

## The Economy in Perspective

*Too much of a little thing...* Federal Reserve Board Chairman Alan Greenspan concluded his prepared testimony to the U.S. House of Representatives' Committee on Financial Services on April 30 with a comment about inflation. He noted that "...core prices by many measures have increased very slowly over the last six months. With price inflation already at a low level, substantial further disinflation would be an unwelcome development, especially to the extent it put pressure on profit margins and impeded the revival of business spending." Does this mean we have closed the door on an era in which accelerating inflation was the villainous foe of virtuous central banks? Have central banks become victims of their own success in the war against inflation?

From one perspective, concern about substantial further disinflation could be welcome. For decades, the Federal Reserve and many other central banks have reduced both the inflation rate and inflation expectations. U.S. inflation, for example, spiked at more than 14 percent in 1980; by 2002, the Consumer Price Index had fallen to 2.3 percent. The International Monetary Fund's consumer price index for industrialized countries peaked at more than 13 percent in 1980, but inflation in those countries registered 1.7 percent in 2002, an order of magnitude lower than the pace set two decades earlier. Equally important, inflation expectations now indicate that people believe inflation will remain close to these low rates.

In macroeconomic parlance, "price stability" is stability in money's purchasing power over time, the notion that a dollar tomorrow will buy the same amount of consumer satisfaction as it will today (in an economy with positive per capita productivity growth, consumers would have more dollars, hence more total satisfaction, in the future.) If an economy characterized by price stability did experience a small inflation or deflation from time to time, few problems would be likely to arise as long as people did not expect the deviations to persist long.

But it is hard to know for sure. Very low inflation and deflation have been rare events in industrialized economies, so it has not been possible to draw statistical inferences based on their recurring features. Nevertheless, we do know from research on very large economic contractions that deflation has often been present. In their monumental work, *A Monetary History of the United States, 1867–1960*,

Milton Friedman and Anna Jacobson Schwartz observed that every significant real output decline in the United States has been associated with deflation. The most notorious episode, of course, was the Great Depression: Between 1929 and 1933, the price level fell 24 percent, while real GDP fell nearly 40 percent. Furthermore, both output and prices remained below their 1929 levels until the end of the Thirties. During the same period, the United Kingdom, Germany, and France also experienced significant output declines and deflation.

But there are counterexamples in which the United States and other countries have experienced growth during periods of mild deflation. For example, from 1880 to 1896, the wholesale price level in the United States fell 30 percent. Far from being a time of gloom and doom, this deflationary episode was a period of relative prosperity: Real income increased 85 percent, an average of nearly 5 percent each year.

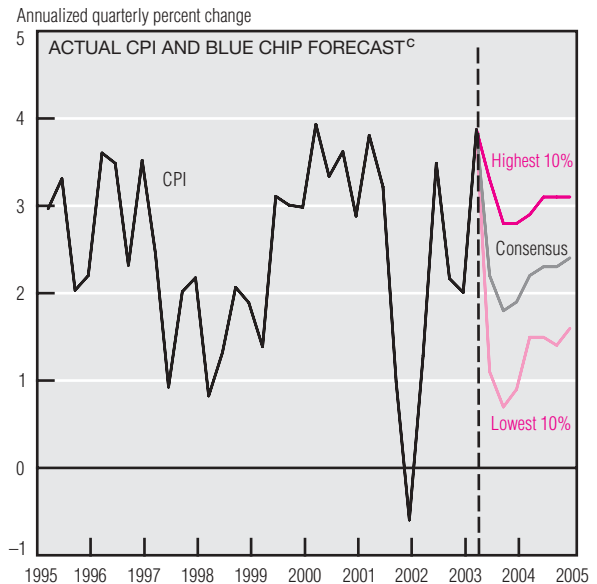
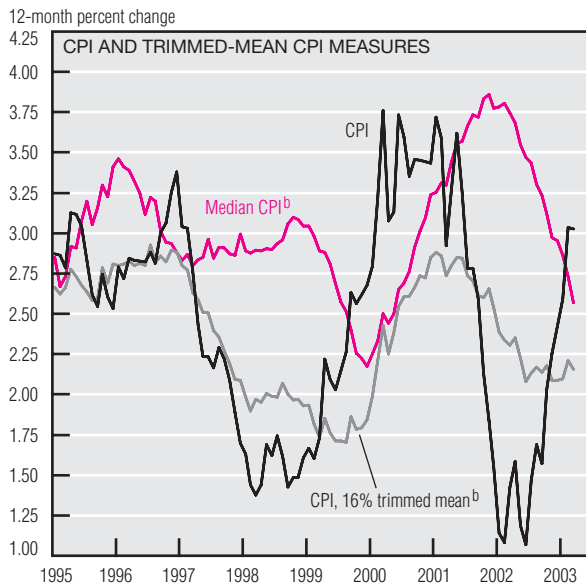
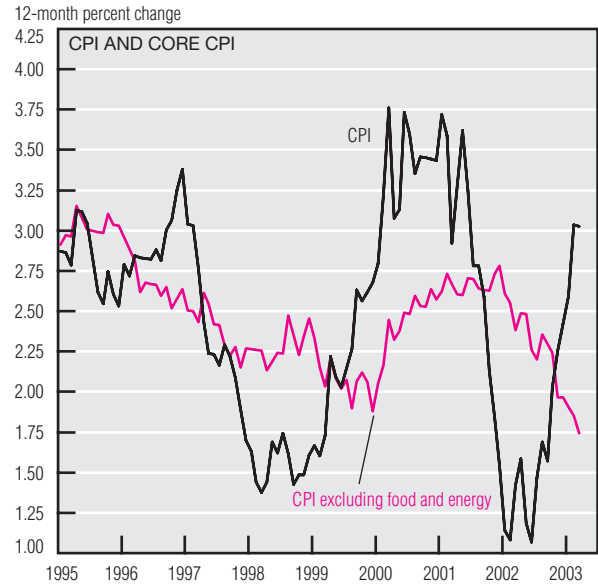
Many analysts use the recent experience of Japan—which is continuing its decade-long period of economic stagnation accompanied by a small deflation—as a cautionary example of deflation's dangers. From 1992 through 2001, Japan's real GDP growth averaged a mere 1 percent annually. The price level fell at an average rate of about 0.5 percent a year during that period; by the beginning of 2003, the country's economy had experienced deflation in four of the previous five years. But the very visible example of Japan may have overshadowed the counterexample of a neighbor: If deflation causes recession, how do we account for the situation in the People's Republic of China, where real GDP has been growing at the rate of between 6 percent and 8 percent for several years, despite deflation?

The Federal Reserve Bank of Cleveland's *2002 Annual Report* contains an essay on deflation, which conjectures that deflation in itself is not the culprit it is often made out to be. Rather, monetary economies seem capable of breaking down when interest rates approach zero, rendering money almost indistinguishable from interest-bearing assets. Although such an outcome seems remote, operating in very low inflation environments might present new challenges for central banks. But we should recognize that we have created these possibilities by vanquishing an old foe.

# Inflation and Prices

## March Price Statistics

	Percent change, last:				2002 avg.
	1 mo. <sup>a</sup>	3 mo. <sup>a</sup>	12 mo.	5 yr. <sup>a</sup>	
<b>Consumer prices</b>					
All items	4.0	5.2	3.0	2.6	2.4
Less food and energy	0.0	0.8	1.7	2.3	2.0
Median <sup>b</sup>	1.1	2.0	2.6	3.0	3.0
<b>Producer prices</b>					
Finished goods	19.1	17.4	4.2	2.1	1.2
Less food and energy	9.1	4.6	0.9	1.1	-0.5



a. Annualized.

b. Calculated by the Federal Reserve Bank of Cleveland.

c. Blue Chip panel of economists.

SOURCES: U.S. Department of Labor, Bureau of Labor Statistics; Federal Reserve Bank of Cleveland; and *Blue Chip Economic Indicators*, April 10, 2003.

The Consumer Price Index (CPI) jumped an annualized 4% in March and has risen 5.2% over the first three months of 2003. Outsized increases in energy costs were again responsible for its rapid rise; the energy sector has been an aggravating influence on the accelerating increase (on a year-over-year basis) in the cost of the representative consumer's market basket. After excluding food and energy, however, the market basket's cost increases have been mostly flat this year and have shown only a modest 1.7% increase from last year, a sign that

there has been little underlying inflationary pressure outside the energy sector. Indeed, the median CPI, an alternative measure of the general rise in consumer prices, has been moderating over the past 18 months, and its current 12-month reading of 2.6% is the lowest since mid-2000.

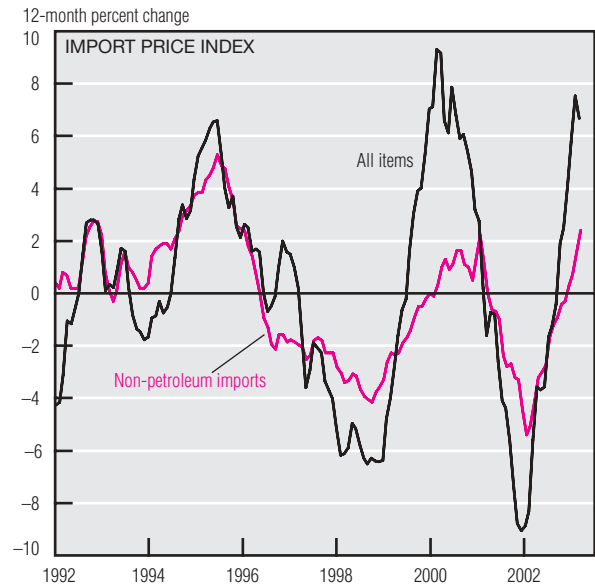
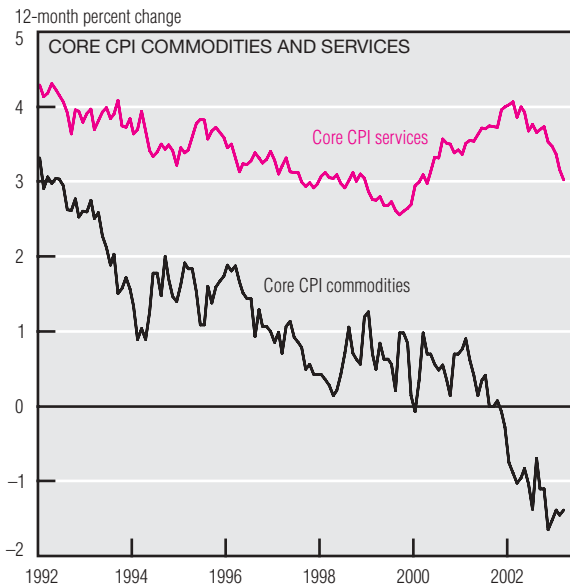
Whether the inflation trend will continue its downward course is unclear, of course, but even the most pessimistic economists do not expect the CPI's behavior to worsen. In fact, the highest 10% of inflation forecasts from the Blue Chip panel of econo-

mists predict a CPI growth trend of around 3%, the current 12-month rate. The panel's consensus forecast puts the inflation trend down around 2½% over the next 18 months, while the optimists see inflation moving down to 1½% over the same horizon.

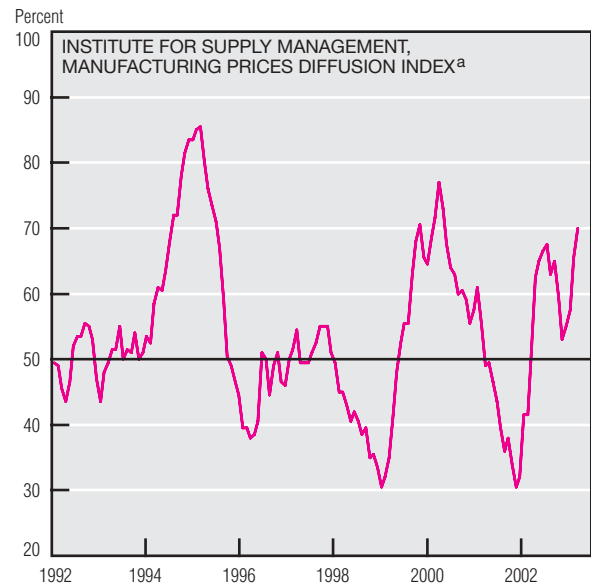
From an arithmetic perspective, the moderation in the underlying inflation trend has resulted from a downward tilt in the rate of service price increases. Excluding energy-related services, the growth trend in services prices, which seem to have peaked around 4% early last year, has

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## Inflation and Prices (cont.)



	Annualized percent change			
	3 mos.	12 mos.	5 yrs.	10 yrs.
Total manufacturing industries	15.1	4.6	2.0	1.5
Food and kindred products	5.8	2.0	1.4	1.3
Apparel and other finished products made from fabrics	0.6	0.2	0.2	0.5
Lumber and wood products except furniture	2.9	-0.9	-0.4	0.3
Furniture and fixtures	2.2	1.1	1.1	1.7
Chemicals and allied products	10.7	5.5	1.9	2.6
Petroleum refining and related products	313.2	63.7	17.4	6.2
Rubber and miscellaneous plastic products	8.9	3.0	0.9	1.1
Primary metal industries	-0.3	3.0	-0.8	0.6
Fabricated metal products except machinery and transportation equipment	1.2	1.1	0.6	1.2
Machinery except electrical	-1.4	-1.3	-0.3	-0.1
Transportation equipment	9.1	1.4	0.9	1.1
Electrical and machinery equipment and supplies	-1.5	-2.3	-1.2	-0.7



a. Not seasonally adjusted.

SOURCES: U.S. Department of Labor, Bureau of Labor Statistics; and Institute for Supply Management.

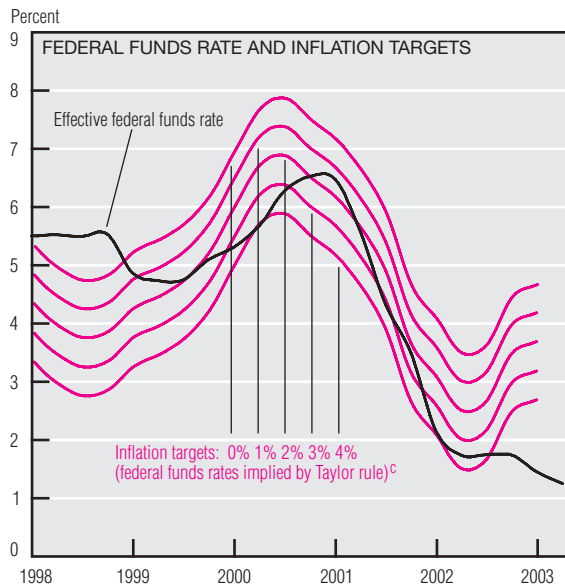
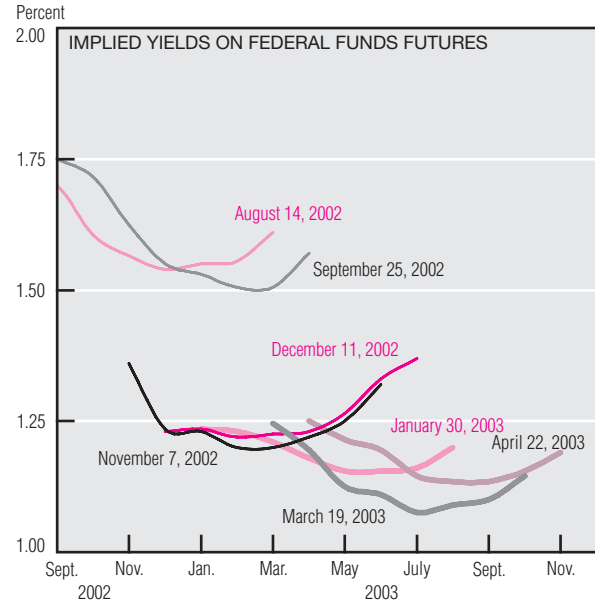
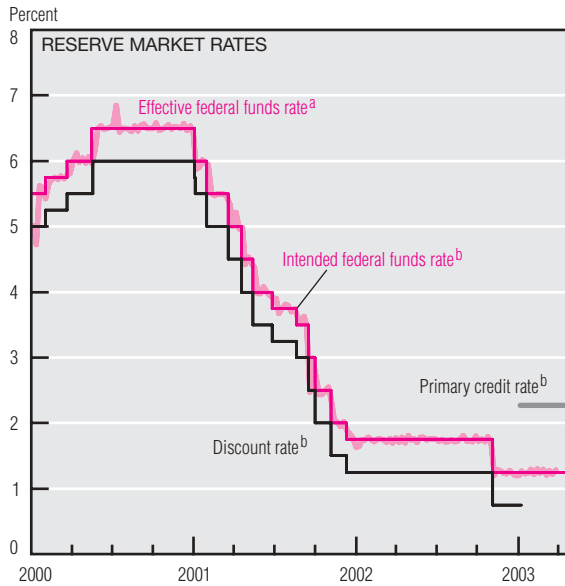
fallen steadily to about 3% since then. Because such costs account for more than half of the consumer's market basket, this downward trend has eased inflation in non-energy household expenses. Meanwhile, the cost of consumer goods (less food and energy) continues to show outright declines—down about 1½% over the past 12 months.

The persistent decline in goods prices has doubtless helped raise the specter of deflation seen by some business analysts. Certainly, outright declines in prices have been occur-

ring for certain goods, like communications equipment, for some time now. But deflation of the sort that usually troubles economists involves more than price declines in a subset of goods. Rather, deflation is a condition in which price declines are seen across a broad range of goods and services. Economists seem somewhat divided as to whether such a deflationary episode is likely in the U.S. Some of them observe that the Federal Reserve has the tools to prevent such an occurrence, but others are less confident.

Still, there may be reason to believe, albeit tentatively, that the downward slide in consumer goods prices is coming to an end. Import prices, which contributed to the drop in consumer goods prices in recent years, are now showing their largest increases in about seven years. In addition, price increases posted by U.S. manufacturers have been increasing strongly this year across a range of industries, a development that is consistent with the price hikes reported by an increasing share of the nation's purchasing managers.

# Monetary Policy



## Balance of Risks<sup>d</sup>

### Change in federal funds target rate

Statement	prior to change	-0.5	-0.25	0	0.25	0.50
Inflationary		0	0	5	3	1
Balanced		0	0	7	2	0
Weakness		6	3	3	0	0
No statement		3	0	0	0	0

a. Weekly average of daily figures.

b. Daily observations.

c. The formula for the implied funds rate is taken from the Federal Reserve Bank of St. Louis, *Monetary Trends*, January 2002, which is adapted from John B. Taylor, "Discretion versus Policy Rules in Practice," *Carnegie-Rochester Conference Series on Public Policy*, vol. 39 (1993), pp. 195-214.

d. Data taken from immediate press releases beginning in May 1999.

SOURCES: U.S. Department of Commerce, Bureau of Economic Analysis; Congressional Budget Office; Board of Governors of the Federal Reserve System; and Bloomberg Financial Information Services.

While the Federal Reserve has not changed the target federal funds rate this year (the May 6 meeting has not taken place as of this writing), the fed funds futures market sees at least a possibility that rates will be lowered from their current level of 1.25%. Futures prices are consistent with market participants' belief in a 50-50 chance of a 25 basis point cut by September.

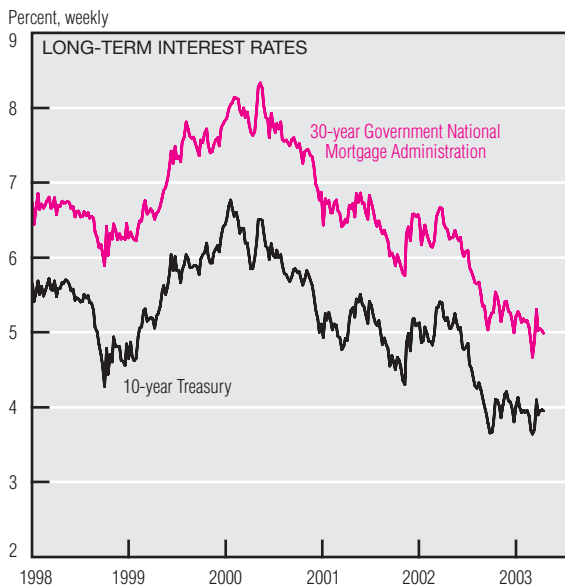
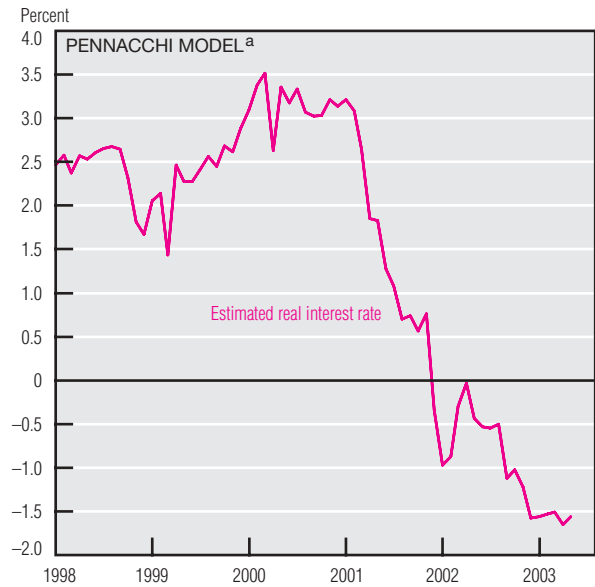
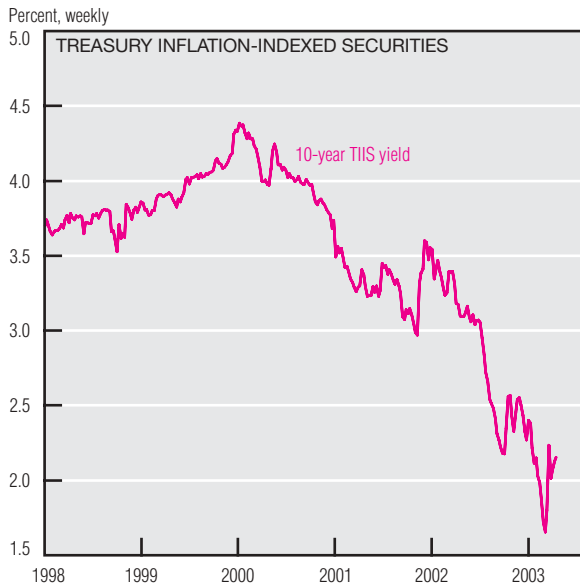
One perhaps surprising aspect of monetary policy is the extent to which the target funds rate has diverged

from the Taylor rule, which posits that the FOMC chooses the target rate as a balanced response to weakness and inflation. The Taylor rule's form depends on the weights given to inflation and output and to the assumed inflation target. While the rule has generally predicted the direction of the fed funds rate's move accurately, it has predicted increasing rates since the second quarter of 2002, at odds with actual rates' downward trend.

Many people look for guidance to the balance-of-risk statement that the FOMC has issued after each meeting

since May 1999. Do such statements contain information about future FOMC actions? It's hard to say whether using the statements would improve on a shrewd guess based on the state of the economy, but some patterns emerge. A statement that there is a risk of weakness has most often been followed by a cut in rates, although the most common response after an inflationary risk statement has been no move. And a downward move has never followed a statement of balanced risks.

# Money and Financial Markets



a. The estimated real interest rate is calculated using the Pennacchi model of inflation estimation and the median forecast for the GDP implicit price deflator from the Survey of Professional Forecasters. Monthly data.  
 SOURCES: Bloomberg Financial Information Services; Jonathan B. Berk, "A Simple Approach for Deciding When to Invest," *American Economic Review*, vol. 89 (1999), pp. 1319–26; and *Wall Street Journal*.

While the Federal Reserve controls several *nominal* interest rates, the real economy is affected by *real* rates, that is, rates adjusted for inflation. Treasury inflation-indexed securities (TIPS) adjust their principal and interest for inflation, giving a direct measure of real rates. It is also possible to estimate real rates using inflation expectations; for example, the Pennacchi approach estimates 30-day real interest rates to have been negative since late 2001. Both short and long rates have fallen substantially since early 2002, although they remain at or near their levels at the beginning of 2003.

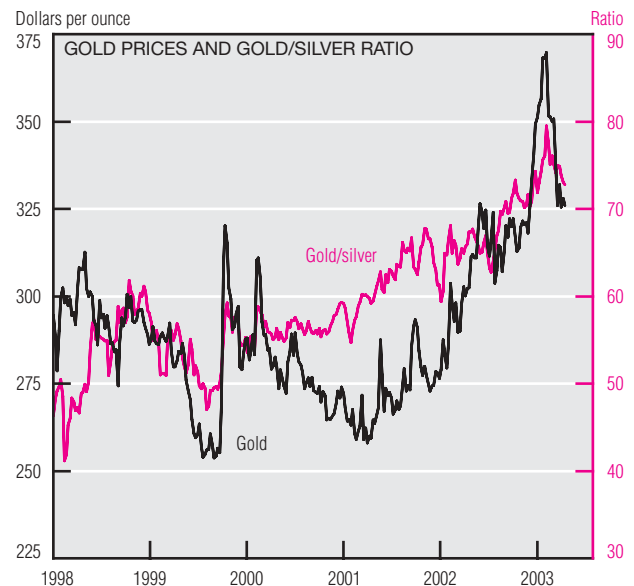
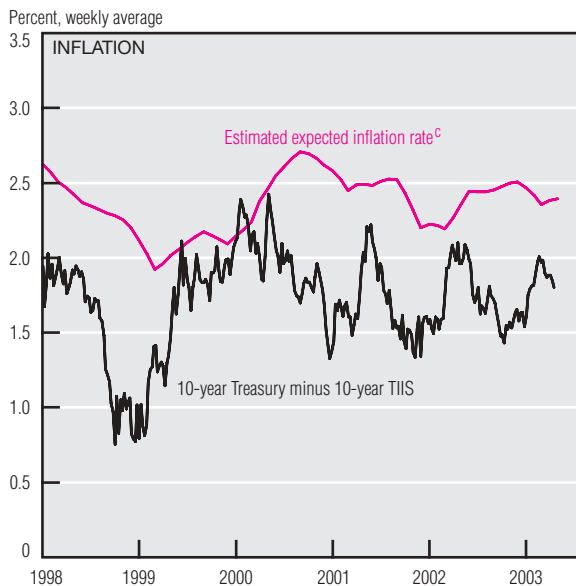
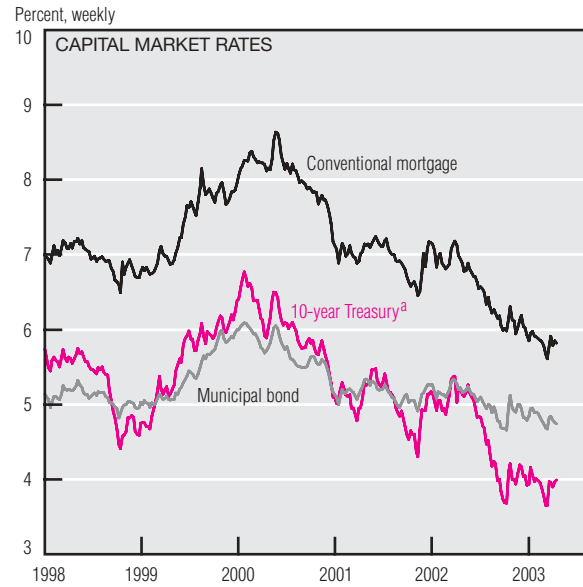
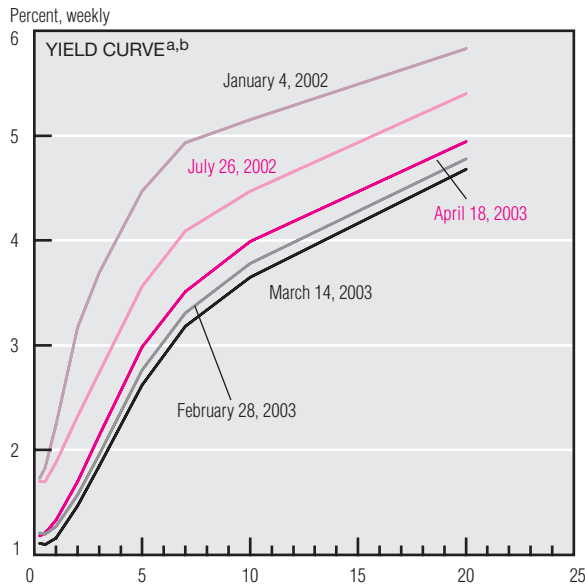
Real rates matter because they influence investment. Businesses must decide which gives them the better return, buying a bond or buying new equipment. A high real rate makes investment projects less profitable. One must be careful to consider the appropriate real rate, however, since most projects implicitly embed a subtle option—the option to wait. That is, if you don't buy that new stamping machine today, you can buy it next month. If real interest rates rise, this has two contrary effects: The future profits from the machine look worse than the high interest rate of the

bond, but delaying those profits for another month also looks worse. The increase in real rates has an ambiguous effect on investment.

One way to adjust for this problem is to use bonds that themselves embed an option. Fortunately, rates on these "callable" bonds are readily available. "Callable" means that the issuer can buy them back at a previously specified price. Such bonds generally aren't protected against inflation, however, so finding their real rate requires an inflation adjustment. The bottom right chart takes a common callable

(continued on next page)

## Money and Financial Markets (cont.)



a. All yields are from constant-maturity series.

b. Average for the week ending on the date shown.

c. The estimated expected inflation rate is calculated using the Pennacchi model of inflation estimation and the median forecast for the GDP implicit price deflator from the *Survey of Professional Forecasters*. Monthly data.

SOURCES: Board of Governors of the Federal Reserve System, "Selected Interest Rates," *Federal Reserve Statistical Releases*, H.15; Bloomberg Financial Information Services; and *Wall Street Journal*.

instrument, the 30-year Government National Mortgage Administration bond, and subtracts, as an inflation estimate, the yield difference between a 10-year Treasury bond and 10-year TIIS. Although its pattern resembles that of the 10-year TIIS rate, the option-adjusted rate is higher and, in addition, has fallen more since the end of 2001: 182 basis points (bp) versus 147 bp.

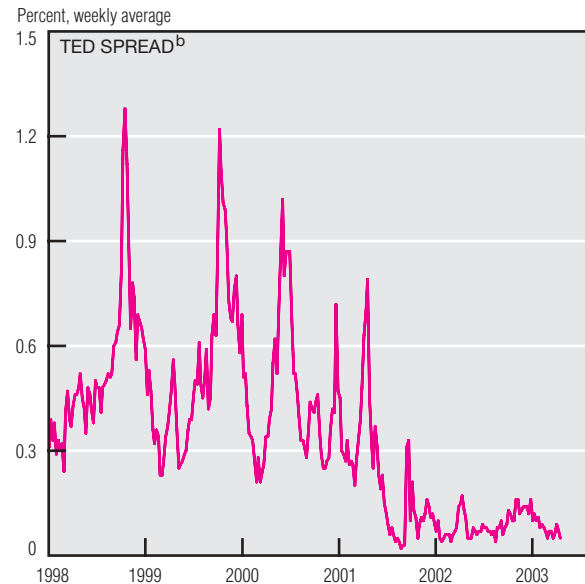
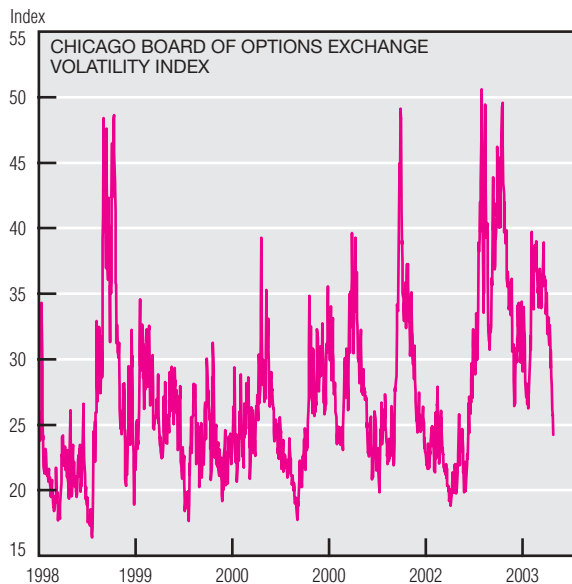
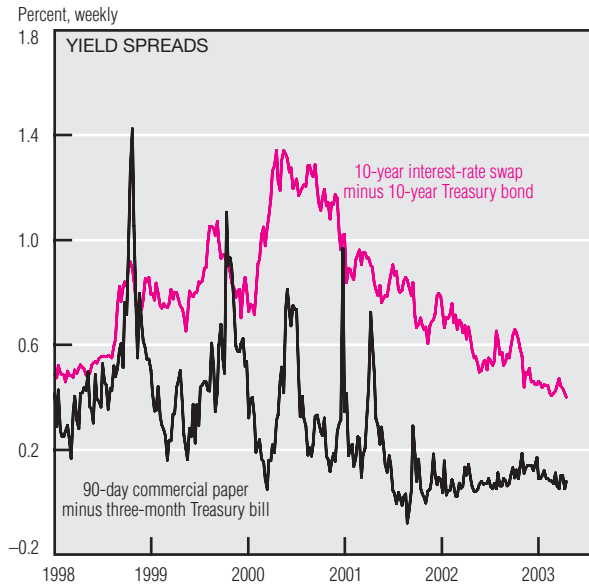
Since last month, the yield curve has moved up and gotten steeper. The 10-year, three-month spread has risen

from 254 bp to 281 bp, remaining well above its historical average of 120 bp. If past performance is any indication, this predicts strong economic growth in the year ahead. The two-year, three-month spread is watched because inversions are thought to indicate that monetary policy rates are out of line with the market; however, the spread has increased from 36 bp to a robust 62 bp. Other long-term rates have followed the general pattern of long-term Treasuries, although so far this year, municipal bond rates have not recovered from their precipitous fall.

Central banks may operate by affecting interest rates, but keeping inflation within appropriate bounds remains a major goal. The difference between nominal yields (Treasury bonds) and real yields (TIIS) gives a market-based measure of inflationary expectations. Although these long-run expectations have notched downward recently, they are still close to  $\frac{1}{2}$  percentage point higher than in mid-2002. Shorter-term expectations produced by the Pennacchi approach have been somewhat steadier.

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## Money and Financial Markets (cont.)



a. Merrill Lynch AA, BBB, and High Yield Master II indexes, each minus the yield on the 10-year Treasury note.

b. Yield spread: three-month euro minus three-month constant-maturity Treasury bill.

SOURCES: Board of Governors of the Federal Reserve System, "Selected Interest Rates," *Federal Reserve Statistical Releases*, H.15; Chicago Board of Options Exchange; and Bloomberg Financial Information Services.

Gold, often considered an inflation hedge, rose from less than \$260 per ounce in early 2001 to nearly \$370 in early 2003 but has since retreated to around \$325 per ounce. Because gold's price relative to silver followed a similar pattern, the rise can probably be attributed more to specific market factors than to fears of inflation.

Financial markets, being forward-looking, can be sensitive to risk. One measure of risk is the yield spread between risky and safe instruments. It may be surprising that in recent months, risk spreads have moved lower across a broad class of bonds

despite worries about war and peace in the Middle East, fears of a double-dip recession, and uncertainty over fiscal policy. Higher-grade spreads, such as those between interest rate swaps or commercial paper and Treasuries, remain at historically low levels. Spreads of corporate bonds, although they may not be at historical lows, have declined appreciably since 2002.

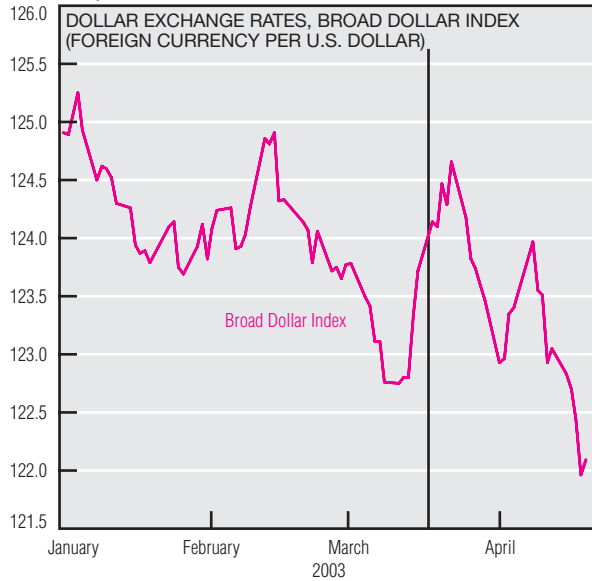
A different measure, considering risk as volatility in prices, is based not on bonds but on option prices, which are particularly sensitive to such volatility. The Volatility Index, which measures the implied volatility

of the Chicago Board of Options Exchanges' option contract on the S&P 100, has fallen substantially in recent months.

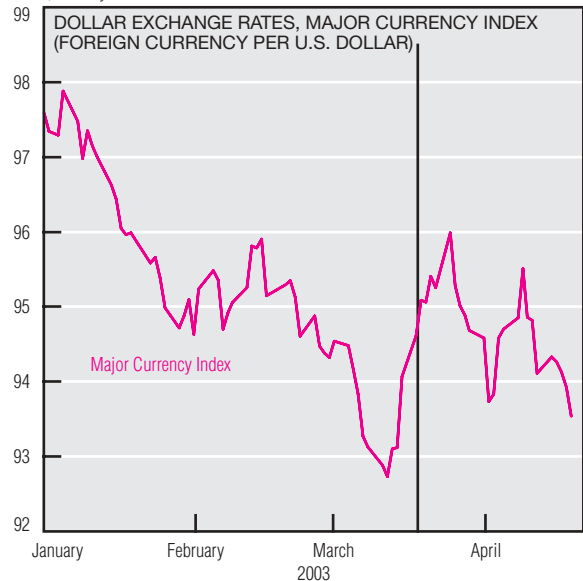
The Treasury-to-eurodollar (TED) spread looks at the difference between the rates on eurodollar deposits and Treasury notes. It is thought to pick up traders' worries about international problems because it is a way to arbitrage rates between the U.S. and the rest of the world without bearing any currency risk. By historical standards, the TED spread remains quite low.

# International Markets

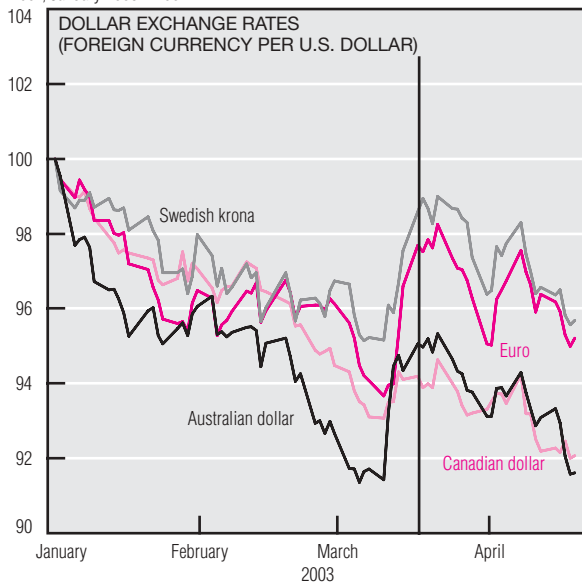
Index, January 2003 = 100



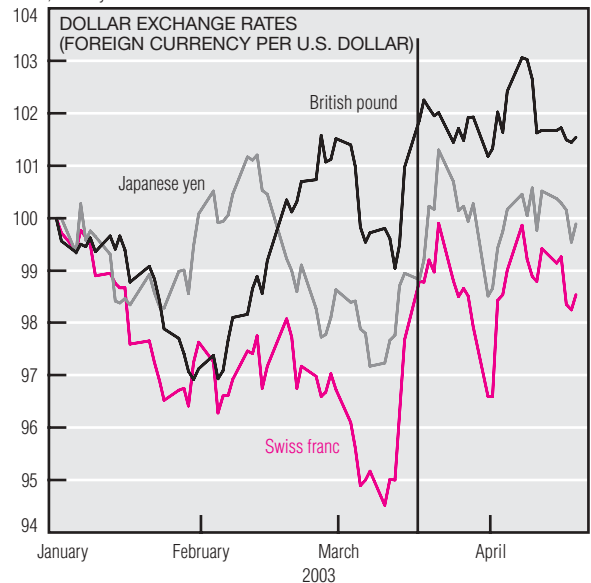
Index, January 2003 = 100



Index, January 2003 = 100



Index, January 2003 = 100



NOTE: Vertical line marks start of war in Iraq.

SOURCES: Board of Governors of the Federal Reserve System; and Bloomberg Financial Information Services.

The Broad Dollar Index includes the currencies of 26 countries or regions that had a share of at least 0.5% in U.S. non-oil imports or nonagricultural exports in 1997. The Major Currency Index includes the currencies of countries or regions that are traded in liquid financial markets and for which there are both short- and long-term interest rates. Since the beginning of the year, these indexes have behaved alike. After depreciating since the year began, both of them appreciated

significantly during a short period that included the starting date of the war in Iraq. From soon after the war's start until now, both have depreciated after experiencing a run-up around the beginning of April.

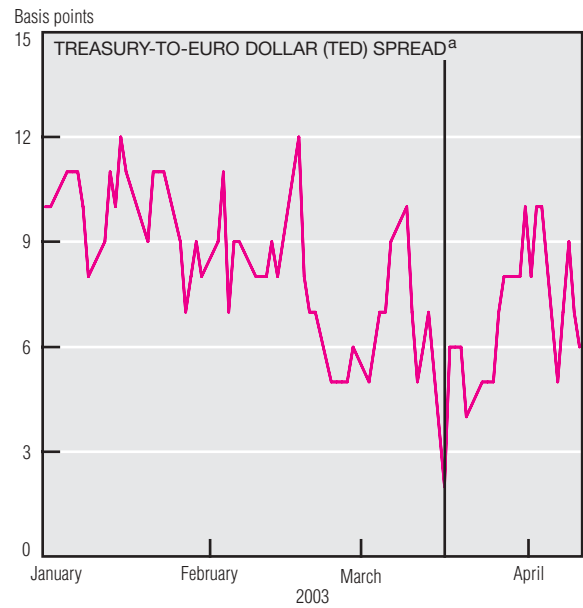
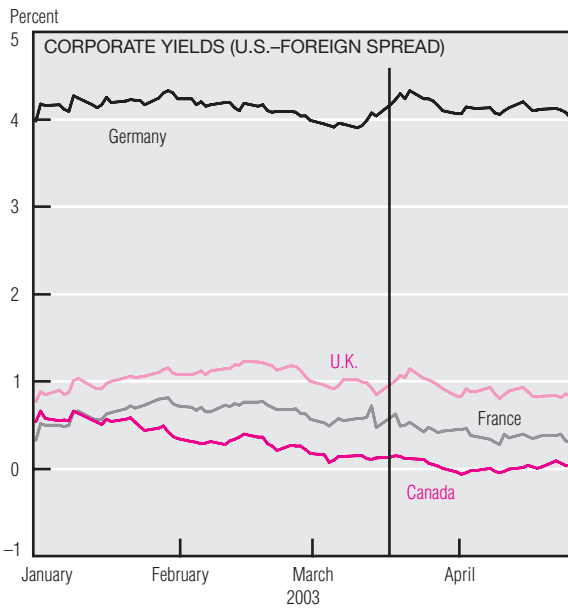
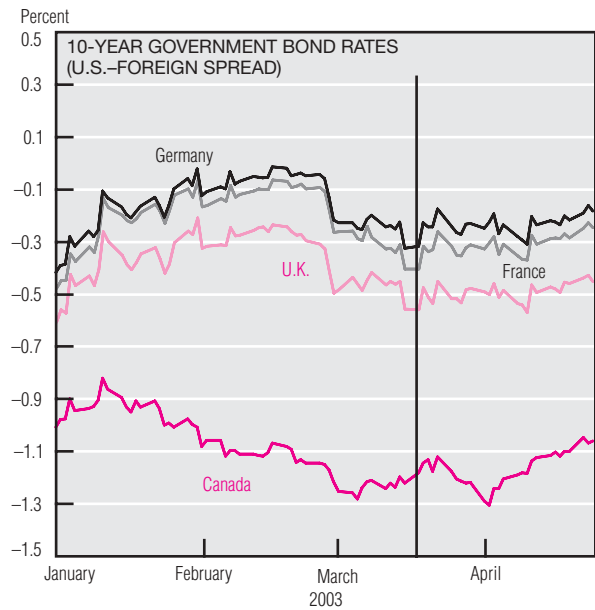
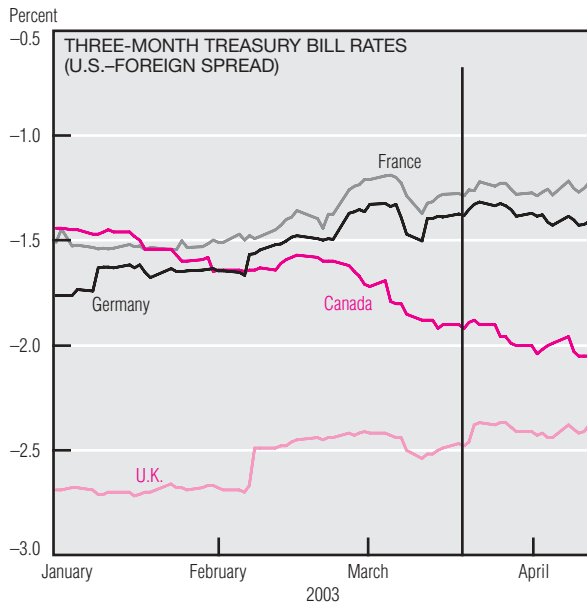
The countries or regions included in the Major Currency Index are Australia, Canada, the euro region, Japan, Sweden, Switzerland, and the U.K. With the exception of the British pound and the Japanese yen, the currencies in this index all have appreciated against the U.S. dollar

since the beginning of the year. Since the Iraqi war started, the Australian dollar, the Canadian dollar, the Swedish krona, and the Swiss franc have appreciated against the U.S. dollar. Although the British and Swiss exchange rates have shown considerable movement, the U.S. dollar's value against these currencies is about the same as it was at the start of hostilities. Since then, the U.S. dollar has strengthened against the Japanese yen.

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## International Markets (cont.)



NOTE: Vertical line marks start of war in Iraq.

a. Yield spread: three-month euro minus three-month constant maturity Treasury bill.

SOURCES: Board of Governors of the Federal Reserve System; and Bloomberg Financial Information Services.

Both the short- and long-term U.S.-foreign interest rate spreads for France, Germany, and the U.K. have increased since the beginning of the year, but the short and long U.S.-Canada interest rate spreads have decreased. For all of these spreads, the movements were more pronounced at the short end than the long end. For example, the U.S.-Canada three-month Treasury bill rate spread decreased more than 50 basis points (bp), whereas the 10-year government bond rate spread decreased

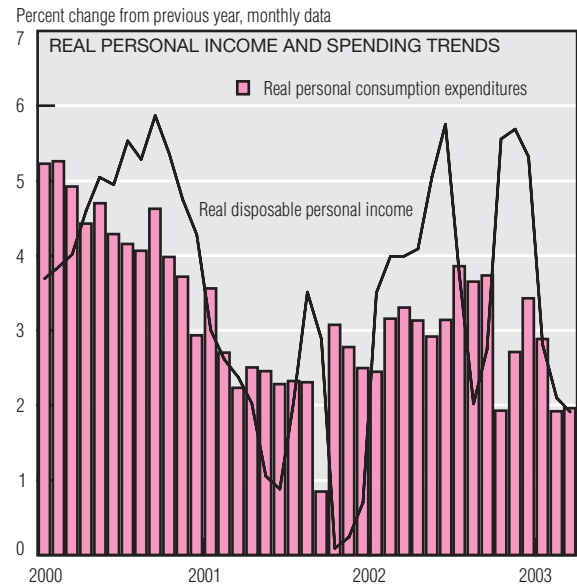
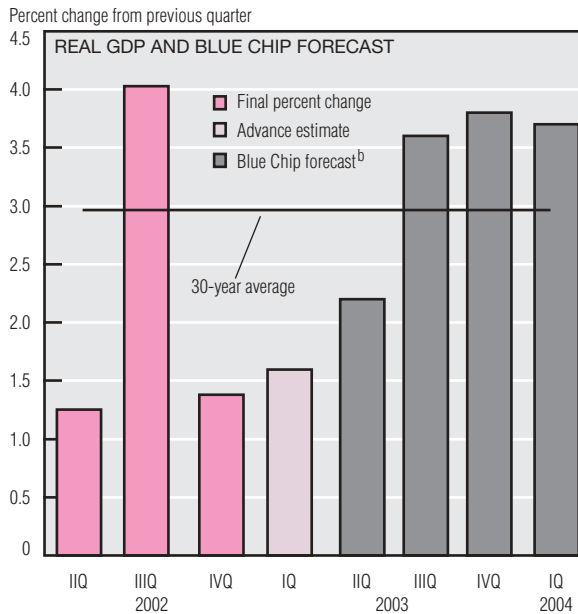
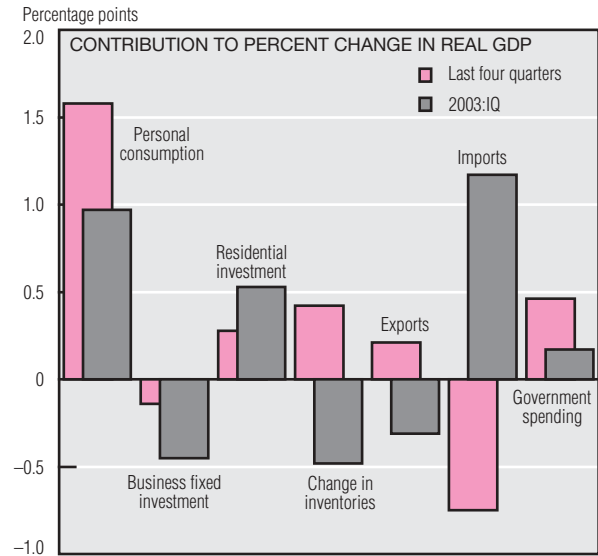
less than 20 bp. Short-term spreads did not appear to react to the start of war in Iraq, but long-term spreads for France, Germany, and the U.K. spiked down just before the start of the war and then back up when war broke out.

Corporate spreads for France, Germany, and the U.K. have remained comparatively stable since the beginning of the year, while the U.S.-Canada corporate spread decreased around 50 bp. None of these spreads appeared to react to the start of the war.

The Treasury-to-eurodollar (TED) spread compares the yield on three-month T-bills with three-month eurodollar deposit rates. Both assets pay off in U.S. dollars, so any difference in the rates reflects risk: A higher TED spread reflects a higher level of risk associated with eurodollar deposits. At the outbreak of the Iraqi war, the TED spread dropped to only 1.5 bp. By the end of March, however, the spread had reached levels like those seen earlier this year.

# Economic Activity

	Change, billions of 1996 \$	Annualized percent change, last:	
		Quarter	Four quarters
Real GDP	37.8	1.6	2.1
Personal consumption	22.6	1.4	2.3
Durables	-2.9	-1.1	3.3
Nondurables	19.9	4.1	2.5
Services	4.8	0.5	1.9
Business fixed investment	-12.6	-4.2	-1.3
Equipment	-11.2	-4.4	2.8
Structures	-1.9	-3.4	-13.4
Residential investment	11.4	12.0	6.2
Government spending	3.8	0.9	2.4
National defense	-1.6	-1.5	5.9
Net exports	24.0	—	—
Exports	-8.6	-3.2	2.2
Imports	-32.5	-7.9	5.7
Change in business inventories	-13.0	—	—



NOTE: All data are seasonally adjusted and annualized.

a. Chain-weighted data in billions of 1996 dollars. Components of real GDP need not add to the total because the total and all components are deflated using independent chain-weighted price indexes.

b. Blue Chip panel of economists.

SOURCES: U.S. Department of Commerce, Bureau of Economic Analysis; and *Blue Chip Economic Indicators*, April 10, 2003.

The advance estimate of the national income and product accounts puts real GDP growth at a sluggish 1.6% (annual rate) in 2003:1Q, less than many forecasters had hoped. Consumer spending, which increased 2.3% over the past year, rose only 1.4% for the quarter (annual rate). Expenditures on motor vehicles and parts decreased for the second straight quarter, hampering durable goods spending, and the growth of services spending slowed considerably. In a discouraging development for capital spending, business fixed

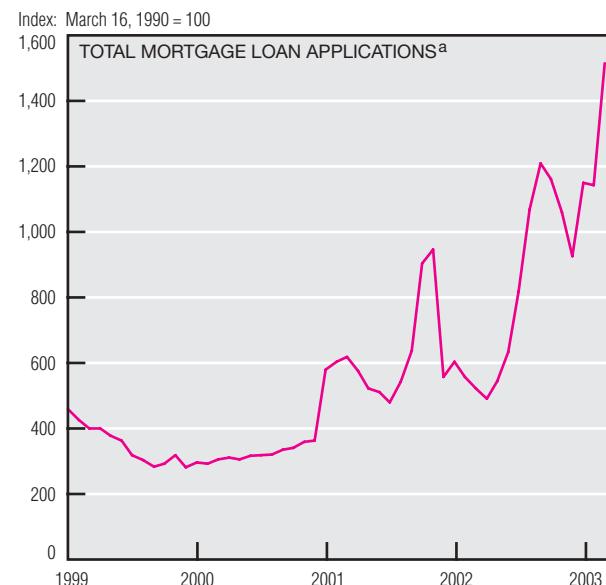
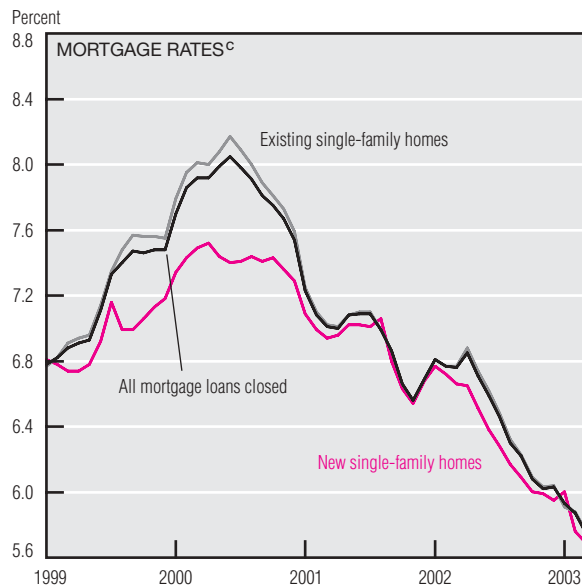
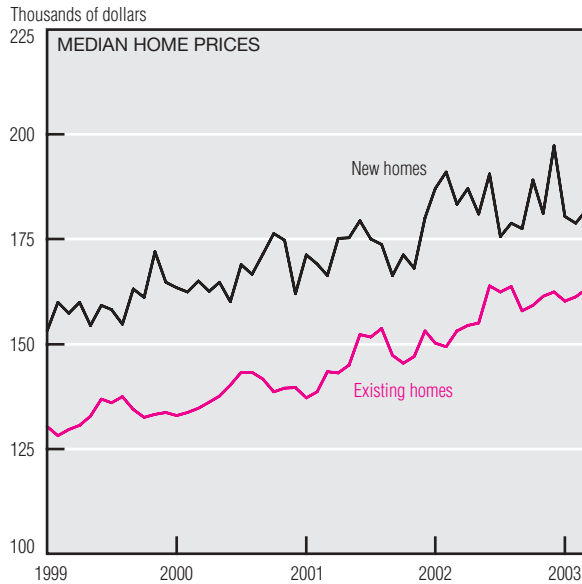
investment fell 4.2% (annual rate), its ninth decrease in the past 10 quarters. Although the uptick in this category in 2002:IVQ inspired hope that recovery was on the horizon, the most recent decline could foretell another delay. Businesses also cut back on their inventories. Inventory changes and business fixed investment combined subtracted 0.9 percentage point from real GDP growth in 2003:1Q. Exports also made a negative contribution to output growth, but this was overbalanced by the positive contribution of decreased import spending.

Real GDP growth in 2003:1Q barely exceeded last quarter's 1.4% growth (annual rate) and fell far short of the long-term average. Nonetheless, Blue Chip forecasters predict robust increases by the latter half of the year and into 2004.

Growth in real personal disposable income has been decelerating since last November. Although real income growth was substantially larger than real consumer spending during 2002:IVQ, the increase in personal consumption expenditures outpaced

(continued on next page)

## Economic Activity (cont.)



a. Seasonally adjusted.

b. Annual rates.

c. Contract interest rate.

SOURCES: U.S. Department of Commerce, Bureau of the Census; Federal Housing Finance Board; Mortgage Bankers Association of America; and National Association of Realtors.

the increase in income by January 2003 and again in March.

Although some economic observers have expressed concern that the housing market is softening, the latest data releases provide little evidence for this view. Median prices for both new and existing homes were up last month; more important, their underlying trend remains unchanged. Because short-term changes in the physical characteristics and location of homes sold introduce a fair amount of noise, these series must be looked at over a period of time.

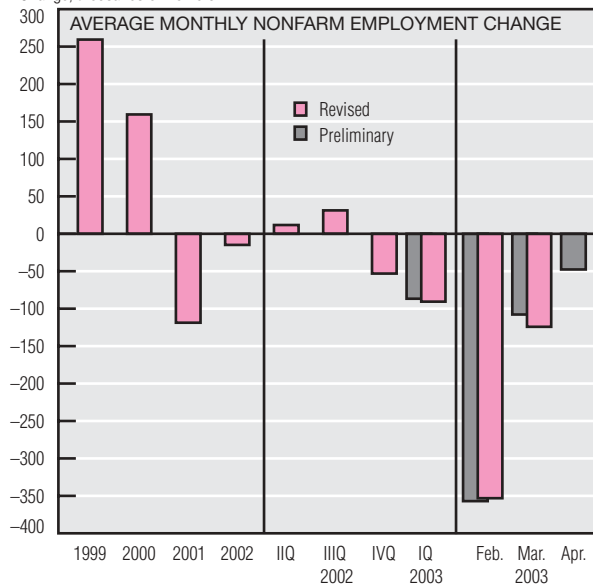
Existing home sales did drop in each of the four regions last month—and by 5.6% overall—but remained at a historically high level. In addition, these data are based on closings, and so may have been affected by wintry weather earlier in the year. More forward-looking data suggest that the housing sector continued strong. Sales of new single-family homes, defined as signed contracts for sale, rose 7.3%. Building permits were off their January peak, but remained at a high level of about 1.8 million units.

Housing starts, a very volatile indicator, fell sharply in March, but they, too, stayed at a high level.

Rates for all mortgage loans closed reached their lowest level (5.75%) since the Federal Housing Finance Board started tracking interest rates in 1963. Low rates not only fueled sales of new and existing homes, but also induced many homeowners to refinance their existing mortgages—some for the second or third time in the last three years.

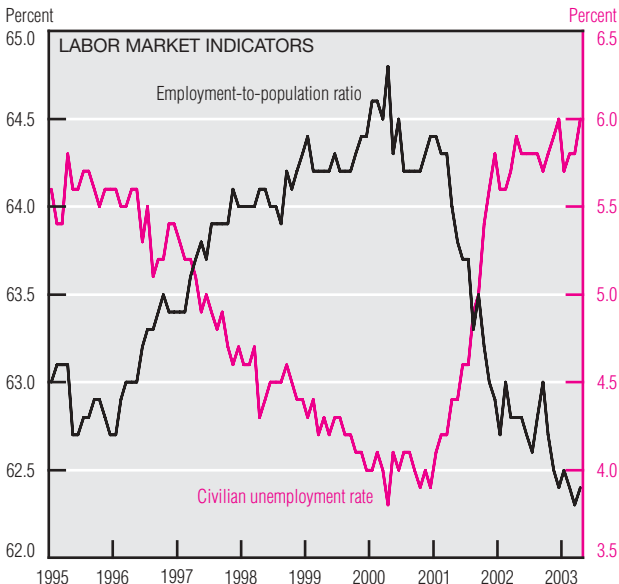
# Labor Markets

Change, thousands of workers



## Labor Market Conditions

	Average monthly change (thousands of employees)				
	2000	2001	2002	Jan.-Mar. 2003	Apr. 2003
Payroll employment	159	-119	-18	-91	-48
Goods-producing	-1	-111	-59	-37	-73
Mining	1	1	-1	1	4
Construction	8	-3	-8	-2	18
Manufacturing	-11	-109	-51	-36	-95
Durable goods	1	-79	-39	-30	-71
Nondurable goods	-12	-30	-12	-6	-24
Service producing	161	-8	41	-54	25
TPU <sup>a</sup>	17	-23	-14	-13	-19
Wholesale and retail trade	25	-31	-19	-12	-16
FIRE <sup>b</sup>	5	10	6	7	7
Services <sup>c</sup>	92	-2	49	-32	21
Health services	15	27	21	11	13
Help supply	0	-54	7	-15	-14
Government	22	39	20	-4	32
<b>Average for period (percent)</b>					
Civilian unemployment rate	4.0	4.8	5.8	5.8	6.0



NOTE: All data are seasonally adjusted.

a. Transportation and public utilities.

b. Finance, insurance, and real estate.

c. The services industry includes travel; business support; recreation and entertainment; private and/or parochial education; personal services; and health services

SOURCE: U.S. Department of Labor, Bureau of Labor Statistics.

Total nonfarm payroll employment fell by 48,000 jobs in April 2003, after losing a revised 124,000 jobs in March. By early April, about 220,000 reservists had been called up because of war, but the Bureau of Labor Statistics cannot quantify the effect on its employment figures.

In April, job losses were concentrated in goods-producing industries, which posted a net loss of 73,000. Manufacturing employment fell by 95,000, the largest drop in 15 months and twice the monthly average for the prior 12 months. Manufacturing's drop was

partly offset by gains in construction (18,000), and mining (4,000). Service-producing industries added 25,000 jobs in April after two months of steep decline. Help supply (temporary) employment declined by 14,000, its second consecutive drop this year. Government added 32,000 jobs after declining in February. Services posted a 21,000-job gain. Wholesale and retail trade fell by 16,000 jobs. Health services continued adding jobs, 13,000 in April.

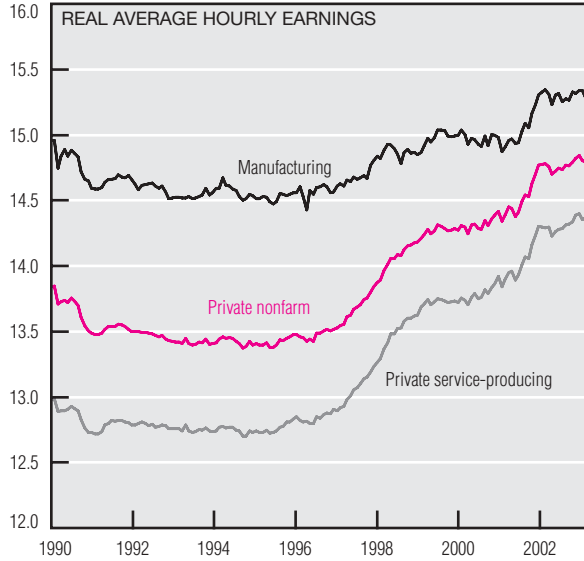
The unemployment rate jumped to 6.0%, 0.2 percentage point higher

than in March. The employment-to-population ratio inched up 0.1 percentage point to 62.4.

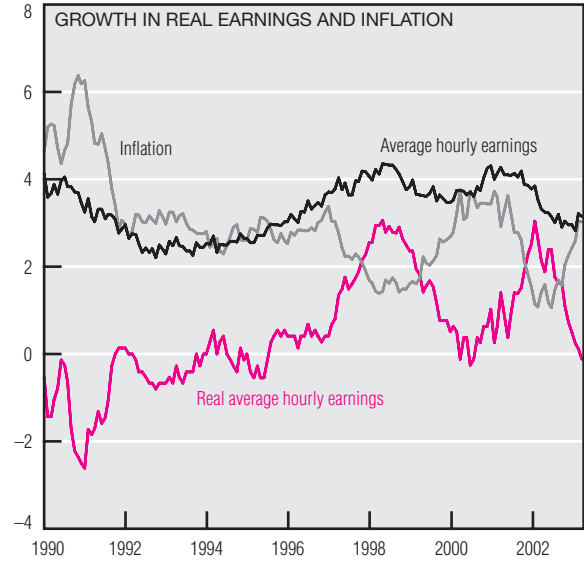
The insured unemployment rate (the share of the labor force that claims unemployment benefits) rose to 2.8% in April, this year's highest level. It is lower than the total unemployment rate because some unemployed persons do not qualify or do not choose to receive benefits. Consistent with the declining labor market, the weekly average of initial claims rose sharply to 444,000 in April, the highest level since November 2001.

# Employment and Earnings

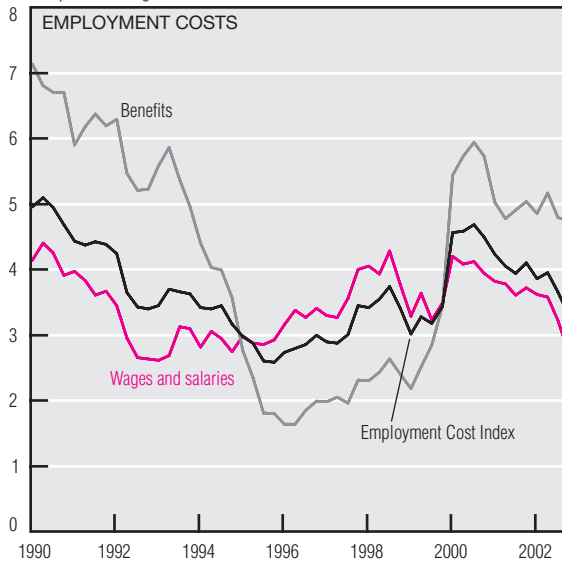
Hourly earnings in 2002 dollars



Annual percent change



Annual percent change



Annual percent change



NOTE: All data are seasonally adjusted.

SOURCE: U.S. Department of Labor, Bureau of Labor Statistics.

Real average hourly earnings have shown two distinct patterns since the beginning of the 1990s. For the first five or six years of the decade, real earnings were essentially flat; between January 1990 and May 1996, earnings growth fell about 2%. Since then, real earnings have grown about 10%. Over the last few months, however, earnings growth has been sluggish. In fact, the year-over-year percent change for monthly data shows that real earnings *declined* 0.12% in March 2003, the first drop since July 2000.

The growth rate of real earnings increased from early 2000 to the beginning of 2002 and has been declining since then. Although nominal earnings began to fall in early 2001, declining inflation caused real earnings to rise. However, as inflation began to tick up in early 2002, with nominal earnings growth continuing to decline, real earnings growth fell sharply.

Despite lower real earnings, the cost of employing a worker continues to rise, with benefits growing faster than wages and salaries. In the mid-1990s, the wages and salaries component of

the Employment Cost Index grew more than the benefits component. But by the beginning of 2000, benefits growth once again exceeded growth in wages and salaries.

Although private workers' aggregate hours are still low, they have begun to turn around, reversing the trend that started in early 2000. On a positive note, in the last quarter of 2002, growth in private workers' rate of output per hour remained historically high at 4%, although it was down compared to the first three quarters of that year.

## Changes in Measuring Employment

### North American Industrial Classification System (NAICS) Code, Major Categories

#### Goods-producing

Agriculture, forestry, fishing, and hunting

Mining

Utilities

Construction

Manufacturing

#### Service-providing

Wholesale trade

Retail trade

Transportation and warehousing

Information

Finance and insurance

Real estate, rental, and leasing

Professional, scientific, and technical services

Administrative, support, waste management, and remediation services

Educational services

Health care and social assistance

Arts, entertainment, and recreation

Accommodation and food services

Other services (except public administration)

Public administration

### Standard Industrial Classification (SIC) Code, Major Categories

#### Goods-producing

Agriculture, forestry, and fishing

Mining

Construction

Manufacturing

#### Service-producing

Transportation, communications, and public utilities

Wholesale trade

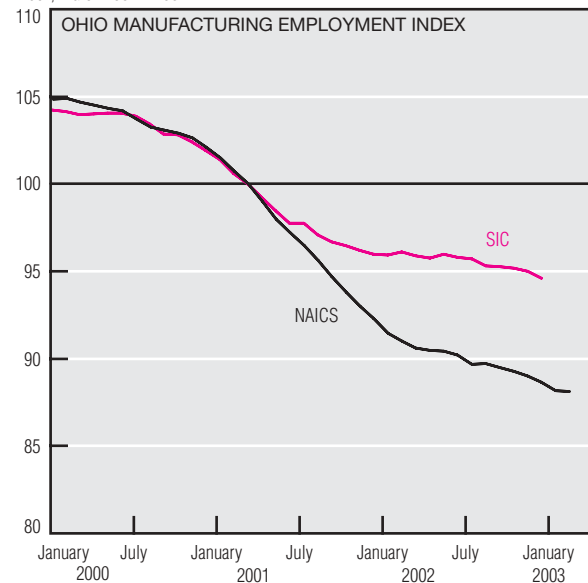
Retail trade

Finance, insurance, and real estate

Services

Government

Index, March 2001 = 100



SOURCE: U.S. Department of Labor, Bureau of Labor Statistics.

The Bureau of Labor Statistics is in the process of changing its reporting of employment figures to conform to the North American Industry Classification System (NAICS), which will replace the Standard Industrial Classification (SIC) system. This conversion is expected to be complete by May; the June 6, 2003 employment release will report all industry data for the nation and the states under NAICS codes.

The SIC system was developed in the 1930s, when manufacturing and other goods-producing industries dominated the U.S. economy.

Although the SIC codes were revised over the intervening decades in an effort to capture changes in the economy's structure, the system has not been able to reflect rapid-fire changes in areas such as information services, health care, and high-tech manufacturing.

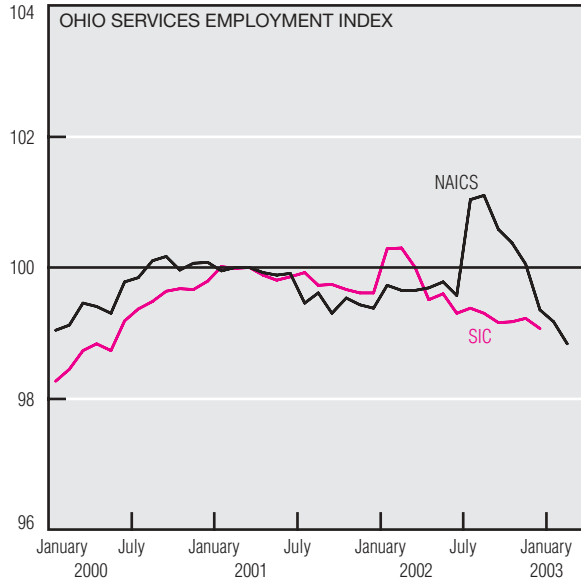
The NAICS system was developed in cooperation with Canada and Mexico to create a uniform classification system for North America (a result of the NAFTA trade agreement). NAICS consists of a six-digit hierarchical classification system and identifies 1,170 industries, compared to the 1,004

industries recognized in the four-digit SIC system. NAICS not only recognizes more industries, it also revises the definition of more than 600 of the SIC industries to reflect their nature more accurately. For example, under the SIC system, computer manufacturing was not an individually recognized industry at the aggregate level; it was lumped with other industries in the industrial machinery and equipment category (35). Under NAICS, computer manufacturing is its own industry, computer and electronic product manufacturing (334); combined with

*(continued on next page)*

## Changes in Measuring Employment (cont.)

Index, March 2001 = 100



### Ohio

	Percent change	
	Jan.—Feb. 2003	Feb. 2002—Feb. 2003
<b>Nonfarm employment</b>	-0.2	-1.2
<b>Goods-producing</b>	-0.5	-3.0
Construction	-1.9	-2.1
Manufacturing	-0.1	-3.2
<b>Service-providing</b>	-0.2	-0.8
Trade, transportation, and utilities	0.3	-0.7
Information	-0.5	-4.2
Financial activities	0.1	-0.6
Professional and business services	-0.3	-0.4
Education and health services	-0.2	0.6
Leisure and hospitality	-0.1	-2.4

### Pennsylvania

	Percent change	
	Jan.—Feb. 2003	Feb. 2002—Feb. 2003
<b>Nonfarm employment</b>	0.0	-0.4
<b>Goods-producing</b>	-0.1	-3.9
Construction	0.5	-0.8
Manufacturing	-0.3	-4.8
<b>Service-providing</b>	0.0	0.3
Trade, transportation, and utilities	-0.6	-1.8
Information	-0.4	-1.3
Financial activities	0.0	0.6
Professional and business services	-0.9	-2.1
Education and health services	0.4	2.6
Leisure and hospitality	0.6	2.2

### Kentucky

	Percent change	
	Jan.—Feb. 2003	Feb. 2002—Feb. 2003
<b>Nonfarm employment</b>	-0.3	0.1
<b>Goods-producing</b>	-0.9	-2.8
Construction	-3.3	-0.9
Manufacturing	-0.2	-2.8
<b>Service-providing</b>	-0.1	0.8
Trade, transportation, and utilities	0.5	-1.8
Information	-0.6	-0.9
Financial activities	-0.3	2.6
Professional and business services	-0.3	1.7
Education and health services	0.8	4.3
Leisure and hospitality	-0.2	3.9

SOURCE: U.S. Department of Labor, Bureau of Labor Statistics.

machinery manufacturing (333), it comprises most of the SIC's old industrial machinery category. As is clear from examining the major categories, the service-producing sector is more clearly delineated under NAICS than it was under the SIC system.

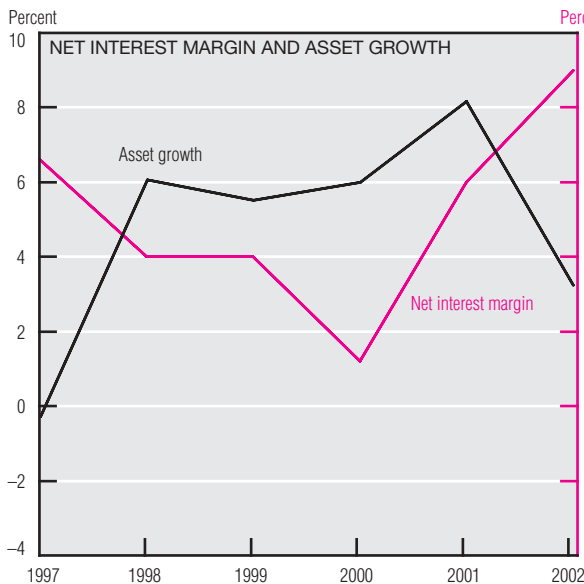
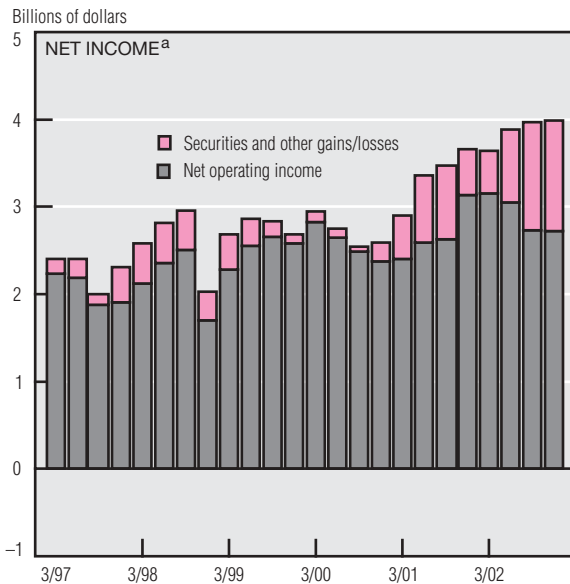
The transition from SIC to NAICS does not change an economy's aggregate number of jobs in any given month, but the accounting change does affect individual industries and will alter the way we view our economy. A good example of this change is the manufacturing industry in Ohio. Under the SIC classification, Ohio's

manufacturing lost roughly 5% of total employment between the recession's March 2001 onset and December 2002. NAICS data, however, show a loss of more than 12% of Ohio's manufacturing jobs over that period. In the case of the services industry, there are substantial short-run deviations between the two classification systems.

The change in classification codes is already complete for three of the states in the Fourth District: Ohio, Pennsylvania, and Kentucky (the Bureau of Labor Statistics revised past data to reflect NAICS classifications in order to allow historical comparisons

in employment). The data show that goods-producing sectors in every Fourth District state continue to struggle; in all of these states, goods producers posted much larger year-over-year employment losses in February than did their service-providing counterparts. Although employment in Ohio's service-providing sector declined slightly, the sector showed modest gains in Pennsylvania and Kentucky. Education and health services, formerly encompassed in the SIC's generic "services" category, enjoyed year-over-year employment gains in all three states.

# Savings Institutions



a. Net income equals net operating income plus securities and other gains/losses.  
 NOTE: Observation for 2002 is fourth-quarter annualized data.  
 SOURCE: Federal Deposit Insurance Corporation, *Quarterly Banking Profile*, various issues.

FDIC-insured saving institutions reported net income of \$3.99 billion for 2002:IVQ, which was \$329 million (9.0%) higher than a year earlier. Compared to the previous quarter, it increased by a modest \$15 million. As in recent quarters, net income was buttressed by one-time gains in securities sales—to the tune of \$1.86 billion.

S&Ls' noninterest (fee) income of \$2.8 billion was higher than the previous quarter and almost back to its level

a year earlier. Total interest income in the fourth quarter of 2002 was 10.6% lower than the same quarter the year before. The process of re-pricing S&Ls' loan portfolios seemed to be heading toward completion in 2002. It brought their cost of borrowing into line with lending costs, producing a modest (0.8%) increase for net interest income in 2001–02.

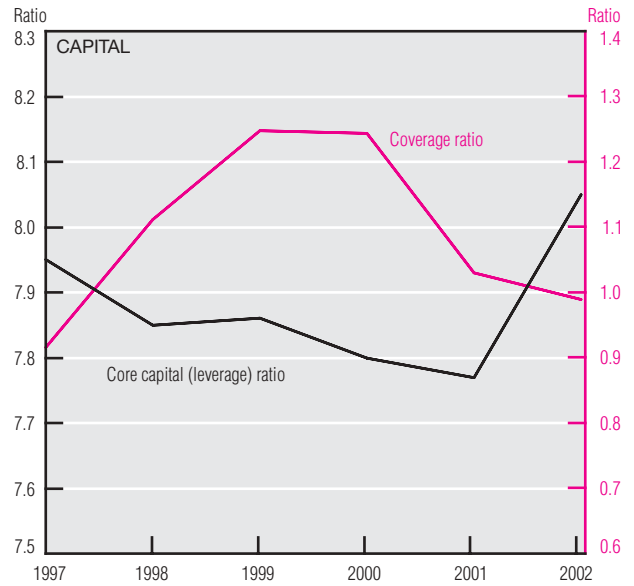
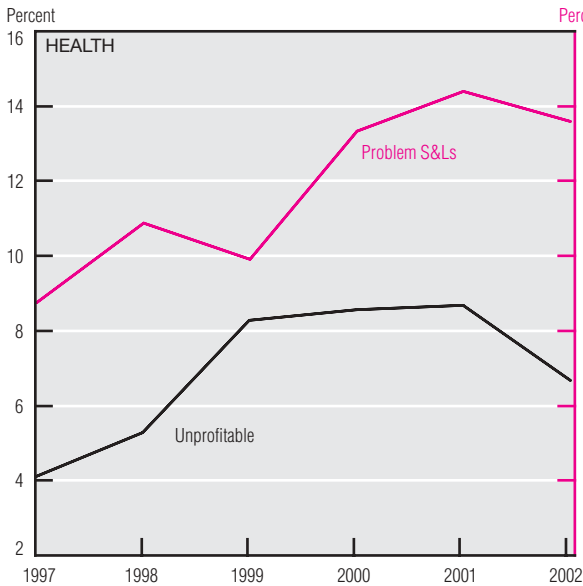
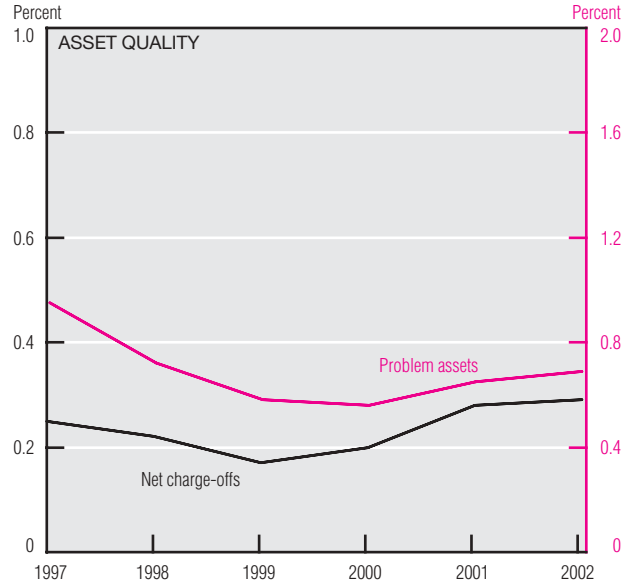
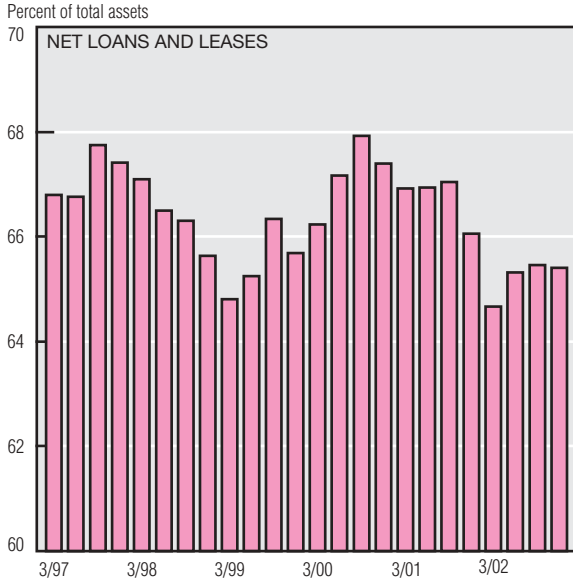
Saving institutions' strong earnings performance is once again apparent in the net interest margin (calculated

as interest plus dividends earned on interest-bearing assets minus interest paid to depositors and creditors; it is expressed as a percentage of average earning assets). S&Ls' net interest margin continued to increase from its low of 2.96% in 2000 and now stands at 3.35%, its highest level since 1993. This factor, coupled with asset growth's decline to 3.24%, pushed S&Ls' return on assets to 1.16% and their return on equity to 12.36%.

(continued on next page)



# Savings Institutions (cont.)



NOTE: Observation for 2002 is fourth-quarter annualized data.  
 SOURCE: Federal Deposit Insurance Corporation, *Quarterly Banking Profile*, various issues.

In 2002:IVQ, net loans and leases as a share of total assets were 65.4%, unchanged since the previous quarter. This is less than its recent high of 67.9% in 2000:IIIQ and indicates a continued decline in savings institutions' direct holdings of loans.

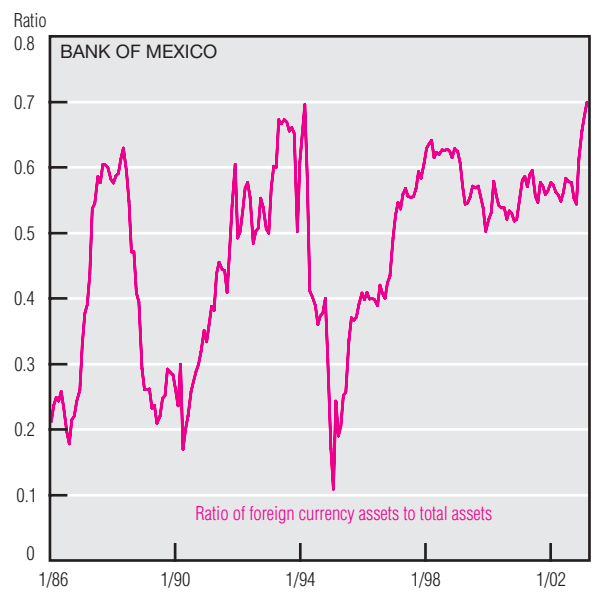
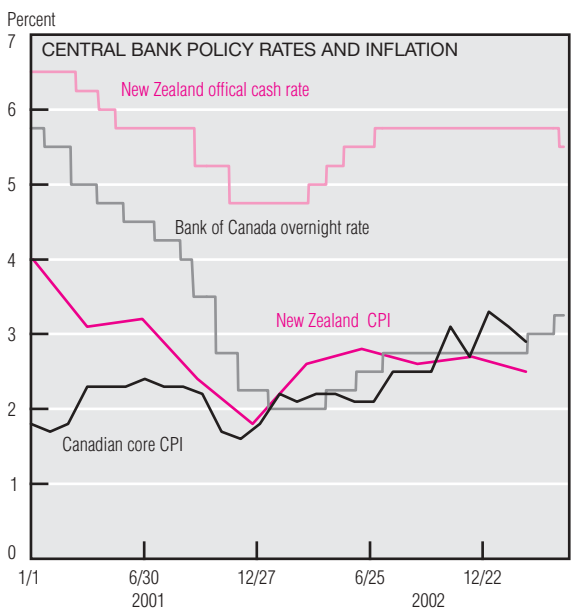
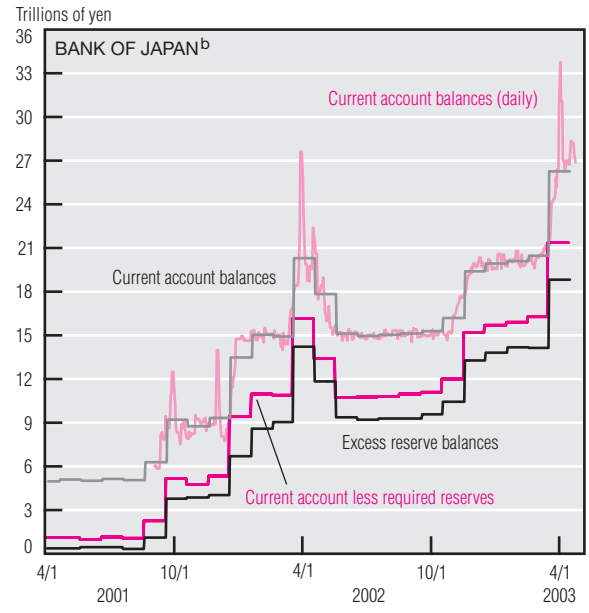
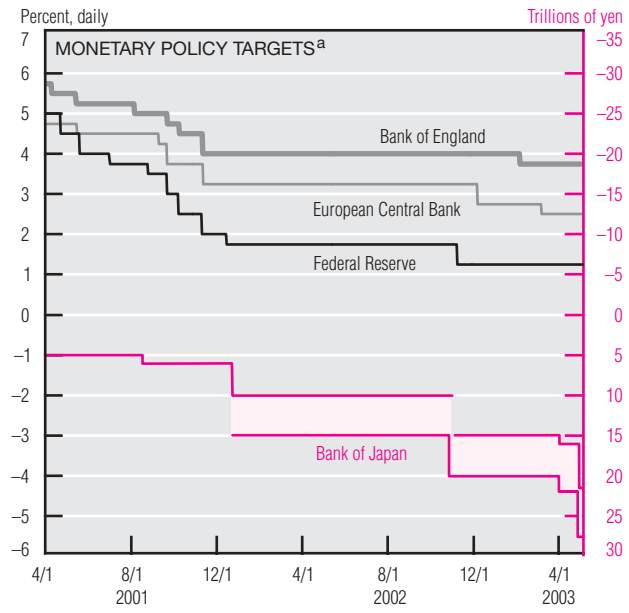
Asset quality declined slightly in 2002. Net charge-offs (gross charge-offs minus recoveries) of 0.29% showed almost no change from 0.28% in 2001. Problem assets (non-current

assets plus other real estate) made up 0.69% of total assets in 2002, only a slight increase from 0.65% in 2001.

However, asset quality is not a significant problem for FDIC-insured savings institutions. Problem S&Ls (those with substandard exam ratings) declined from 1.24% in 2001 to 1.16% in 2002. The percent of unprofitable institutions is falling and currently stands at 6.68%. The coverage ratio stands at 99 cents in loan

loss reserves for every dollar of non-current loans, down from \$1.03 at the end of 2001. The decline in the coverage ratio was caused primarily by a larger (\$768 million) increase in noncurrent loans, compared to a \$482 million increase in loan loss reserves since the end of 2001. For 2002:IIIQ, core capital, which protects saving institutions against unexpected losses, increased to 8.05% from 7.77% in 2001.

# Foreign Central Banks



a. Federal Reserve: overnight interbank rate. Bank of Japan: quantity of current account balances (since December 19, 2001, a range of the quantity of current account balances). Bank of England and European Central Bank: two-week repo rate.  
 b. Current account balances at the Bank of Japan are required and excess reserve balances at depository institutions subject to reserve requirements plus the balances of certain other financial institutions not subject to reserve requirements. Reserve requirements are satisfied on the basis of the average of a bank's daily balances at the Bank of Japan starting the sixteenth of one month and ending the fifteenth of the next.  
 SOURCES: Board of Governors of the Federal Reserve System; Bank of Japan; European Central Bank; Bank of England; Wholesale Markets Brokers Association; and Bloomberg Financial Information Services.

The Bank of Japan, alone among the four major central banks, loosened its policy setting over the past month by an additional ¥5 trillion in current account balances. The Bank also has proposed to transact open market operations in asset-backed securities as a way to stimulate financial intermediation. There has been speculation that the Bank may seek approval to retain a larger share of its earnings as reserves, a change that is consistent with the broader range of private debt and equity securities it has been

adding to its balance sheet. The Bank appears close to the lower bound of its own accounting rule, which calls for a capital adequacy ratio (reserves plus capital divided by banknotes outstanding) of 8% to 12%. Policy settings have changed in both Canada and New Zealand. The Bank of Canada raised its target for the overnight loan rate 25 basis points (bp) to 3.25%, citing inflation rates "well above the Bank's 2 percent inflation target" in the context of strong current domestic demand and

employment. The Reserve Bank of New Zealand reduced its official cash rate 25 bp to 5.50%. Over the past year inflation was 2.5%, within the target range of 0% to 3%. However, the Bank stated, "the weaker tradable sector is expected to feed through into reduced domestic demand elsewhere in the economy, as exporters' incomes decline." The Bank of Mexico, whose holdings of foreign currency assets have reached very high levels, announced a plan for gradual sales of dollars.