unusually cold weather in February, and outlays for other goods and services posted sizable gains after a steep runup in the fourth quarter. The available data imply a much slower pace of spending growth in the second quarter, as sales of light motor vehicles softened and real spending on goods other than motor vehicles turned lackluster.

Real disposable personal income (DPI)—that is, aftertax income adjusted for inflation—also started the year on a strong note after a large increase in the fourth quarter.<sup>1</sup> Wages and salaries and some other major categories of personal income continued to rise appreciably in nominal terms throughout the first half. However, these gains were eroded in real terms by the energy-related jump in inflation in the spring, and, as a result, real DPI rose at an annual rate of just 1½ percent between the fourth quarter of 2006 and May 2007, compared with an increase of more than 3 percent over the four quarters of 2006.

Even given the sharp deceleration in residential real estate values, household wealth has remained support-

Wealth-to-income ratio, 1984-2007



NOTE: The data are quarterly and extend through 2007;Q1. The wealthto-income ratio is the ratio of household net worth to disposable personal income.





NOTE: The data are quarterly and extend through 2007:Q2; the reading for 2007:Q2 is the average for April and May.

ive of spending growth. One reason is that the surge in equity values in recent quarters has allowed overall household wealth to keep pace with nominal income despite the softness in home prices. In addition, because changes in net worth tend to influence consumption with a lag of several quarters, the increases in wealth during 2005 and 2006 are likely still providing a good deal of impetus to spending. These increases in wealth, which have provided many households with the resources and inclination to raise their spending at a rate that exceeds income growth, have been a factor pushing down the personal saving rate over the past couple of years even as interest rates have moved up. After fluctuating in the vicinity of 2 percent from 1999 to 2004, the saving rate subsequently dropped sharply, and it stood at negative 1<sup>1</sup>/<sub>4</sub> percent, on average, in April and May of 2007.

#### **Residential Investment**

Residential construction activity remained soft in the first half of 2007, as builders continued to confront weak demand and an elevated inventory of unsold new homes. In the single-family sector, new units were started at an average annual rate of 1.18 million between January and May—more than 30 percent below the quarterly high reached in the first quarter of 2006. Starts in the multifamily sector averaged a little less than 300,000 units during the first five months of 2007, an amount at the lower end of the range of the past nine years. All told, the contraction in housing activity subtracted nearly 1 percentage point from the change in real GDP in the first quarter of 2007—almost as much as in the second half of 2006—and the drag likely remained substantial in the second quarter.

SOURCE: For net worth, Federal Reserve Board, flow of funds data; for income, Department of Commerce, Bureau of Economic Analysis.

<sup>1.</sup> According to the published data, real DPI rose at an annual rate of 4<sup>3</sup>/<sub>4</sub> percent in the first quarter. However, a substantial part of the increase occurred because the Bureau of Economic Analysis (BEA) added \$50 billion (annual rate) to its estimate of first-quarter wages and salaries in response to information that bonus payments and stock option exercises around the turn of the year were unusually large. Because the BEA did not assume that these payments carried forward into April, real DPI fell sharply in that month.

SOURCE: Department of Commerce, Bureau of Economic Analysis.

#### Private housing starts, 1994–2007



NOTE: The data are quarterly and extend through 2007:Q2; the readings for 2007:Q2 are the averages for April and May. SOURCE: Department of Commerce, Bureau of the Census.

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The monthly data on home sales have been erratic this year. But after smoothing through the ups and downs, the data suggest that demand has softened further after falling at a double-digit rate between mid-2005 and mid-2006 and then holding reasonably steady in the second half of last year. On average, sales of existing homes over the three months ending in May 2007 were 41/2 percent below their average level in the second half of last year, while sales of new homes were down 10 percent over that period. The further weakening of housing demand this year likely reflects, in part, tighter lending standards for mortgages, and it occurred despite mortgage rates that were relatively low by longer-run standards. The ongoing slippage in sales has made it more difficult for homebuilders to make much of a dent in their inventories of new homes for sale. When evaluated relative to the three-month average pace of sales,

Mortgage rates, 1999–2007



Note: The data, which are weekly and extend through July 11, 2007, are contract rates on thirty-year mortgages.

SOURCE: Federal Home Loan Mortgage Corporation.

Change in prices of existing single-family houses, 1984–2007



Note: The data are quarterly, and changes are from one year earlier. The repeat-transactions index extends through 2007:Q1. For the years preceding 1991, that index includes appraisals associated with mortgage refinancings; beginning in 1991, it includes purchase transactions only. The data for average price extend through 2007:Q2, and the reading for Q2 is the average for April and May compared with the same period one year earlier.

SOURCE: For repeat transactions, Office of Federal Housing Enterprise Oversight; for average price, National Association of Realtors.

the months' supply of unsold new homes in May was more than 60 percent above the high end of the relatively narrow range it occupied from 1997 to 2005. Moreover, these published figures probably understate the true inventory overhang in this sector to the extent that they do not account for the surge in canceled sales in the past year; such cancellations return homes to unsold inventory but are not incorporated in the official statistics.

The rate of house-price appreciation slowed dramatically in 2006 after nearly a decade of rapid increases, and prices appear to have moved roughly sideways in the first half of 2007. The purchase-only version of the repeattransactions price index for existing single-family homes published by the Office of Federal Housing Enterprise Oversight, which tracks sales prices of the same houses over time, rose at an annual rate of just 2 percent in the first quarter of 2007 (the latest available data) and was up just 3 percent over the year ending in the first quarter, compared with an increase of 10 percent over the preceding year. For April and May combined, the average price of existing single-family homes sold-which does not control for changes in the mix of houses sold but is available on a more timely basis-was about 1 percent below that of a year earlier.

#### Household Finance

Household debt expanded at an annual rate of 6 percent in the first quarter of 2007, somewhat below the pace of 8<sup>3</sup>/<sub>4</sub> percent posted in 2006. The deceleration was primarily the result of a significant step-down in the rise of mortgage debt, which reflected the sharp slowing of house-price appreciation and the slower pace of home sales. Consumer (nonmortgage) debt has remained on a moderate uptrend this year.

Debt rose a little more slowly than personal income in the first quarter, so the financial obligations ratio for the household sector inched down, though it remained only a bit below its historical high. Most households were able to meet their debt service obligations, and measures of household credit quality were generally little changed. For example, delinquency rates on consumer loans and prime mortgages—the two main components of total household debt—stayed low through the spring of 2007, as did those on subprime fixed-rate mortgages. In addition, household bankruptcy filings continued to be subdued in the first half of the year: They ran near the average pace seen since early 2006, after the bulge that accompanied the implementation of the new bankruptcy law in October 2005.

Some households, however, have experienced growing financial strains. Delinquency rates on subprime mortgages with variable interest rates, which account for about 9 percent of all first-lien mortgages outstanding, continued to climb in the first five months of 2007 and reached a level more than double the recent low for this series, which was recorded in mid-2005. The rise in delinquencies has begun to show through to new foreclosures. In the first quarter of 2007, an estimated 325,000 foreclosure proceedings were initiated, up from an average quarterly rate of 230,000 over the preceding two years; about half of the foreclosures this year were on subprime mortgages. The decline in credit

Mortgage delinquency rates, 2001–07



NOTE: The data are monthly. Prime-mortgage data extend through April 2007, and subprime-mortgage data extend through May 2007. Delinquency rate is the percent of loans ninety days or more past due or in foreclosure. Prime mortgages include near-prime mortgages.

SOURCE: First American LoanPerformance

quality in the subprime sector has likely stemmed from a combination of several factors, including the moderation in overall economic growth and some regional economic weakness. In addition, a substantial number of subprime borrowers with variable-rate mortgages have faced an upward adjustment of the rates from their initial levels. When house prices were rising rapidly and rates on new loans were lower, many of these borrowers qualified to refinance into another loan with more-favorable terms. With house prices having decelerated and rates having moved higher, however, the scope for refinancing has been reduced. Moreover, investor owners may have been tempted to walk away from properties with little or no equity. Subprime mortgages originated in late 2005 and 2006 have shown unusually high rates of early delinquency, suggesting that some lenders unduly loosened underwriting standards during that period.

In recent months, credit has become less easily available in the subprime-mortgage market, as investors in subprime-mortgage-backed securities reportedly have scrutinized the underlying subprime loans more carefully and lenders have tightened underwriting standards. For example, more than half of the respondents to the questions on subprime residential mortgages in the Federal Reserve's April 2007 Senior Loan Officer Opinion Survey on Bank Lending Practices indicated that they had tightened credit standards on such loans over the previous three months. In June, the federal financial regulatory agencies issued a final Statement on Subprime Mortgage Lending to address issues relating to certain adjustable-rate mortgage products. Credit spreads on the lower-rated tranches of new subprime securitizations have increased sharply, on balance, this year, and issuance of subprime-mortgagebacked securities has moderated from its vigorous pace of the past couple of years. However, despite the ongoing

Spreads over libor of securities backed by subprime residential mortgages, 2006–07



NOTE: The data are weekly and extend through July 6, 2007. SOURCE: Merrill Lynch.



Gross issuance of alt-A and subprime-mortgage-backed securities, 2002–07

NOTE: Alt-A includes such products as mortgages with limited income verification and mortgages secured by non-owner-occupied properties. SOURCE: Inside MBS & ABS.

problems, the subprime market has continued to function, and new loans are being made.

#### The Business Sector

#### **Fixed Investment**

After having risen sharply over much of 2006, real business fixed investment (BFI) lost some steam in the fourth quarter and posted a relatively meager gain in the first quarter of 2007. The slower rise in business output in recent quarters has likely been a moderating influence on business investment expenditures. But on the whole, economic and financial conditions still appear to be favorable for capital spending: Corporate profits remain robust, businesses have ample liquid assets at their disposal, and conditions in financial markets remain supportive.

Much of the recent softness in BFI was in spending on equipment and software (E&S), which rose at an annual rate of less than 2 percent in real terms in the first quarter after having fallen nearly 5 percent in the fourth quarter of 2006. Within the major components of E&S, real spending on high-tech equipment expanded at an annual rate of more than 20 percent in the first quarter of 2007 because of both a surge in outlays on computers after the release of a major new operating system and a spurt in investment in communications gear. Aircraft purchases also posted a sizable increase. However, spending on motor vehicles tumbled, as many firms had accelerated their purchases of medium and heavy trucks into 2005 and 2006 so that they could take delivery before the Environmental Protection Agency's new emissions standards for engines went into effect this year. Elsewhere, real investment in equipment



Change in real business fixed investment, 2001–07

SOURCE: Department of Commerce, Bureau of Economic Analysis.

other than high-tech and transportation goods dropped at an annual rate of 10 percent in the first quarter after a fall of nearly 5 percent in the previous quarter. The weakness in this category, which accounts for roughly 40 percent of investment in E&S when measured in nominal terms, appears to have reflected, in part, appreciable declines in spending on equipment disproportionately used by the construction and motor vehicle industries and was most pronounced around the turn of the year.

Although the weakness in truck sales apparently extended through midyear, real E&S outlays apart from transportation equipment appear to have posted a solid increase in the second quarter. Incoming information suggests that high-tech spending continued to move up in real terms—albeit not as fast as it did in the first quarter. Moreover, shipments and orders for equipment other than high-tech and transportation items regained some lost ground.

Nonresidential construction activity turned up steeply in 2006 after having been stagnant for several years, and it continued to exhibit considerable strength in early 2007. Outlays for office, retail, and industrial buildings are all running well above year-earlier levels, and—given that

Note: High-tech equipment consists of computers and peripheral equipment and communications equipment.

vacancy rates have moved down over the past couple of years—prospects for further gains in coming quarters are good. One exception to the recent strength in this sector is the drilling and mining category, in which real outlays fell in the first quarter after three years of sizable gains. The recent softening in this category of investment may reflect, in part, reported shortages of specialty equipment and skilled labor.

#### Inventory Investment

Inventory investment slowed markedly in the fourth quarter of 2006 as firms acted to stem rising inventory imbalances, and it turned negative in the first quarter of 2007. The downswing in inventory investment shaved about 1 percentage point from the change in real GDP in both the fourth and first quarters, and it appears to have brought stocks into better alignment with sales. Some of the inventory correction was in the motor vehicle sector, in which high gasoline prices have been causing demand to shift to more-fuel-efficient models-a trend that, by the middle of 2006, had left dealers with bloated inventories of light trucks and sport-utility vehicles. Facing little prospect of significantly stronger sales of those vehicles in the near term, the manufacturers instituted sharp cuts in production starting in the second half of last year. The production cuts, which in the first quarter of 2007 brought assemblies of light vehicles to their lowest level in more than a decade, helped clear out dealers' lots and thus set the stage for a step-up in assemblies in the second quarter. The automakers have scheduled a further rise in assemblies in the third quarter, in part to get a good start on producing the new, more-fuel-efficient models that will be introduced to the public in coming months.

Excluding motor vehicles, inventories appeared to be well aligned with sales through much of 2006, but they too started to look excessive as the growth of aggregate demand slowed in the latter part of the year. The emerging imbalances, some-though not all-of which appear to have been at firms that supply the construction and motor vehicle industries, prompted production adjustments that reduced non-auto inventory investment to a very modest rate in the first quarter. According to the limited available information, the pace of real stockbuilding appears to have remained low in April and May, and, for the most part, inventories seem to have moved back into rough alignment with sales. In fact, businesses surveyed in June by the Institute for Supply Management reported that their customers were mostly comfortable with their current stock levels, whereas earlier in the year an elevated number of respondents had characterized these inventory positions as too high.

#### **Corporate Profits and Business Finance**

In the first quarter of 2007, growth in corporate profitability slowed from last year's pace, but the level of profitability remained high. Earnings per share for S&P 500 firms decelerated but still came in nearly 10 percent above their year-earlier level. In the national income accounts, profits of nonfinancial corporations in the first quarter were little changed from year-earlier levels after double-digit gains in 2006; nonetheless, before-tax profits measured as a share of sector GDP were nearly 13 percent, close to the high levels posted last year.



SOURCE: Department of Commerce, Bureau of Economic Analysis.





NOTE: The data are quarterly and extend through 2007:Q1. Profits are from domestic operations of nonfinancial corporations, with inventory valuation and capital consumption adjustments.

SOURCE: Department of Commerce, Bureau of Economic Analysis.

Selected components of net financing for nonfinancial corporate businesses, 2003–07



NOTE: The data for the components except bonds are seasonally adjusted. The data for the sum of selected components are quarterly. The data for 2007:Q2 are estimated.

Fueled in part by continued heavy merger and acquisition activity, nonfinancial business debt expanded at an annual rate of 9 percent in the first quarter of this year, only a bit slower than in 2006, and data in hand suggest a robust pace of expansion again in the second quarter. Net bond issuance has been solid so far in 2007, and commercial and industrial lending by banks has remained strong. Although lower-quality corporate credit markets experienced some strains, generally narrow credit spreads have encouraged corporate bond issuance, and the growth of business loans has been spurred by banks' accommodative lending posture. Considerable net fractions of respondents to the April 2007 Senior Loan Officer Opinion Survey indicated that they had eased some terms-especially spreads of loan rates over their costs of funds, costs of credit lines, and loan covenants-on commercial and industrial loans over the previous three months. Banks pointed to more-aggressive competition from other banks or nonbank lenders and to increased liquidity in the secondary market for these loans as the most important reasons for having eased business lending terms. Commercial paper outstanding was flat in the first quarter but increased somewhat in the second quarter.

Gross public issuance of equity by nonfinancial corporations has continued to be moderate so far this year, but private equity issuance has apparently remained strong, as leveraged buyout activity has continued to climb. However, given the elevated levels of share repurchases and equity retirements from cash-financed mergers and acquisitions in the first quarter, net equity issuance continued to be deeply negative.

#### Net equity issuance at nonfinancial corporations, 1991-2007



NOTE: The data are annual through 2006; for 2007, they are as of Q1. Data for 2006:Q4 and 2007:Q1 are estimated. Equity issuance includes funds invested by private equity partnerships and stock option proceeds. SOURCE: Federal Reserve Board, flow of funds data.

Despite some deceleration in profits, the credit quality of nonfinancial firms has generally continued to be robust. The six-month trailing bond default rate has stayed near zero this year, and the delinquency rate on commercial and industrial loans at banks remained extremely low in the first quarter. For public firms, balance sheet liquidity was still high in the first quarter, whereas corporate leverage stayed near historical lows despite the large net retirement of equity. In addition, net interest payments relative to cash flow continued to be near the low end of the range seen over the past two decades.

Commercial real estate debt expanded briskly in the first quarter of 2007, albeit not quite so rapidly as

Default rate on outstanding corporate bonds, 1992-2007



NOTE: The data are monthly and extend through June 2007. 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.

SOURCE: Federal Reserve Board; Securities Data Company; and Federal Financial Institutions Examination Council, Consolidated Reports of Condition and Income (Call Report).



Net interest payments of nonfinancial corporations as a percent of cash flow, 1979–2007

NOTE: The data are quarterly and extend through 2007:Q1. SOURCE: Department of Commerce, Bureau of Economic Analysis.

in 2006, a pattern consistent with the net tightening of credit standards on commercial real estate loans reported in the Senior Loan Officer Opinion Survey. Spreads on BBB-rated commercial-mortgage-backed securities (CMBS) soared in late February and have varied within an elevated range since then. The increase reportedly came in response to a reduction in investor interest in collateralized debt obligations, sponsors of which traditionally have purchased many of these securities, and to plans by the rating agencies to increase the level of credit support required for such securities. However, because rents on commercial properties have been increasing and vacancy rates have remained moderate, credit quality has generally continued to be good. Delinquency rates on commercial mortgages held by life insurance companies and on those backing CMBS have stayed near the bottom of their recent ranges this year. The delinquency rate on commercial mortgages held by banks edged up further in the first quarter in response to a deterioration in the performance of loans for multifamily properties and for construction and land development; nevertheless, this delinquency rate remained low by historical standards.

#### The Government Sector

#### Federal Government

The deficit in the federal unified budget narrowed further during the past year: Receipts continued to rise at a fairly rapid rate, while growth in outlays was relatively subdued. Over the twelve months ending in June, the unified budget recorded a deficit of \$163 billion, \$113 billion less than during the comparable period ending in June 2006. When measured relative to nominal GDP, the deficit has decreased steadily from a recent fiscal year high of 3.6 percent in 2004 to a little more than 1 percent during the past twelve months.

Nominal federal receipts during the twelve months ending in June were 8 percent higher than during the same period a year earlier. This increase was considerably smaller than the double-digit advances recorded in fiscal 2005 and fiscal 2006. Nonetheless, it was faster than the increase in income and pushed up the ratio of receipts to GDP to nearly 19 percent. Individual income tax receipts continued to outpace the rise in taxable personal income as measured in the national income and product accounts (NIPA), likely a result, at least in part, of larger

Federal receipts and expenditures, 1987-2007



Spreads of ten-year investment-grade commercial-mortgage-

backed securities over swaps, 1997-2007



NOTE: Through 2006, receipts and expenditures are on a unified-budget basis and are for fiscal years (October through September); GDP is for the four quarters ending in Q3. For 2007, receipts and expenditures are for the twelve months ending in June, and GDP is the average of 2006:Q4 and 2007:Q1.

SOURCE: Office of Management and Budget.

NOTE: The data are weekly and extend through July 11, 2007. SOURCE: Bloomberg.

capital gains realizations (which are excluded from NIPA income), the effect of some taxpayers moving into higher tax brackets as their real incomes increased, and perhaps a further shift in the distribution of income toward high-income households, which typically face higher tax rates. Corporate receipts, after rising at an annual rate of nearly 40 percent, on average, over the three years ending in fiscal 2006, rose 15 percent during the year ending in June, a rate more in line with the increase in corporate profits.

Nominal federal outlays increased less than 3 percent during the twelve months ending in June and edged down to 20 percent of nominal GDP, around the lower end of the narrow range that has prevailed since 2003. In large part, the deceleration in outlays reflected the tapering off of the temporary bulge in expenditures for flood insurance and disaster relief associated with the 2005 hurricanes. Meanwhile, spending on health programs continued to rise briskly, only in part because of the net increment to spending from the Medicare Part D prescription drug program, which started in January 2006. Defense spending was up 5 percent over the period, an increase somewhat below those recorded in fiscal years 2005 and 2006. Total federal outlays were also boosted by a sizable rise in net interest payments as interest rates moved higher, although the increase in debt service costs was significantly smaller than that of a year earlier.

As measured in the NIPA, real federal expenditures on consumption and gross investment—the part of federal spending that is a direct component of GDP—fell at an annual rate of nearly 4 percent in the first quarter, as a drop in defense spending more than offset a moderate increase in nondefense purchases. Defense expenditures tend to be erratic from quarter to quarter, and the first-quarter dip followed a large increase in the fourth quarter. Defense

Change in real government expenditures on consumption and investment, 2001–07



SOURCE: Department of Commerce, Bureau of Economic Analysis.

#### Net saving, 1987-2007



NOTE: The data are quarterly and extend through 2007: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.

spending appears to have turned back up in the second quarter, and, given currently enacted appropriations, it is likely to increase further in coming quarters.

All else being equal, the significant narrowing of the unified budget deficit over the past few years raises national saving. However, the positive effect on national saving of the smaller federal deficit has been largely offset by a downward drift in nonfederal saving. Although business saving has increased substantially over this period, personal saving has dropped sharply. Accordingly, total national saving (that is, federal plus nonfederal) has recovered only a little from the exceptionally low levels reached between 2003 and 2005; measured net of estimated depreciation, it has fluctuated between 11/2 percent and 21/2 percent of GDP since the start of 2006. If not boosted over the longer run, persistent low levels of saving will be associated with either slower capital formation or continued heavy borrowing from abroad, either of which would retard the rise in the standard of living of U.S. residents over time and hamper the ability of the nation to meet the retirement needs of an aging population.

#### Federal Borrowing

Federal debt rose at an annual rate of 63/4 percent in the first quarter of 2007, a bit slower than in the corresponding quarter of last year. As of the end of the first quarter, the ratio of federal debt held by the public to nominal GDP was about 36 percent, a level little changed from that in recent quarters.

The improvement in the budget position of the federal government has led the Treasury to scale back issuance of marketable coupon securities. As part of its reduction Federal government debt held by the public, 1960–2007



NOTE: The final observation is for 2007: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.

Treasury securities held by foreign investors as a share of total outstanding, 1998–2007



NOTE: The data are quarterly and extend through 2007:Q1. SOURCE: Federal Reserve Board, flow of funds data.

in issuance, the Treasury announced in May that it was discontinuing auctions of three-year nominal notes. This move had been widely anticipated and elicited little reaction in financial markets.

Overall, foreign purchases of Treasury securities appear to have increased further this year, thereby bringing the share of these securities held by foreign investors to a new high of almost 45 percent at the end of the first quarter. The proportion of nominal coupon securities purchased at auctions by foreign investors moved up in late 2006 and has stayed elevated thus far this year, albeit well off the peak reached in 2004. Balance of payments data point to sizable net purchases by foreign private investors between January and March, whereas such investors sold Treasury securities, on net, in 2006. In contrast, net purchases by foreign official investors have declined somewhat this year. Custody holdings at the Federal Reserve Bank of New York on behalf of foreign official and international accounts have only edged up since the end of 2006.

#### State and Local Government

On the whole, state and local governments continue to enjoy strong fiscal positions as a consequence of several years of robust revenue inflows and a period of appreciable restraint on spending after these governments' fiscal difficulties earlier in the decade. Accordingly, over the past year or so, states and localities in the aggregate have been able both to raise expenditures and to maintain healthy balances in their reserve funds. However, revenue flows in many states appear to have slowed a bit of late, a pattern similar to the one that has emerged at the federal level. For local governments, property tax receipts are still being bolstered by the earlier run-up in real estate values, but the deceleration in house prices over the past year will likely slow the rise in local revenues down the road. Moreover, many state and local governments expect to face significant structural imbalances in their budgets in coming years as a result of the ongoing pressures from Medicaid and the need to provide pensions and health care to an increasing number of retired state and local government employees.

According to the NIPA, real expenditures on consumption and gross investment by state and local governments rose at an annual rate of nearly 4 percent in the first quarter, and they apparently posted a further increase in the second quarter. Much of the strength in the first half of 2007 was in construction spending, which has been climbing since the start of 2006, in part because of very rapid increases in outlays on highways. Hiring by states and localities also exhibited considerable vigor during the first half of 2007, both in the education sector and elsewhere; on average, state and local government employment rose 30,000 per month over the six months ending in June, compared with an average monthly increase of 22,000 over the preceding ten years.

#### State and Local Government Borrowing

Borrowing by state and local governments has been strong thus far in 2007, largely because refundings in advance of retirements have been elevated as interest rates have remained relatively low. In contrast, issuance of shortterm debt has been moderate—a development consistent with the strong budgets of state and local governments. The credit quality of municipal bonds has remained solid on the whole, as the number of bond-rating upgrades has outpaced the number of downgrades thus far this year. The ratio of yields on municipal bonds to those on comparablematurity Treasury securities has stayed at the low end of its range of the past decade.

#### The External Sector

In 2006, U.S. real net exports made a positive contribution to the full year's economic growth for the first time since 1995. The contribution of net exports moved into negative territory again, however, in the first quarter of this year, as imports rebounded and exports slowed from their exceptional pace late last year. Data for April and May point to a resurgence of exports and a moderation of imports in the second quarter.

The U.S. nominal current account deficit widened a bit in the first quarter of 2007 to \$770 billion at an annual rate, or about 5¾ percent of nominal GDP, from \$752 billion in the fourth quarter of 2006. The larger deficit was due to an increase in net unilateral transfers abroad. Although the first-quarter trade balance deteriorated in real terms, increases in export prices outpaced those in import prices, thereby leaving the nominal trade balance unchanged. Despite the large negative U.S. net international investment position, the U.S. balance on investment income remained positive and also was about unchanged in the first quarter.

#### International Trade

Despite continued solid foreign economic expansion and persisting stimulus from earlier declines in the dollar, the growth of real exports of goods and services slowed to an annual rate of less than 1 percent in the first quarter

U.S. trade and current account balances, 1999-2007



NOTE: The data are quarterly and extend through 2007:Q1. SOURCE: Department of Commerce.

Change in real imports and exports of goods and services, 1999–2007



SOURCE: Department of Commerce.

from its exceptionally strong pace of more than 10 percent in the fourth quarter. The slowdown was particularly evident in sales of capital goods—especially aircraft and computers—and industrial supplies, which fell in the first quarter after rising robustly in late 2006. Also contributing to the slowdown, real exports of services rose only 2 percent in the first quarter after increasing more than 16 percent in the fourth quarter. Available data for nominal exports in April and May suggest that real export growth moved up in the second quarter, as increases in exports of services, automobiles, industrial supplies, and consumer goods more than offset a further contraction in exports of capital goods.

Prices of exported goods rose at an annual rate of 4 percent in the first quarter of 2007, up from the pace of about 2½ percent seen in the second half of 2006. Prices of non-agricultural industrial supplies, which had been reduced in the fourth quarter by lower oil prices, were pushed up in the first quarter by higher prices for metals and renewed increases in oil prices. In addition, agricultural prices—especially those of corn, soybeans, and wheat—have risen briskly over the past several quarters, in part because of the direct and indirect effects of the increased demand for ethanol. Monthly data on trade prices in the second quarter point to further increases in export prices on the strength of additional run-ups in the prices of non-agricultural industrial supplies, most notably metals.

After falling at an annual rate of 2<sup>1</sup>/<sub>2</sub> percent in the fourth quarter, real imports of goods and services rose at a 5<sup>1</sup>/<sub>2</sub> percent rate in the first quarter. A sharp increase in oil imports, after a fourth-quarter decline, was the most important contributor to the swing, but imports of computers, semiconductors, and natural gas also accelerated. Imports of other goods continued to be weak, likely

a result, in part, of slower U.S. growth; imports of autos and industrial supplies, in particular, contracted sharply. The growth of real imports of services dropped from 6¼ percent in the fourth quarter to 2¾ percent in the first quarter. Data for April and May imply some slowing of overall real imports in the second quarter. In particular, imports of oil and computers displayed noteworthy decelerations.

Prices of imported goods excluding oil and natural gas rose at an annual rate of about 1½ percent in the first quarter of 2007, as prices of both finished and materialintensive goods recorded higher rates of increase. Monthly trade price data suggest that import prices accelerated in the second quarter, partly because of higher metals prices, which have fluctuated widely in recent months but are up substantially, on balance, so far in 2007. More generally, prices of industrial supplies have been rising briskly, a movement that may reflect, in part, a response to the depreciation of the dollar in recent months. No such effect of the dollar's decline is readily apparent in the prices of finished goods.

Oil prices fell at the beginning of 2007, as unusually mild temperatures reduced oil demand and OPEC members appeared less likely to implement fully production cuts agreed to at the end of 2006. The spot price of West Texas intermediate (WTI) crude oil, the U.S. benchmark, fell from an average of \$62 per barrel in December to \$54 per barrel in January. Oil prices then rose gradually as it became apparent that OPEC, led by Saudi Arabia, indeed would restrain oil production further. Oil prices also have been supported by solid growth in demand, particularly in developing countries, and by long-running concerns

Prices of oil and of nonfuel commodities, 2003-07



Note: The data are monthly. The price of nonfuel commodities extends through June 2007. The last observation for the oil price is the average for July 1 through July 13, 2007. 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. about supply disruptions. Ongoing violence has depressed oil production in Iraq and Nigeria; the Nigerian outage recently worsened to about one-fourth of the country's estimated capacity. Since the start of the year, concerns have also intensified about a possible future disruption of oil exports from Iran. The spot price of WTI averaged \$72 per barrel in the first half of July.

Despite its elevated level by historical standards, the spot price of WTI has not increased as much in recent months as have the prices of other grades of crude oil because of high inventories of WTI in the central United States arising from interruptions for maintenance and unplanned outages at refineries. Since early March, the spot price of Brent crude oil, the European benchmark, has risen about \$5 per barrel more than has the spot price of WTI; the price of Brent averaged \$76 per barrel in the first half of July.

#### The Financial Account

The U.S. nominal current account deficit continued to be financed primarily by foreign purchases of U.S. debt securities. Driven by purchases of U.S. government securities by Asian central banks, foreign official inflows moved up noticeably in the first quarter. Although demand for U.S. Treasury securities by foreign official investors eased, it was more than offset by increased official purchases of bonds and mortgage-backed securities issued by government-sponsored enterprises (GSEs). Preliminary data indicate that official inflows remained strong through April.

Foreign private purchases of U.S. securities maintained the extraordinary pace set in 2006. Demand for U.S. Treasury bonds extended its fourth-quarter strength, while demand for equities picked up from an already robust level; purchases of corporate bonds moderated slightly,

U.S. net financial inflows, 2003-07



NOTE: The data are quarterly and extend through 2007:Q1. SOURCE: Department of Commerce.



Net private foreign purchases of long-term U.S. securities, 2003–07

and, on net, private foreigners sold debt issued by GSEs. Foreign direct investment flows into the United States weakened significantly; the rate of inflows in the first quarter was roughly half that in 2006.

Net purchases of foreign securities by U.S. residents, which represent a financial outflow, remained strong in the first quarter of this year. Net acquisitions of bonds continued at the brisk pace recorded in the second half of 2006, while purchases of foreign stocks, although slowing slightly, remained elevated. Outflows associated with U.S. direct investment abroad strengthened to a near-record rate.

#### The Labor Market

#### Employment and Unemployment

The demand for labor has been increasing at a moderate rate this year, somewhat less quickly than in 2006. After having averaged 190,000 per month in 2006, gains in payroll employment averaged 145,000 per month in the first half of 2007. The civilian unemployment rate has changed little since last fall and stood at 4.5 percent in June.

As was the case in 2006, job growth in the first half of 2007 was driven by solid gains in service-producing industries. In particular, hiring at health, education, and eating and drinking establishments remained on strong uptrends, and job gains at businesses providing professional and technical services were sizable. However, employment in the financial activities and administrative support sectors softened after two years of strong advances. In the goods-producing sector, manufacturing employment, which has been on a secular downtrend for more than a quarter-century, declined again over the first

#### Net change in payroll employment, 2001–07



NOTE: Nonfarm business sector.

SOURCE: Department of Labor, Bureau of Labor Statistics.

half of 2007. The decline this year reflected cutbacks at firms closely tied to the construction industry and at producers of motor vehicles and parts, as well as the ongoing downtrend in payrolls at manufacturers of apparel and textiles. Employment in residential construction, which had fallen in 2006 after two years of substantial increases, declined just modestly, on net, over the first half of 2007 despite the substantial contraction in housing activity.

Other labor market indicators have mostly remained positive. Initial claims for unemployment insurance have stayed relatively low in recent months. In addition, readings from private surveys of hiring plans have remained in a favorable range despite recent declines, and the job openings rate has held at a high level. According to the Conference Board, households' assessments of job availability cooled a bit in the spring after having improved somewhat earlier in the year; even so, the June value for this indicator was still relatively positive.

Civilian unemployment rate, 1974-2007



NOTE: The data are monthly and extend through June 2007. SOURCE: Department of Labor, Bureau of Labor Statistics.

NOTE: The data are quarterly and extend through 2007:Q1. SOURCE: Department of Commerce.



#### Labor force participation rate, 1974–2007



After hovering around 4<sup>3</sup>/<sub>4</sub> percent during the first three quarters of 2006, the unemployment rate fell to 4<sup>1</sup>/<sub>2</sub> percent in the fourth quarter, and it remained in that neighborhood through June. The labor force participation rate has continued to be buoyed by the favorable job market, and it stood at 66.1 percent in June, within the narrow range that has prevailed since 2005. Despite the recent flatness, the participation rate has fallen appreciably since the start of the decade; the downtrend has largely reflected longer-run demographic forces that include a leveling off in the participation rate of women and an increase in the proportion of the workforce in older age groups, which have lower average participation rates than do younger age groups.

#### Productivity and Labor Compensation

Gains in labor productivity have slowed lately. According to currently published data, output per hour in the nonfarm business sector rose just 1 percent over the year ending in the first quarter of 2007, down from the pace of 2 percent per year recorded over the preceding two years (and down from much larger increases in the first half of the decade). The slowing in productivity was associated with the deceleration in output and thus was probably, at least in part, a temporary cyclical phenomenon. Indeed, the fundamental forces that in recent years have supported a solid uptrend in underlying productivity-the driver of real wage gains over time-remain in place. They include the rapid pace of technological change and firms' ongoing efforts to use information technology to improve the efficiency of their operations. Increases in the amount of capital, especially high-tech capital, available to each worker also appear to be providing considerable impetus to productivity growth.



# 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

Broad measures of hourly compensation have been bounced around in recent years by the lumpiness of bonus payments, stock option exercises, and sharp swings in employer benefit costs. However, on balance, the evidence points to some pickup recently in the underlying pace of compensation gains, a development consistent with the tight labor market. The employment cost index (ECI) for private industry workers, which measures both wages and the cost of benefits, increased 3<sup>1</sup>/<sub>4</sub> percent in nominal terms between March 2006 and March 2007, compared with an

Measures of change in hourly compensation, 1997–2007



NOTE: The data are quarterly and extend through 2007: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 output per hour, 1948-2007



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.

increase of 2½ percent over the preceding twelve months. Adjusted for inflation, as measured by the increase in the overall PCE price index, the ECI rose nearly 1 percent over the year ending in March after having fallen nearly ½ percent over the preceding year. Data on hourly compensation in the second quarter are not yet available, but a sharp rise in overall consumer prices during that period probably offset much—if not all—of the nominal gains that were realized.

The step-up in the rate of increase in the ECI over the past year was concentrated in its wage and salary component, which rose 3<sup>1</sup>/<sub>2</sub> percent over the year ending in March, 1¼ percentage points more than the increase over the year-earlier period. Meanwhile, increases in the cost of providing benefits have slowed dramatically of late, in part because premiums for health insurance have stopped rising at double-digit rates. The increase in benefit costs over the year ending in March, which amounted to just 2<sup>1</sup>/<sub>4</sub> percent, was also held down by a sharp drop in employer contributions to retirement plans. The lower contributions appear to have reflected several factors, including the strong performance of the stock market in 2006 and a high level of employer contributions over the past several years; taken together, these factors significantly boosted the funding levels of defined-benefit plans.

According to preliminary data, compensation per hour in the nonfarm business (NFB) sector—an alternative measure of hourly compensation derived from the data in the NIPA—rose 3<sup>1</sup>/<sub>4</sub> percent over the year ending in the first quarter of 2007, the same rise as in the ECI. Over the year ending in the first quarter of 2006, NFB hourly compensation had risen 5<sup>3</sup>/<sub>4</sub> percent, in part because of an apparent surge in the value of stock option exercises (which are excluded from the ECI) early last year. Largely reflecting the slower growth in NFB hourly compensation, unit labor costs rose  $2\frac{1}{4}$  percent over the year ending in the first quarter of 2007 after increasing  $3\frac{1}{2}$  percent over the preceding four quarters.

#### Prices

Headline inflation picked up again in the first half of 2007, as energy prices surged after having eased late last year and increases in food prices quickened. The PCE chain-type price index increased at an annual rate of 4.4 percent between December 2006 and May 2007 after rising 2.2 percent over the twelve months of 2006. Core PCE prices—which exclude the direct effects of movements in food and energy prices—rose at an annual rate of 2.0 percent over the first five months of the year, 0.1 percentage point less than the increase over the twelve months of 2006.

Energy prices, which had fallen substantially in the fourth quarter of 2006, decreased further in January in response to declines in the price of crude oil, unseasonably mild temperatures in North America and Europe, and historically high inventories of petroleum products and natural gas. However, energy prices shot up from February to May, and the rise brought the net increase in the PCE price index for energy over the first five months of the year to 14 percent (not at an annual rate). The increase was especially large for gasoline, the price of which was boosted not only by higher prices for crude oil beginning in late winter but also by numerous refinery shutdowns, reflecting both planned maintenance and unplanned disruptions. Retail gasoline prices have fallen some since May as refiners have made some progress in bringing

Change in core consumer prices, 2001-07



NOTE: Through 2006, change is from December to December; for 2007, 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.

output closer to seasonal norms, but they are still about \$0.70 per gallon above the levels of late December.

Food prices have also picked up this year, in part because of the jump in the price of corn, which is now in demand not only as a feedstuff and food but also as an input to the production of ethanol. Between December 2006 and May 2007, the PCE price index for food and beverages increased at an annual rate of nearly 6 percent. The higher cost of corn was partly responsible for a 10<sup>1</sup>/<sub>2</sub> percent rise over the period in prices for meats, poultry, fish, and eggs. The index for fruits and vegetables also posted a double-digit increase, mainly because a severe freeze in California in January destroyed a substantial portion of the citrus crop and set back the harvest of many other fruits and vegetables. Prices for food consumed away from home, which typically are influenced more by labor and other business costs than by farm prices, rose at an annual rate of 4 percent over the first five months of the year.

The edging down of core PCE inflation this year largely reflected some waning of the sizable increases in shelter costs that were recorded in 2006. Core PCE inflation in the most recent few months was also held down significantly by transitory factors—most notably, a sharp drop in the price of apparel. In addition, the retail price of tobacco, which, like apparel, tends to be volatile from month to month, flattened out after a steep increase earlier in the year. Meanwhile, the rate of increase in the core consumer price index (CPI) has dropped from 2.6 percent in 2006 to an annual rate of 2.1 percent so far this year; the main reason for the sharper deceleration in the core CPI than in core PCE prices is that housing costs receive a much greater weight in this index than they do in the core PCE measure.

TIPS-based inflation compensation, 2003-07



Note: The data are daily and extend through July 13, 2007. 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.

Alternative measures of price change, 2006–07 Percent

reicent		
Price measure	2006	2007
Chain-type (Q1 to Q1)		
Gross domestic product (GDP)	3.1	2.8
Excluding food and energy		2.7
Gross domestic purchases		2.5
Personal consumption expenditures (PCE)	3.0	2.2
Excluding food and energy	2.0	2.3
Market-based PCE excluding food and		
energy	1.6	2.1
Fixed-weight (Q2 to Q2)		
Consumer price index	4.0	2.6
Excluding food and energy		2.3

NOTE: Changes are based on quarterly averages of seasonally adjusted data. For the consumer price index, the 2007:Q2 value is calculated as the average for April and May compared with the average for the second quarter of 2006 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.

More fundamentally, the behavior of core inflation so far this year has been shaped by many of the same forces that were at work in 2006. Resource utilization in labor and product markets remains fairly high. And although last autumn's drop in energy prices may have offered some temporary relief, the resurgence in prices for energy and other commodities is likely putting some upward pressure on core inflation. Regarding inflation expectations, the Reuters/University of Michigan Surveys of Consumers (Reuters/Michigan) suggest that the median expectation for year-ahead inflation has moved up in response to the energy-driven pickup in headline inflation: It rose from 3.0 percent in the first three months of the year to 3.3 percent in April and remained at about this level through early July. However, longer-run inflation expectations appear to have remained contained. In fact, according to the Reuters/Michigan surveys, the median five- to ten-year expectation, at 3.1 percent in early July, has stayed within the narrow range that has prevailed for the past two years. According to the Survey of Professional Forecasters, conducted by the Federal Reserve Bank of Philadelphia, expectations of inflation over the next ten years remained around 2<sup>1</sup>/<sub>2</sub> percent in the first half of 2007, a level that has been essentially unchanged since 1998. Inflation compensation as measured by the spreads of yields on nominal Treasury securities over those on their inflation-protected counterparts has also stayed within its range of recent years.

Broader, NIPA-based measures of inflation, which are available only through the first quarter of this year, slowed relative to the pace of the past couple of years. The latest data show a rise in the price index for GDP less food and energy of 2<sup>3</sup>/<sub>4</sub> percent over the year ending in the first quarter, down <sup>1</sup>/<sub>4</sub> percentage point from the year-earlier figure. Although core PCE inflation picked up slightly during the past four quarters, prices for some other components of final demand, especially construction, decelerated.

#### U.S. Financial Markets

U.S. financial markets have functioned well thus far in 2007 despite episodes of heightened volatility. As the year opened, financial market quotes put considerable weight on the expectation of an easing of monetary policy sometime soon. By the spring, however, investors apparently had become more optimistic about the economic outlook and, as a result, had concluded that less Federal Reserve easing would be forthcoming than they had anticipated earlier. In line with the upward shift in policy expectations, two-year Treasury yields rose about 10 basis points, on balance, through mid-July; ten-year yields increased 40 basis points. Supported by solid corporate profits and the more upbeat economic outlook, equity prices advanced roughly 10 percent on net. Despite some widening in recent weeks, risk spreads on corporate credits generally remained narrow, reflecting strong and liquid corporate balance sheets. Measures of investors' uncertainty about prospects for a number of financial asset prices widened somewhat, on balance, from low levels.

#### Market Functioning and Financial Stability

In late February and early March, financial market volatility increased sharply amid a pullback from riskier assets that was reportedly spurred by a variety of factors, including a sharp dip in the Chinese equity market, mounting concerns about conditions in the subprimemortgage sector, and some softer-than-expected U.S. economic data. During the period, spreads on indexes of subprime-mortgage credit default swaps (CDS) spiked; equity markets in the United States and abroad declined; Treasury yields dropped across maturities; spreads of riskier fixed-income instruments over comparable Treasuries widened somewhat; and measures of market uncertainty, including implied volatilities derived from options prices, moved up sharply. Despite some capacity-related technical difficulties in equity markets on February 27, financial markets generally handled the volatility well. Liquidity in the Treasury market continued to be good, as record-high trading volumes were accompanied by bid-ask spreads within ranges of the past few years. Market sentiment subsequently improvedapparently a result, in part, of reduced anxiety about spillovers to broader markets of the problems in the subprime-mortgage sector-and financial markets gradually stabilized. Many asset prices reversed their Implied S&P 500 volatility, 2000-07



NOTE: The data are weekly and extend through July 13, 2007. The series shown-the VIX-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.

SOURCE: Chicago Board Options Exchange.

earlier declines, and measures of uncertainty moved lower.

Strains in financial markets increased again late in the spring, prompted largely by renewed concerns about the subprime-mortgage sector. A considerable widening in spreads on indexes of subprime-mortgage CDS contributed to, and was likely reinforced by, troubles at a few small and medium-sized hedge funds that had taken positions designed to profit from an improvement in subprime credit quality. These pressures intensified as a result of actual and anticipated downgrades of some securities backed by subprime mortgages. Investors' uncertainty

### Spreads on BBB- indexes of credit default swaps on subprime mortgages, 2006–07



NOTE: The data are daily and extend through July 13, 2007; the spreads are relative to libor. The series shown refer to pools of mortgages originated in specific half-years, as follows: Series 2007-1 corresponds to mortgages originated in 2006:H2, series 2006-2 to those originated in 2006:H1, and series 2006-1 to those originated in 2005:H2.

about a range of asset prices increased, and lower-quality corporate credit spreads widened, reportedly reflecting, in part, heightened uncertainty about the valuation of structured credit products, which are an important source of funding in the subprime-mortgage market and in other financing markets. These pressures have been contained, though: In spite of the recent rise, spreads on lower-quality corporate credits remain near the low end of their historical ranges, and, although investors recently have balked at some aggressively structured deals, financing activity in bond and other credit markets continues at a fairly brisk pace. Market participants do not appear to have pulled back from risk-taking more generally, in that equity prices have moved higher in recent weeks, and Treasury bid-ask spreads have stayed within normal ranges despite elevated trading volumes.

The effects on financial institutions of this year's difficulties in the subprime-mortgage sector have depended on the institutions' exposure to the sector. Several mortgage lenders-particularly monoline subprime lendersexperienced substantial losses, as they had to repurchase larger-than-expected volumes of previously securitized loans because of so-called early payment defaults. Consequently, a number of these lenders have gone out of business since the beginning of the year. Large investment banks active in the securitization of subprime mortgages suffered modest hits to their earnings, and their CDS spreads are considerably higher than at the beginning of the year. To date, most large depository institutions appear to have been less affected by the subprime difficulties, in part because of their greater diversification and generally limited subprime lending activity. CDS spreads for these institutions have moved up only a little, on the whole, thus far in 2007.

#### Interest Rates

Since the beginning of the year, investors appear to have become more optimistic, on balance, about the outlook for economic activity and consequently have raised their expected path for the federal funds rate. Judging from futures markets, market participants currently anticipate that the rate will decline about 25 basis points through the end of 2008; at the end of last year, market participants had expected about 75 basis points of easing over the same period. Investors also have apparently become more certain about the path for the federal funds rate: Implied volatilities derived from options on Eurodollar futures over the next year have moved down, on net, this year and remain near historical lows. Estimated probability distributions for the target federal funds rate between six and twelve months ahead were somewhat skewed toward lower rates through mid-July.

Interest rates on selected Treasury securities, 2003-07



NOTE: The data are daily and extend through July 13, 2007. SOURCE: Department of the Treasury.

Spreads of corporate bond yields over comparable off-the-run Treasury yields, by credit rating, 1998–2007



NOTE: The data are daily and extend through July 13, 2007. The spreads shown are the yields on ten-year bonds less the ten-year Treasury yield. SOURCE: Derived from smoothed corporate yield curves using Merrill Lynch bond data.

Reflecting the reduced odds placed on policy easing, yields on two-year nominal Treasury securities increased about 10 basis points over the year through mid-July. Tenyear Treasury yields rose 40 basis points over the same period. A portion of the increase in longer-term yields appears to be attributable to a widening of term premiums, although estimated term premiums remain relatively low by historical standards. Yields on inflation-indexed Treasury securities moved nearly in line with those on their nominal counterparts, thereby leaving inflation compensation only a little higher.

In the corporate bond market, yields on investmentand speculative-grade securities rose about as much, on balance, as those on comparable-maturity Treasury securi-

#### Stock price indexes, 2005-07



NOTE: The data are daily and extend through July 13, 2007. SOURCE: Frank Russell Company; Dow Jones Indexes.

ties through mid-July, and so risk spreads on such instruments are little changed on the year. The narrow spreads on corporate bonds appear to reflect investors' positive outlook for business credit quality over the medium term. The term structure of forward risk spreads for corporate bonds supports this view, as forward spreads for the next few years are low while spreads further out the curve are more in line with historical norms.

#### Equity Markets

Broad equity indexes increased between 8<sup>1</sup>/<sub>2</sub> percent and 12 percent, on net, through mid-July. Stock prices were boosted by solid first-quarter earnings that generally met or exceeded investors' expectations and by the more upbeat economic outlook. Share prices rose for a wide range of industries, although basic materials and energy firms outperformed the broader market because of strong global demand for commodities. The spread between the twelve-month forward earnings-price ratio for the S&P 500 and a real long-run Treasury yield-a rough gauge of the equity risk premium-narrowed a bit and now stands close to the middle of its range of the past few years. After a spike in connection with the period of unsettled conditions in financial markets in late February and early March, the implied volatility of the S&P 500 calculated from options prices fell back, but it picked up again recently in response to renewed concerns about the subprime-mortgage market.

#### Debt and Financial Intermediation by Banks

The total debt of the domestic nonfinancial sectors expanded at an annual rate of 7<sup>1</sup>/<sub>4</sub> percent in the first

#### Change in domestic nonfinancial debt, 1991–2007



NOTE: For 2007, change is from 2006:Q4 to 2007: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.

quarter of 2007, a somewhat slower pace than in 2006. The deceleration in borrowing was mainly accounted for by a slowdown in household debt, particularly mortgage debt. In contrast, borrowing by nonfinancial businesses remained robust in the first quarter. Preliminary data for the second quarter suggest slightly slower growth in total domestic nonfinancial sector debt. The step-down in growth is particularly noticeable in the federal government sector, in which strong receipts this tax season held down borrowing. However, the recent data suggest somewhat faster growth in nonfinancial business debt in the second quarter, a pickup fueled by heavy merger and acquisition activity.

Commercial bank credit increased at an annual rate of about 6½ percent in the first half of 2007. However, adjusted to remove the effects of a conversion of a bank to a thrift institution, bank credit expanded at an annual rate of about 8½ percent over the same period, somewhat slower than in 2006.

Excluding this bank-to-thrift conversion, total loans grew briskly in the first half of the year, with most bank loan types expanding vigorously. Rapid growth in commercial and industrial loans was supported by the continued robust merger and acquisition activity. Growth in commercial real estate loans was also strong even though construction and land development loans, a portion of which is used to fund residential development, decelerated sharply. Despite the ongoing adjustment in the housing market, residential real estate loans on banks' books (adjusted for the bank-to-thrift conversion noted earlier) expanded at a strong pace. But home equity loans grew only modestly. Because rates on these loans are generally tied to short-term market interest rates, the flattening of the yield curve last year made them a relatively more expensive source of credit. Consumer loans held by banks picked up in the first quarter, but they slowed in the second quarter.

Commercial bank profitability declined somewhat in the first quarter of 2007 but remained solid. The net interest margin of the industry continued to narrow, a likely result of ongoing competitive pressures and the flat yield curve. Bank profitability was also restrained by growth in non-interest expenses and a modest increase in provisions for loan losses. Credit quality stayed strong overall: Delinquency and charge-off rates remained generally low, although delinquency rates on residential and commercial real estate loans moved up further from last year's levels.

#### The M2 Monetary Aggregate

M2 expanded at an annual rate of about 7½ percent over the first half of 2007. The increase evidently outstripped growth in nominal GDP by a substantial margin and exceeded the rate that would have been expected on the basis of the aggregate's previous relationship with income and interest rates. M2 rose at an annual rate of 8 percent in the first quarter before slowing to a pace of 6¾ percent in

M2 growth rate, 1991-2007



Note: Through 2006, the data are annual on a fourth-quarter over fourth-quarter basis; for 2007, change is calculated from 2006:Q4 to 2007: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.

the second quarter. Liquid deposits, by far the largest component of M2, have followed a similar pattern this year. Small time deposits and retail money market funds both grew rapidly last year, as the rates paid on them moved up with short-term market interest rates. However, these components have decelerated this year because market rates have changed relatively little. Currency growth has remained modest in 2007, apparently a result of weak demand for U.S. dollars overseas.

#### International Developments

Foreign economic growth remained strong in the first quarter of 2007, supported by increased domestic demand in many key countries. Most recent indicators point to continued strength in foreign economies in the second quarter as well. Canada, the euro area, Japan, and the United Kingdom all posted above-trend growth rates in the first quarter. Although the expansion of the Japanese economy moderated somewhat in the first quarter, growth remained brisk relative to the average pace seen in recent years. Output accelerated in emerging Asia, led by China, and growth in Mexico appears to be picking up again after a lull in the first quarter.

Rising energy prices boosted consumer prices in many regions of the world last year, and, in some cases, substantial increases in food prices also contributed to inflation pressures. Broad measures of price inflation have continued to rise in many foreign economies this year, as economic growth has remained strong, and core inflation has moved up noticeably in a number of these economies. In response, monetary policy has been tightened in many



Consumer prices for major foreign economies, 2004-07

SOURCE: Haver

SOURCE: Federal Reserve Board, Statistical Release H.6, "Money Stock Measures."

NOTE: The data are monthly; they extend through May for Canada, Japan, and the United Kingdom and through June for the euro area. Change is from one year earlier.



Equity indexes in selected foreign industrial economies, 2006–07

SOURCE: Bloomberg.

major industrial countries as well as in some emergingmarket economies. Longer-term foreign interest rates have also risen.

Global financial markets were calm at the beginning of 2007, and volatilities for many asset prices were at, or close to, record lows. Toward the end of February, conditions changed, as international investors scaled back their exposure to risky positions—particularly those funded in yen—in response to a sharp drop in Chinese stock prices and concerns about the U.S. economy. As a result, equity

Equity indexes in selected emerging-market economies, 2006–07



Note: The data are weekly. The last observation for each series is the week ending July 13, 2007. For the Latin American and Asian groups, each economy's index weight is its market capitalization as a share of the group's total. The Latin American economies are Argentina, Brazil, Chile, Colombia, Mexico, Peru, and Venezuela. The Asian economies are China, India, Indonesia, Malaysia, Pakistan, the Philippines, South Korea, Taiwan, and Thailand. The series for China is the Shanghai Composite Index.

SOURCE: For Latin America and Asia, Morgan Stanley Capital International (MSCI) index; for China, Bloomberg.

Yields on benchmark government bonds in selected foreign industrial economies, 2004–07



NOTE: The data are for ten-year bonds and are weekly. The last observation for each series is the week ending July 13, 2007. SOURCE: Bloomberg.

prices in most industrial and emerging economies fell over the course of several days, while the yen appreciated sharply against most other currencies.

More-placid conditions returned in early March, and by early June share prices around the world had posted solid gains, reaching multiyear highs or even record highs in many countries. In particular, Chinese stock prices resumed their steep climb, although the rise was interrupted by occasional additional periods of heightened volatility. These episodes had no apparent disruptive effects on other global financial markets.

Most major global equity indexes experienced another increase in volatility during June and July amid concerns about the U.S. subprime-mortgage market, but they were little changed, on net, over this period. On balance, equity indexes in the major foreign industrial countries have increased between 5 percent and 12 percent in local-currency terms since the beginning of 2007. The Shanghai composite index is up more than 45 percent this year after a remarkable increase of about 130 percent last year. Leading equity indexes in other emerging Asian economies and in Latin America have also posted sizable gains in the range of 10 percent to 35 percent so far this year.

As in the United States, long-term bond yields in Canada, the euro area, and Japan rose significantly, on balance, in the first half of 2007; increases on ten-year nominal sovereign debt ranged from 25 to 70 basis points. Starting in early February, yields declined in global markets for several weeks amid growing concerns about the outlook for the U.S. economy. Since then, market participants seem to have become more optimistic about prospects for both U.S. and foreign economic growth, and yields have more than reversed the declines. Yields on

Note: The data are weekly. The last observation for each series is the week ending July 13, 2007.

U.S. dollar nominal exchange rate, broad index, 2004–07



NOTE: The data are weekly and are in foreign currency units per dollar. The last observation is the week ending July 13, 2007. 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 the most important 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.

inflation-protected long-term securities also rose during the first half of 2007 in the major industrial countries, but, with the exception of those in the euro area, they did not rise quite as much as nominal yields did, implying some modest increases in inflation compensation.

Our broadest measure of the nominal trade-weighted foreign exchange value of the dollar has declined about  $3\frac{1}{2}$  percent, on net, since the beginning of 2007. Over the same period, the major currencies index of the dollar has moved down more, about  $4\frac{1}{2}$  percent. On a bilateral basis, the dollar has depreciated 10 percent against the Canadian dollar and roughly  $3\frac{1}{2}$  percent against the euro and sterling; in contrast, it has appreciated about

U.S. dollar exchange rate against selected major currencies, 2004–07



NOTE: The data are weekly and are in foreign currency units per dollar. The last observation for each series is the week ending July 13, 2007. SOURCE: Bloomberg. 2<sup>1</sup>/<sub>2</sub> percent against the yen. The bulk of the change against the Canadian dollar occurred in the second quarter after better-than-expected news about economic activity and expectations of monetary policy tightening in Canada. The U.S. dollar has depreciated 3 percent, on net, against the Chinese renminbi since the beginning of 2007; the pace of change in the renminbi–dollar rate has accelerated somewhat over the past two and a half months.

#### Industrial Economies

The major foreign industrial economies experienced above-trend growth in the first quarter of this year. In Canada, real GDP grew at an annual rate of 3<sup>3</sup>/<sub>4</sub> percent after rising nearly 2 percent during 2006; inventory accumulation figured prominently in the faster growth. In the United Kingdom, real GDP increased at an annual rate of 2<sup>3</sup>/<sub>4</sub> percent in the first quarter. Robust expansions in both countries have been accompanied by increases in inflation rates, which in recent months have hovered at or above those countries' inflation targets of 2 percent. Although the pickup in headline inflation partly reflected higher energy prices, core inflation has also trended up in recent months in both Canada and the United Kingdom. In the midst of elevated inflation and increasing rates of resource utilization, monetary policy was tightened three times this year in the United Kingdom (by 25 basis points each time) after two increases in the policy rate last year. The Bank of Canada also recently raised its policy rate 25 basis points. Market participants expect that both countries' central banks will raise their policy rates further.

Official or targeted interest rates in selected foreign industrial economies, 2004–07



NOTE: The data are daily. The last observation for each series is through July 13, 2007. The data shown are the overnight rate for Canada, the refinancing rate for the euro area, the call money rate for Japan, and the repurchase rate for the United Kingdom.

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

Growth of real GDP in the euro area moved down to 2¾ percent in the first quarter after posting growth of 31/4 percent over the four quarters of 2006. Although export growth moderated from its strong performance of 2006, recovery of domestic demand appears to have taken firmer hold, as investment accelerated in the first quarter. Private consumption in Germany had been muted earlier this year, partly because of a hike in the value-added tax at the start of the year, but lately retail sales in Germany and the euro area more broadly have picked up, on balance, from their January lows. Survey indicators of consumer and business sentiment also point to relatively strong growth in the euro area during the second quarter. Overall consumer price inflation has remained just below the European Central Bank's 2 percent ceiling since the fall of last year, while core inflation has risen to about 2 percent from around 11/2 percent last year. To combat potential inflation pressures, the Bank continued to tighten monetary policy during the first half of this year, implementing two more increases of 25 basis points in its policy rates.

Japanese economic growth moderated in the first quarter of this year to a still-brisk annual rate of 31/4 percent. Household consumption rose at a robust rate of about 3 percent, and real exports increased almost 14 percent. Investment growth slowed, although recent surveys report that businesses are optimistic about the outlook. The labor market in Japan improved further in the first five months of the year: The unemployment rate fell below 4 percent, and the ratio of job offers to applicants remained elevated. Despite the strong growth of output and improved labor markets, consumer prices were about unchanged on a twelve-month basis in May; the GDP deflator has continued to fall, though, during the period. Core consumer prices have shown small twelve-month declines over the past several months, and wages have declined relative to their year-earlier levels.

#### **Emerging-Market Economies**

Economic activity in China accelerated in the first quarter of 2007 and appears to have remained robust in the second quarter. Growth was supported by a surge in exports and a pickup in fixed investment, which had slowed somewhat in the second half of 2006. The strength of exports has resulted in a ballooning of the Chinese trade surplus. Since late 2006, inflation in China has increased—reaching a rate of 3<sup>1</sup>/<sub>2</sub> percent over the twelve months ending in May—largely because of higher food prices. Continuing rapid growth of aggregate demand and liquidity pressures from the accumulation of foreign exchange reserves have raised concerns about broader, more-sustained upward pressures on inflation. Chinese authorities have tightened monetary policy through several increases in banks' reserve requirements and two increases in interest rates so far this year; they have also continued to use sterilization operations to partially offset the effect of the reserve accumulation on the money supply.

Elsewhere in emerging Asia, real GDP surged in India and the Philippines in the first quarter and remained strong in Malaysia and Singapore. Growth was generally supported by domestic demand in all four economies. Growth held steady in South Korea, as stronger domestic demand was partially offset by a drag from net exports. Incoming data point to strength in the region in the second quarter. Outside of China, inflationary pressures in several emerging Asian economies have eased somewhat this year because of the unwinding of previous increases in food prices and, in some cases, the effect of currency appreciations. During the past year, political tensions in Thailand and uncertainty about the government's policy on capital controls have periodically disrupted markets and economic activity.

In a continuation of the deceleration that started about the middle of last year, Mexican output rose a scant ½ percent in the first quarter; manufacturing (particularly in the automobile sector) was restrained by the moderation in the U.S. economic expansion, and construction slowed sharply. Recent data on industrial production, however, suggest that growth may have rebounded in the second quarter. Mexican headline consumer price inflation continues to hover at the upper limit of the Bank of Mexico's target range of 2 percent to 4 percent. Monetary policy was tightened in Mexico in April for the first time since March 2005.

In Brazil, the growth of real GDP moderated to about 3 percent in the first quarter, as the appreciation of the Brazilian *real* weighed on the external sector. The strong *real* has also helped keep inflation in check despite fairly strong economic growth and a lowering of the policy interest rate. Economic growth in Argentina moved down in the first quarter, in part because of a contraction in exports, and reported data suggest that inflation has continued to decline. Growth in Venezuela appears to have slowed sharply so far in 2007 after three years of double-digit performances, driven by expansionary fiscal policy funded by high petroleum revenues. Venezuelan twelve-month inflation picked up to nearly 20 percent in June.