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Board of Governors of the Federal Reserve System



Monetary Policy Report to the Congress
Pursuant to section 2B of the Federal Reserve Act

February 13, 2001

Letter of Transmittal

BOARD OF GOVERNORS OF THE
FEDERAL RESERVE SYSTEM
Washington, D.C., February 13, 2001

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,



Alan Greenspan, Chairman

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Monetary Policy Report to the Congress

Report submitted to the Congress on February 13, 2001, pursuant to section 2B of the Federal Reserve Act

MONETARY POLICY AND THE ECONOMIC OUTLOOK

When the Federal Reserve submitted its previous Monetary Policy Report to the Congress, in July of 2000, tentative signs of a moderation in the growth of economic activity were emerging following several quarters of extraordinarily rapid expansion. After having increased the interest rate on federal funds through the spring to bring the growth of aggregate demand and potential supply into better alignment and thus contain inflationary pressures, the Federal Reserve had stopped tightening as evidence of an easing of economic growth began to appear.

Indications that the expansion had moderated from its earlier rapid pace gradually accumulated during the summer and into the autumn. For a time, this downshifting of growth seemed likely to leave the economy expanding at a pace roughly in line with that of its potential. Over the last few months of the year, however, elements of economic restraint emerged from several directions to slow growth even more. Energy prices, rather than turning down as had been anticipated, kept climbing, raising costs throughout the economy, squeezing business profits, and eroding the income available for discretionary expenditures. Equity prices, after coming off their highs earlier in the year, slumped sharply starting in September, slicing away a portion of household net worth and discouraging the initial offering of new shares by firms. Many businesses encountered tightening credit conditions, including a widening of risk spreads on corporate debt issuance and bank loans. Foreign economic activity decelerated noticeably in the latter part of the year, contributing to a weakening of the demand for U.S. exports, which also was being restrained by an earlier appreciation in the exchange value of the U.S. dollar.

The dimensions of the economic slowdown were obscured for a time by the usual lags in the receipt of economic data, but the situation began to come into sharper focus late in the year as the deceleration

steepened. Spending on business capital, which had been rising rapidly for several years, elevating stocks of these assets, flattened abruptly in the fourth quarter. Consumers clamped down on their outlays for motor vehicles and other durables, the stocks of which also had climbed to high levels. As the demand for goods softened, manufacturers adjusted production quickly to counter a buildup in inventories. Rising concern about slower growth and worker layoffs contributed to a sharp deterioration of consumer confidence. In response to the accumulating weakness, the Federal Open Market Committee (FOMC) lowered the intended interest rate on federal funds $\frac{1}{2}$ percentage point on January 3 of this year. Another rate reduction of that same size was implemented at the close of the most recent meeting of the FOMC at the end of last month.

As weak economic data induced investors to revise down their expectations of future short-term interest rates in recent months and as the Federal Reserve eased policy, financial market conditions became more accommodative. Since the November FOMC meeting, yields on many long-term corporate bonds have dropped on the order of a full percentage point, with the largest declines taking place on riskier bonds as the yield spreads on those securities narrowed considerably from their elevated levels. In response, borrowing in long-term credit markets has strengthened appreciably so far in 2001. The less restrictive conditions in financial markets should help lay the groundwork for a rebound in economic growth.

That rebound should also be encouraged by underlying strengths of the economy that still appear to be present despite the sluggishness encountered of late. The most notable of these strengths is the remarkable step-up in structural productivity growth since the mid-1990s, which seems to be closely related to the spread of new technologies. Even as the economy slowed in 2000, evidence of ongoing efficiency gains were apparent in the form of another year of rapid advance in output per worker hour in the nonfarm business sector. With households and businesses still in the process of putting recent innovations in place and with technological breakthroughs still occurring, an end to profitable investment opportunities in the technology area does not yet seem to be in sight. Should investors continue to seek out emerging

opportunities, the ongoing transformation and expansion of the capital stock will be maintained, thereby laying the groundwork for further gains in productivity and ongoing advances in real income and spending. The impressive performance of productivity and the accompanying environment of low and stable underlying inflation suggest that the longer-run outlook for the economy is still quite favorable, even though downside risks may remain prominent in the period immediately ahead.

*Monetary Policy, Financial Markets,
and the Economy over the
Second Half of 2000 and Early 2001*

As described in the preceding Monetary Policy Report to the Congress, the very rapid pace of economic growth over the first half of 2000 was threatening to place additional strains on the economy's resources, which already appeared to be stretched thin. Private long-term interest rates had risen considerably in response to the strong economy, and, in an effort to slow the growth of aggregate demand and thereby prevent a buildup of inflationary pressures, the Federal Reserve had tightened its policy settings substantially through its meeting in May 2000. Over subsequent weeks, preliminary signs began to emerge suggesting that growth in aggregate demand might be slowing, and at its June meeting the FOMC left the federal funds rate unchanged.

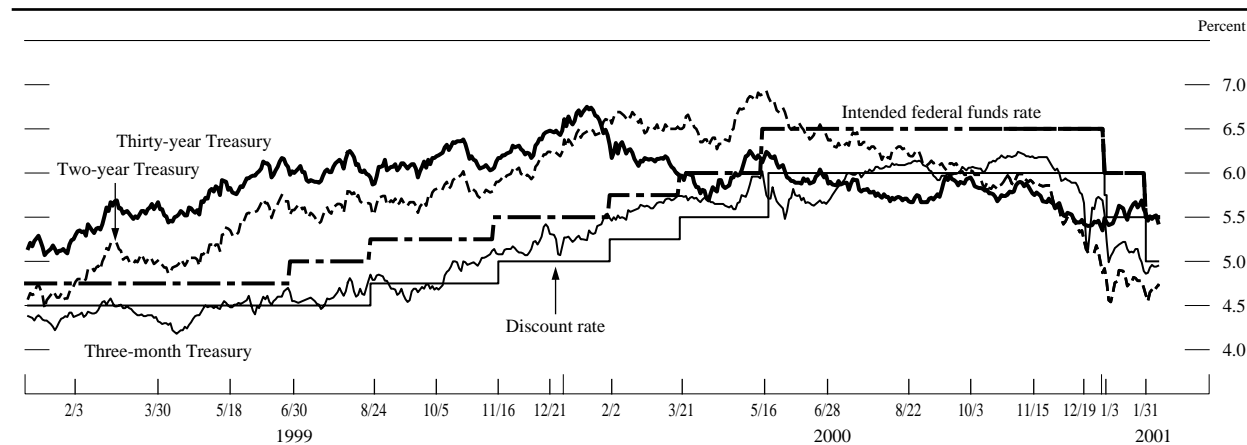
Further evidence accumulated over the summer to indicate that demand growth was moderating. The rise in mortgage interest rates over the previous year seemed to be damping activity in the housing sector. Moreover, the growth of consumer spending had slowed from the exceptional pace of earlier in the year; the impetus to spending from outsized equity price gains in 1999 and early 2000 appeared to be partly wearing off, and rising energy prices were continuing to erode the purchasing power of households. By contrast, business fixed investment still was increasing very rapidly, and strong growth of foreign economies was fostering greater demand for U.S. exports. Weighing this evidence and recognizing that the effects of previous tightenings had not yet been fully felt, the FOMC decided at its meeting in August to hold the federal funds rate unchanged. The Committee remained concerned that demand could continue to grow faster than potential supply at a time when the labor market was already taut, and it saw the balance of risks still tilted toward heightened inflation pressures.

The FOMC faced fairly similar circumstances at its October meeting. By then, it had become more appar-

ent that the growth in demand had fallen to a pace around that of potential supply. Although consumer spending had picked up again for a time, it did not regain the vigor it had displayed earlier in the year, and capital spending, while still growing briskly, had decelerated from its first-half pace. With increases in demand moderating, private employment gains slowed from the rates seen earlier in the year. However, labor markets remained exceptionally tight, and the hourly compensation of workers had accelerated to a point at which unit labor costs were edging up despite strong gains in productivity. In addition, sizable increases in energy prices were pushing broad inflation measures above the levels of recent years. Although core inflation measures were at most only creeping up, the Committee felt that there was some risk that the increase in energy prices, which was lasting longer than had seemed likely earlier in the year, would start to leave an imprint on business costs and longer-run inflation expectations, posing the risk that core inflation rates could rise more substantially. Weighing these considerations, the FOMC decided to hold the federal funds rate unchanged at its October meeting. While recognizing that the risks in the outlook were shifting, the FOMC believed that the tautness of labor markets and the rise in energy prices meant that the balance of those risks still was weighted towards heightened inflation pressures, and this assessment was noted in the balance-of-risks statement.

By the time of the November FOMC meeting, conditions in the financial markets were becoming less accommodative in some ways, even as the Federal Reserve held the federal funds rate steady. Equity prices had declined considerably over the previous several months, resulting in an erosion of household wealth that seemed likely to restrain consumer spending going forward. Those price declines, along with the elevated volatility of equity prices, also hampered the ability of firms to raise funds in equity markets and were likely discouraging business investment. Some firms faced more restrictive conditions in credit markets as well, as risk spreads in the corporate bond market widened significantly for firms with lower credit ratings and as banks tightened the standards and terms on their business loans. Meanwhile, incoming data indicated that the pace of economic activity had softened a bit further. Still, the growth of aggregate demand apparently had moved only modestly below that of potential supply. Moreover, while crude oil prices appeared to be topping out, additional inflationary pressures were arising in the energy sector in the form of surging prices for natural gas, and there had been no easing of the

Selected interest rates



NOTE. The data are daily and extend through February 8, 2001. The dates on the horizontal axis are those of scheduled FOMC meetings and of any intermeeting policy actions.

tightness in the labor market. In assessing the evidence, the members of the Committee felt that the risks to the outlook were coming into closer balance but had not yet shifted decisively. At the close of the meeting, the FOMC left the funds rate unchanged once again, and it stated that the balance of risks continued to point toward increased inflation. However, in the statement released after the meeting, the FOMC noted the possibility of subpar growth in the economy in the period ahead.

Toward the end of the year, the moderation of economic growth gave way, fairly abruptly, to more sluggish conditions. By the time of the December FOMC meeting, manufacturing activity had softened considerably, especially in motor vehicles and related industries, and a number of industries had accumulated excessive stocks of inventories. Across a broader set of firms, forecasts for corporate sales and profits in the fourth quarter and in 2001 were being slashed, contributing to a continued decline in equity prices and a further widening of risk spreads on lower-rated corporate bonds. In this environment, growth in business fixed investment appeared to be slowing appreciably. Consumer spending showed signs of decelerating further, as falling stock prices eroded household wealth and consumer confidence weakened. Moreover, growth in foreign economies seemed to be slowing, on balance, and U.S. export performance began to deteriorate. Market interest rates had declined sharply in response to these developments. Against this backdrop, the FOMC at its December meeting decided that the risks to the outlook had swung considerably and now were weighted toward economic weakness, although it decided to wait for additional evidence on the extent and persistence of the slowdown before moving to an easier

policy stance. Recognizing that the current position of the economy was difficult to discern because of lags in the data and that prospects for the near term were particularly uncertain, the Committee agreed at the meeting that it would be especially attentive over coming weeks to signs that an intermeeting policy action was called for.

Additional evidence that economic activity was slowing significantly emerged not long after the December meeting. New data indicated a marked weakening in business investment, and retail sales over the holiday season were appreciably lower than businesses had expected. To contain the resulting buildup in inventories, activity in the manufacturing sector continued to drop. In addition, forecasts of near-term corporate profits were being marked down further, resulting in additional declines in equity prices and in business confidence. Market interest rates continued to fall, as investors became more pessimistic about the economic outlook. Based on these developments, the Committee held a telephone conference call on January 3, 2001, and decided to cut the intended federal funds rate $\frac{1}{2}$ percentage point. Equity prices surged on the announcement, and the Treasury yield curve steepened considerably, apparently because market participants became more confident that a prolonged downturn in economic growth would likely be forestalled. Following the policy easing, the Board of Governors approved a decrease in the discount rate of a total of $\frac{1}{2}$ percentage point.

The Committee's action improved financial conditions to a degree. Over the next few weeks, equity prices rose, on net. Investors seemed to become less wary of credit risk, and yield spreads narrowed across most corporate bonds even as the issuance of these

securities picked up sharply. But in some other respects, investors remained cautious, as evidenced by widening spreads in commercial paper markets. Incoming data pointed to further weakness in the manufacturing sector and a sharp decline in consumer confidence. Moreover, slower U.S. growth appeared to be spilling over to several important trading partners. In late January, the FOMC cut the intended federal funds rate $\frac{1}{2}$ percentage point while the Board of Governors approved a decrease in the discount rate of an equal amount. Because of the significant erosion of consumer and business confidence and the need for additional adjustments to production to work off elevated inventory levels, the FOMC indicated that the risks to the outlook continued to be weighted toward economic weakness.

Economic Projections for 2001

Although the economy appears likely to be sluggish over the near term, the members of the Board of Governors and the Reserve Bank presidents expect stronger conditions to emerge as the year progresses. For 2001 overall, the central tendency of their forecasts of real GDP growth is 2 percent to $2\frac{1}{2}$ percent, measured as the change from the fourth quarter of 2000 to the fourth quarter of 2001. With growth falling short of its potential rate, especially in the first half of this year, unemployment is expected to move up a little further. Most of the governors and Reserve Bank presidents are forecasting that the average unemployment rate in the fourth quarter of this year will be about $4\frac{1}{2}$ percent, still quite low by historical standards.

The rate of economic expansion over the near term will depend importantly on the speed at which inventory overhangs that developed over the latter part

of 2000 are worked off. Gains in information technology have no doubt enabled businesses to respond more quickly to a softening of sales, which has steepened the recent production cuts but should also damp the buildup in inventories and facilitate a turnaround. The motor vehicle industry made some progress toward reducing excess stocks in January owing to a combination of stronger sales and a further sharp cutback in assemblies. In other parts of manufacturing, the sizable reductions in production late last year suggest that producers in general were moving quickly to get output into better alignment with sales. Nevertheless, stocks at year-end were above desired levels in a number of industries.

Once inventory imbalances are worked off, production should become more closely linked to the prospects for sales. Household and business expenditures have decelerated markedly in recent months, and uncertainties about how events might unfold are considerable. But, responding in part to the easing of monetary policy, financial markets are shifting away from restraint, and this shift should create a more favorable underpinning to the expected pickup in the economy as the year progresses. The sharp drop in mortgage interest rates since May of last year appears to have stemmed the decline in housing activity; it also has enabled many households to refinance existing mortgages at lower rates, an action that should free up cash for added spending. Conditions of business finance also have eased to some degree. Interest rates on investment-grade corporate bonds have recently fallen to their lowest levels in about $1\frac{1}{2}$ years. Moreover, the premiums required of bond issuers that are perceived to be at greater risk have dropped back in recent weeks from the elevated levels of late 2000. As credit conditions have eased, firms have issued large amounts of corporate bonds so far in 2001. However, considerable caution is evident in the commercial paper market and among banks, whose loan officers have reported a further tightening of lending conditions since last fall. In equity markets, prices have recently dropped in response to negative reports on corporate earnings, reversing the gains that took place in January.

The restraint on domestic demand from high energy prices is expected to ease in coming quarters. Natural gas prices have dropped back somewhat in recent weeks as the weather has turned milder, and crude oil prices also are down from their peaks. Although these prices could run up again in conjunction with either a renewed surge in demand or disruptions in supply, participants in futures markets are anticipating that prices will be trending gradually lower over time. A fall in energy prices would relieve

Economic projections for 2001

Percent

| Indicator | Memo: 2000 actual | Federal Reserve governors and Reserve Bank presidents | |
|---|----------------------|---|---------------------------------|
| | | Range | Central tendency |
| <i>Change, fourth quarter to fourth quarter¹</i> | | | |
| Nominal GDP | 5.9 | $3\frac{3}{4}$ – $5\frac{1}{4}$ | 4–5 |
| Real GDP ² | 3.5 | 2– $2\frac{3}{4}$ | 2 – $2\frac{1}{2}$ |
| PCE chain-type price index | 2.4 | $1\frac{3}{4}$ – $2\frac{1}{2}$ | $1\frac{3}{4}$ – $2\frac{1}{4}$ |
| <i>Average level, fourth quarter</i> | | | |
| Civilian unemployment rate | 4.0 | $4\frac{1}{2}$ –5 | About $4\frac{1}{2}$ |

1. Change from average for fourth quarter of 2000 to average for fourth quarter of 2001.

2. Chain-weighted.

cost pressures on businesses to some degree and would leave more discretionary income in the hands of households.

How quickly investment spending starts to pick up again will depend not only on the cost of finance but also on the prospective rates of return to capital. This past year, expectations regarding the prospects of some high-tech companies clearly declined, and capital spending seems unlikely to soon regain the exceptional strength that was evident in the latter part of the 1990s and for a portion of last year. From all indications, however, technological advance still is going forward at a rapid pace, and investment will likely pick up again if, as expected, the expansion of the economy gets back on more solid footing. Private analysts are still anticipating high rates of growth in corporate earnings over the long-run, suggesting that the current sluggishness of the economy has not undermined perceptions of favorable long-run fundamentals.

The degree to which increases in exports might help to support the U.S. economy through a stretch of sluggishness has become subject to greater uncertainty recently because foreign economies also seem to have decelerated toward the end of last year. However, the expansion of imports has slowed sharply, responding in part to the softening of domestic demand growth. In effect, some of the slowdown in demand in this country is being shifted to foreign suppliers, implying that the adjustments required of domestic producers are not as great as they otherwise would have been.

In adjusting labor input to the slowing of the economy, businesses are facing conflicting pressures. Speedy adjustment of production and ongoing gains in efficiency argue for cutbacks in labor input, but companies are also reluctant to lay off workers that have been difficult to attract and retain in the tight labor market conditions of the past few years. In the aggregate, the balance that has been struck in recent months has led, on net, to slower growth of employment, cutbacks in the length of the average workweek, and, in January of this year, a small increase in the unemployment rate.

Inflation is not expected to be a pressing concern over the coming year. Most of the governors and Reserve Bank presidents are forecasting that the rise in the chain-type price index for personal consumption expenditures will be smaller than the price rise in 2000. The central tendency of the range of forecasts is $1\frac{3}{4}$ percent to $2\frac{1}{4}$ percent. Inflation should be restrained this coming year by an expected downturn in energy prices. In addition, the reduced pressure on resources that is associated with the slowing of the

economy should help damp increases in labor costs and prices.

ECONOMIC AND FINANCIAL DEVELOPMENTS IN 2000 AND EARLY 2001

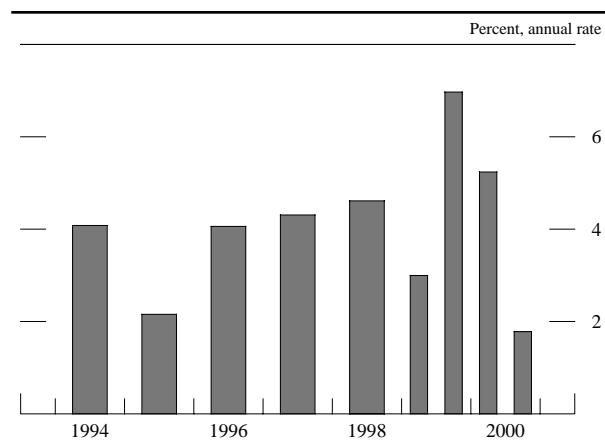
The combination of exceptionally strong growth in the first half of 2000 and subdued growth in the second half resulted in a rise in real GDP of about $3\frac{1}{2}$ percent for the year overall. Domestic demand started out the year with incredible vigor but decelerated thereafter and was sluggish by year-end. Exports surged for three quarters and then faltered. In the labor market, growth of employment slowed over the year but was sufficient to keep the unemployment rate around the lowest sustained level in more than thirty years.

Core inflation remained low in 2000 in the face of sharp increases in energy prices. Although the chain-type price index for personal consumption expenditures (PCE) moved up faster than in 1999, it showed only a slight step-up in the rate of increase after excluding the prices of food and energy. Unit labor costs picked up moderately, adding to the cost pressures from energy, but the ability of businesses to raise prices was restrained by the slowing of the economy and the persistence of competitive pricing conditions.

The Household Sector

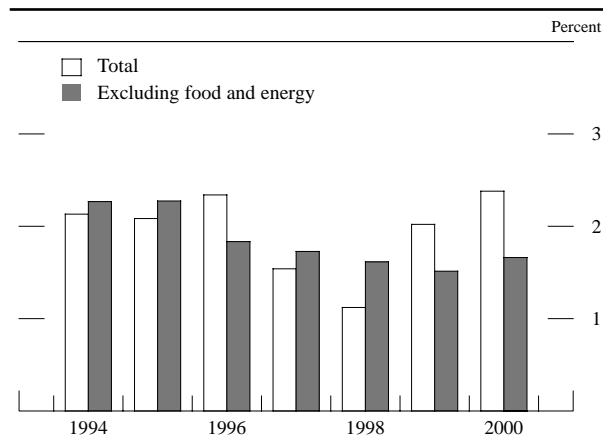
Personal consumption expenditures increased $4\frac{1}{2}$ percent in real terms in 2000 after having advanced

Change in real GDP



NOTE. Here and in subsequent charts, except as noted, annual changes are measured from Q4 to Q4, and change for a half-year is measured between its final quarter and the final quarter of the preceding period.

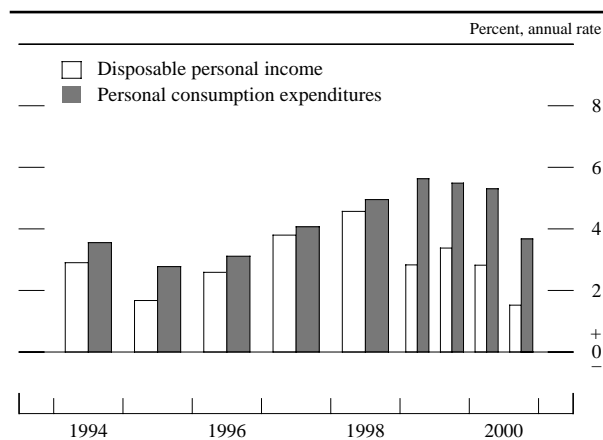
Change in PCE chain-type price index



NOTE. Data are for personal consumption expenditures (PCE).

5 percent in 1998 and 5½ percent in 1999. A large portion of last year's gain came in the first quarter, when consumption moved ahead at an unusually rapid pace. The increase in consumer spending over the remainder of the year was moderate, averaging about 3½ percent at an annual rate. Consumer outlays for motor vehicles and parts surged to a record high early in 2000 but reversed that gain over the remainder of the year; sales of vehicles tailed off especially sharply as the year drew to a close. Real consumer purchases of gasoline fell during the year in response to the steep run-up in gasoline prices. Most other broad categories of goods and services posted sizable gains over the year as a whole, but results late in the year were mixed: Real outlays for goods other than motor vehicles eked out only a small gain in the fourth quarter, while real outlays for consumer services rose very rapidly, not only because of higher outlays for home heating fuels during a spell of colder-than-usual weather but also

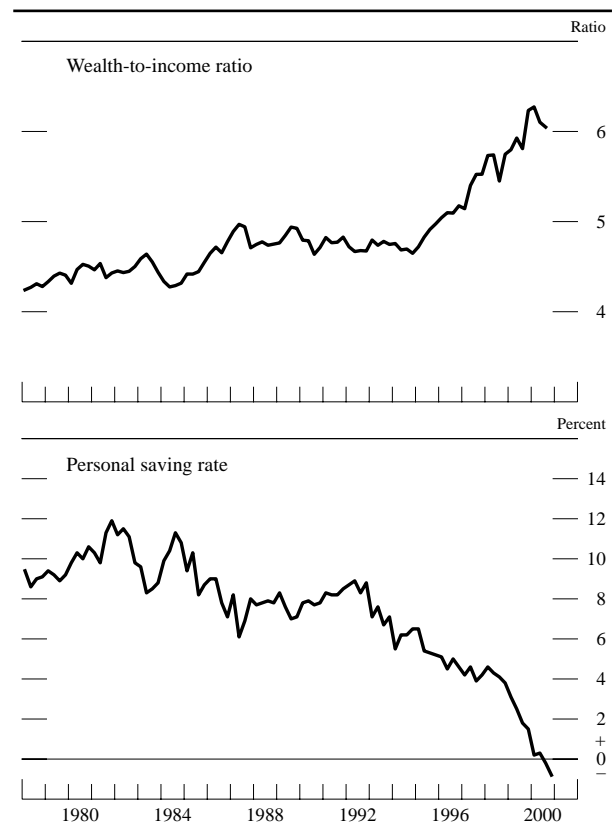
Change in real income and consumption



because of continued strength in real outlays for other types of services.

Changes in income and wealth provided less support to consumption in 2000 than in other recent years. Real disposable personal income rose about 2¼ percent last year after a gain of slightly more than 3 percent in 1999. Disposable income did not rise quite as much in nominal terms as it had in 1999, and rising prices eroded a larger portion of the nominal gain. Meanwhile, the net worth of households turned down in 2000 after having climbed rapidly for several years, as the effect of a decline in the stock market was only partially offset by a sizable increase in the value of residential real estate. With the peak in stock prices not coming until the year was well under way, and with valuations having previously been on a sharp upward course for an extended period, stock market wealth may well have continued to exert a strong positive effect on consumer spending for several months after share values had topped out. As time passed, however, the impetus to consumption from this source most likely diminished. The personal saving rate, which had dropped sharply during

Wealth and saving



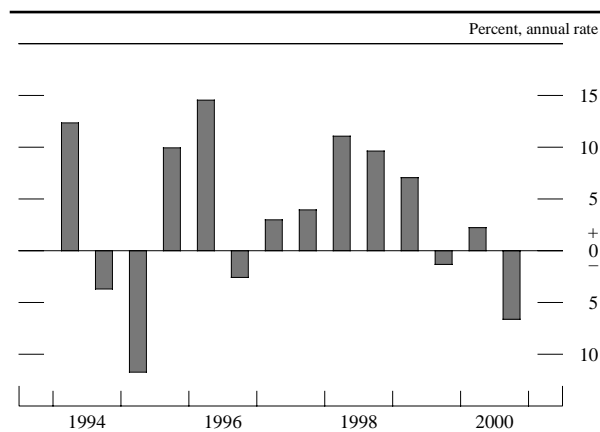
NOTE. The wealth-to-income ratio is the ratio of household net worth to disposable personal income and extends through 2000:Q3; the personal saving rate extends through 2000:Q4.

the stock market surge of previous years, fell further in 2000, but the rate of decline slowed, on average, after the first quarter.

Even with real income growth slowing and the stock market turning down, consumers maintained a high degree of optimism through most of 2000 regarding the state of the economy and the economic outlook. Indexes of sentiment from both the University of Michigan Survey Research Center and the Conference Board rose to new peaks in the first quarter of the year, and the indexes remained close to those levels for several more months. Survey readings on personal finances, general business conditions, and the state of the labor market remained generally favorable through most of the year. As of late autumn, only mild softness could be detected. Toward year-end, however, confidence in the economy dropped sharply. Both of the indexes of confidence showed huge declines over the two months ended in January. The marked shift in attitudes toward year-end probably was brought on by a combination of developments, including the weakness in the stock market over the latter part of the year and more frequent reports of layoffs.

Real outlays for residential investment declined about 2¼ percent, on net, over the course of 2000, as construction of new housing dropped back from the elevated level of the previous year. Investment in housing was influenced by a sizable swing in mortgage interest rates as well as by slower growth of employment and income and the downturn in the stock market. After having moved up appreciably in 1999, mortgage rates continued to advance through the first few months of 2000. By mid-May, the average commitment rate on conventional fixed-rate mortgages was above 8½ percent, up roughly 1½ percentage points from the level of a year earlier.

Change in real residential investment



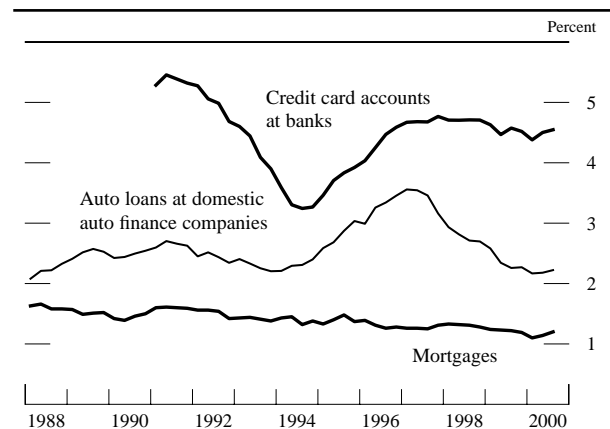
New construction held up even as rates were rising in 1999 and early 2000, but it softened in the spring of last year. Starts and permits for single-family houses declined from the first quarter to the third quarter.

But even as homebuilding activity was turning down, conditions in mortgage markets were moving back in a direction more favorable to housing. From the peak in May, mortgage interest rates fell substantially over the remainder of the year and into the early part of 2001, reversing the earlier increases. Sales of new homes firmed as rates turned down, and prices of new houses continued to trend up faster than the general rate of inflation. Inventories of unsold new homes held fairly steady over the year and were up only moderately from the lows of 1997 and 1998. With demand well-maintained and inventories under control, activity stabilized. Starts and permits for single-family houses in the fourth quarter of 2000 were up from the average for the third quarter.

Households continued to borrow at a brisk pace last year, with household debt expanding an estimated 8¾ percent, well above the growth rate of disposable personal income. Consumer credit increased rapidly early in the year, boosted by strong outlays on durable goods; but as consumer spending cooled later in the year, the expansion of consumer credit slowed. For the year as a whole, consumer credit is estimated to have advanced more than 8½ percent, up from the 7 percent pace of 1999. Households also took on large amounts of mortgage debt, which grew an estimated 9 percent last year, reflecting the solid pace of home sales.

With the rapid expansion of household debt in recent years, the household debt service burden has

Delinquency rates on household loans



NOTE: The data are quarterly and extend through 2000:Q3. Data on credit-card delinquencies are from bank Call Reports; data on auto loan delinquencies are from the Big Three automakers; data on mortgage delinquencies are from the Mortgage Bankers Association.

increased to levels not seen since the late 1980s. Even so, with unemployment low and household net worth high, the credit quality of the household sector appears to have deteriorated little last year. Personal bankruptcy filings held relatively steady and remain well below their peak from several years ago. Delinquency rates on home mortgages, credit cards, and auto loans have edged up in recent quarters but are at most only slightly above their levels of the fourth quarter of 1999. Lenders did not appear to be significantly concerned about the credit quality of the household sector for most of last year, although some lenders have become more cautious of late. According to surveys of banks conducted by the Federal Reserve, few commercial banks tightened lending conditions on consumer installment loans and mortgage loans to households over the first three quarters of 2000. However, the most recent survey indicates that a number of banks tightened standards and terms on consumer loans, particularly non-credit-card loans, over the past several months, perhaps because of some uneasiness about how the financial position of households will hold up as the pace of economic activity slows.

The Business Sector

Real business fixed investment rose 10 percent in 2000 according to the advance estimate from the Commerce Department. Investment spending shot ahead at an annual rate of 21 percent in the first quarter of the year; its strength in that period came, in part, from high-tech purchases that had been delayed from 1999 by companies that did not want their operating systems to be in a state of change at the onset of the new millennium. Expansion of investment was slower but still relatively brisk in the

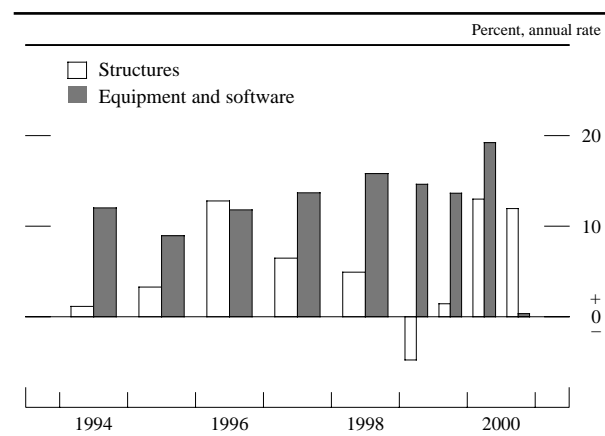
second and third quarters, at annual rates of about 15 percent and 8 percent respectively. In the fourth quarter, however, capital spending downshifted abruptly in response to the slowing economy, tightening financial conditions, and rising concern about the prospects for profits; the current estimate shows real investment outlays having fallen at an annual rate of 1½ percent in that period.

Fixed investment in equipment and software was up 9½ percent in 2000, with the bulk of the gain coming in the first half of the year. Spending slowed to a rate of growth of about 5½ percent in the third quarter and then declined in the fourth quarter. Business investment in motor vehicles fell roughly 15 percent, on net, during 2000, with the largest portion of the drop coming in the fourth quarter; the declines in real outlays on larger types of trucks were particularly sizable. Investment in industrial equipment, tracking the changing conditions in manufacturing, also fell in the fourth quarter but was up appreciably for the year overall. Investment in high-tech equipment decelerated over the year but was still expanding in the fourth quarter: Real outlays for telecommunications equipment posted exceptionally large gains in the first half of the year, flattened out temporarily in the third quarter, and expanded again in the fourth. Spending on computers and peripherals increased, in real terms, at an average rate of about 45 percent over the first three quarters of the year but slowed abruptly to a 6 percent rate of expansion in the year's final quarter, the smallest quarterly advance in several years.

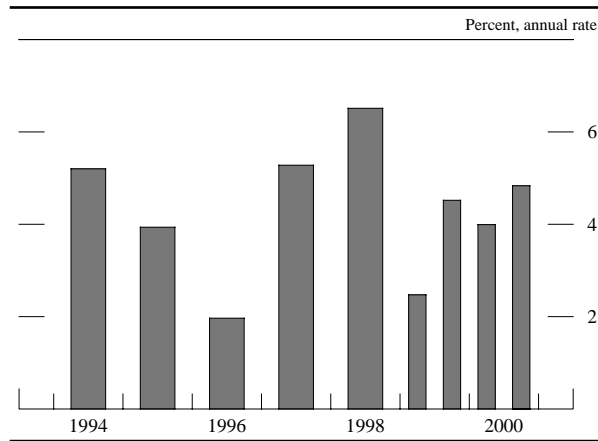
Investment in nonresidential structures rose substantially in 2000, about 12½ percent in all, after having declined 1¾ percent in 1999. Investment in factory buildings, which had fallen more than 20 percent in 1999 in an apparent reaction to the economic disruptions abroad and the associated softness in demand for U.S. exports, more than recouped that decline over the course of 2000. Real outlays for office construction, which had edged down in 1999 after several years of strong advance, got back on track in 2000, posting a gain of about 13½ percent. Real investment in commercial buildings other than offices was little changed after moderate gains in the two previous years. Spending on structures used in drilling for energy strengthened in response to the surge in energy prices.

Business inventory investment was subdued early in the year when final sales were surging; aggregate inventory–sales ratios, which have trended lower in recent years as companies became more efficient at managing stocks, edged down further. As sales moderated in subsequent months, production growth did

Change in real business fixed investment



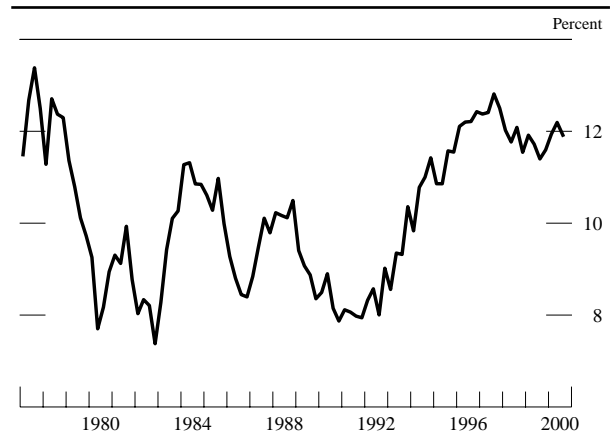
Change in real nonfarm business inventories



not decelerate quite as quickly, and inventories began to rise more rapidly. Incoming information through the summer suggested that some firms might be encountering a bit of backup in stocks but that the problems were not severe overall. In the latter part of the year, however, inventory–sales ratios turned up, indicating that more serious overhangs were developing. Responding to the slowing of demand and the increases in stocks, manufacturers reduced output in each of the last three months of the year by successively larger amounts. Businesses also began to clamp down on the flow of imports. Despite those adjustments, stocks in a number of domestic industries were likely well above desired levels as the year drew to a close.

The Commerce Department's compilation of business profits currently extends only through the third quarter of 2000, but these data show an evolving pattern much like that of other economic data. After having risen at an annual rate of more than 16 percent in the first half of the year, U.S. corporations' economic profits—that is, book profits with inventory and capital consumption adjustments—slowed to less than a 3 percent rate of growth in the third quarter. Profits from operations outside the United States continued to increase rapidly in the third quarter. However, economic profits from domestic operations edged down in that period, as solid gains for financial corporations were more than offset by a 4 percent rate of decline in the profits of nonfinancial corporations. Profits of nonfinancial corporations as a share of their gross nominal output rose about ½ percentage point in the first half of 2000 but reversed part of that gain in the third quarter. Earnings reports for the fourth quarter indicate that corporate profits fell sharply in that period.

Before-tax profits as a share of GDP

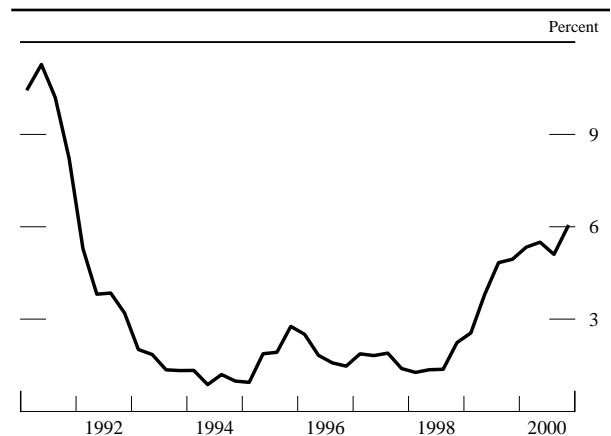


NOTE. Profits from domestic operations of nonfinancial corporations, with inventory valuation and capital consumption adjustments, divided by gross domestic product of nonfinancial corporate sector. The data extend through 2000:Q3.

Business debt expanded strongly over the first half of 2000, propelled by robust capital spending as well as by share repurchases and cash-financed merger activity. The high level of capital expenditures outstripped internally generated funds by a considerable margin despite continued impressive profits. To meet their borrowing needs, firms tapped commercial paper, bank loans, and corporate bonds in volume in the first quarter. The rapid pace of borrowing continued in the second quarter, although borrowers relied more heavily on bank loans and commercial paper to meet their financing needs in response to a rise in longer-term interest rates.

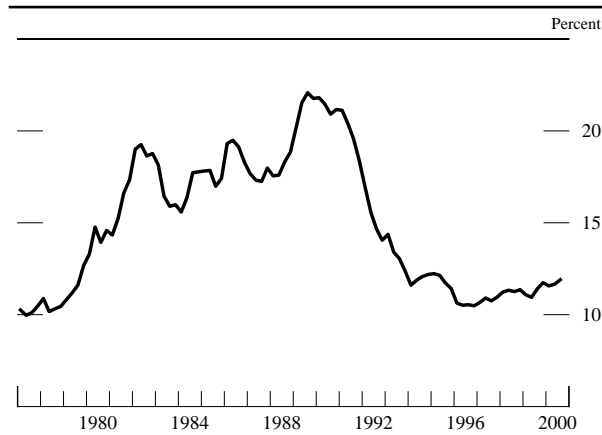
Business borrowing slowed appreciably in the second half of the year. As economic growth moderated and profits weakened, capital spending decelerated

Default rate on outstanding junk bonds



NOTE. The data are quarterly; the series shown is a four-quarter moving average.

Net interest payments of nonfinancial corporations relative to cash flow

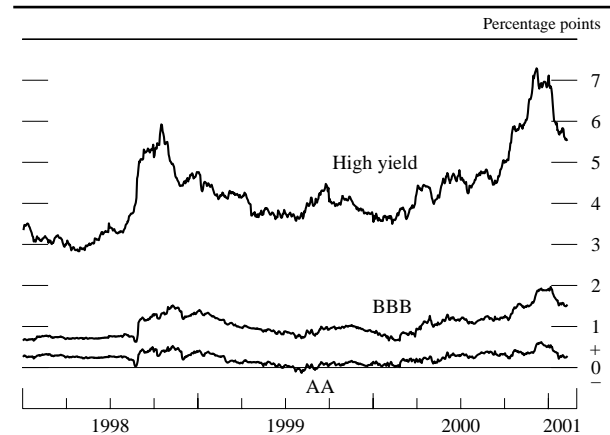


NOTE. The data are quarterly and extend through 2000:Q3.

sharply. In addition, firms held down their borrowing needs by curbing their buildup of liquid assets, which had been accumulating quite rapidly in previous quarters. Borrowing may have been deterred by a tightening of financial conditions for firms with lower credit ratings, as investors and lenders apparently became more concerned about credit risk. Those concerns likely were exacerbated by indications that credit quality had deteriorated at some businesses. The default rate on high-yield bonds continued to climb last year, reaching its highest level since 1991. Some broader measures of credit quality also slipped. The amount of nonfinancial debt downgraded by Moody's Investor Services in 2000 was more than twice as large as the amount upgraded, and the delinquency rate on business loans at commercial banks continued to rise over the year. But while some firms were clearly having financial difficulties, many other firms remained soundly positioned to service their debt. Indeed, the ratio of net interest payments to cash flow for all nonfinancial firms moved only modestly above the relatively low levels of recent years.

As concerns about risk mounted, lenders became more cautious about extending credit to some borrowers. An increasingly large proportion of banks reported firming terms and standards on business loans over the course of the year. In the corporate bond market, yield spreads on high-yield and lower-rated investment-grade bonds, measured relative to the ten-year swap rate, began climbing sharply in September and by year-end were at levels well above those seen in the fall of 1998. Lower-rated commercial paper issuers also had to pay unusually large premiums late in the year, particularly on paper spanning the year-end. As financial conditions

Spreads of corporate bond yields over the ten-year swap rate

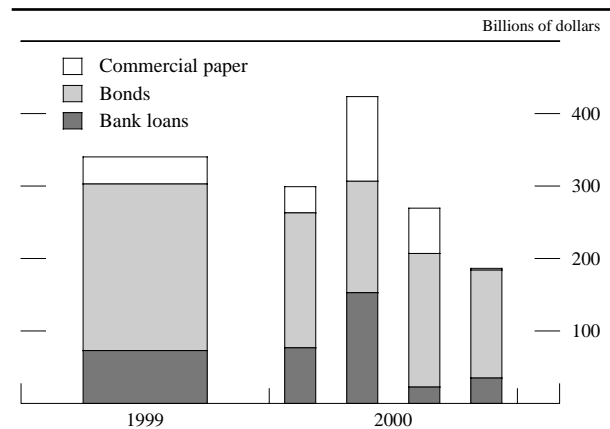


NOTE. The data are daily and extend through February 8, 2001. The spreads compare the yields on the Merrill Lynch AA, BBB, and 175 indexes with the ten-year swap rate.

became more stringent, issuance of high-yield debt was cut back sharply in the fourth quarter, although investment-grade bond issuance remained strong. Bank lending to businesses was also light at that time, and net issuance of commercial paper came to a standstill. In total, the debt of nonfinancial businesses expanded at an estimated 5½ percent rate in the fourth quarter, less than half the pace of the first half of the year. The slowdown in borrowing in the latter part of the year damped the growth of nonfinancial business debt over 2000, although it still expanded an estimated 8¾ percent.

In early 2001, borrowing appears to have picked up from its sluggish fourth-quarter pace. Following the easing of monetary policy in early January, yield spreads on corporate bonds reversed a considerable portion of their rise over the latter part of 2000, with spreads on high-yield bonds narrowing more than a percentage point. As yields declined, corporate bond issuance picked up, and even some below-investment grade issues were brought to the market. In contrast, investors in the commercial paper market apparently became more concerned about credit risk, partly in response to the defaults of two California utilities on some bonds and commercial paper in mid-January related to the difficulties in the electricity market in that state. After those defaults, spreads between top-tier and second-tier commercial paper widened further, and investors became more discriminating even within the top rating tier. Some businesses facing resistance in the commercial paper market reportedly met their financing needs by tapping backup credit lines at banks.

Major components of net business financing



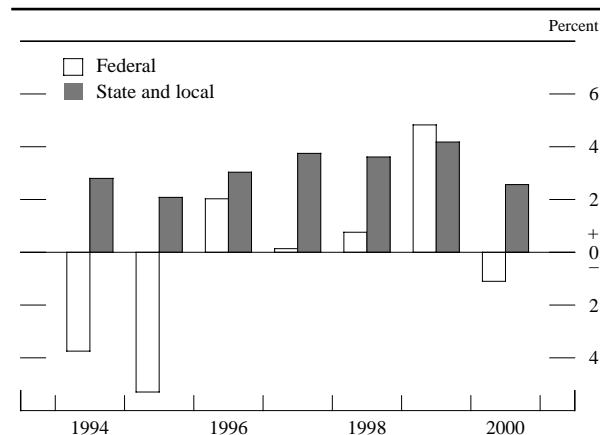
NOTE. Seasonally adjusted annual rate for nonfarm nonfinancial corporate businesses. Components for 2000:Q4 are estimated.

Growth in commercial mortgage debt slowed last year to an estimated rate of 9¼ percent, and issuance of commercial-mortgage-backed securities in 2000 fell back from its 1999 pace. Spreads on lower-rated commercial-mortgage-backed securities over swap rates widened by a small amount late in the year, and banks on net reported tightening their standards on commercial real estate credit over the year. Nevertheless, fundamentals in the commercial real estate market remain solid, and delinquency rates on commercial mortgages stayed around their historic lows.

The Government Sector

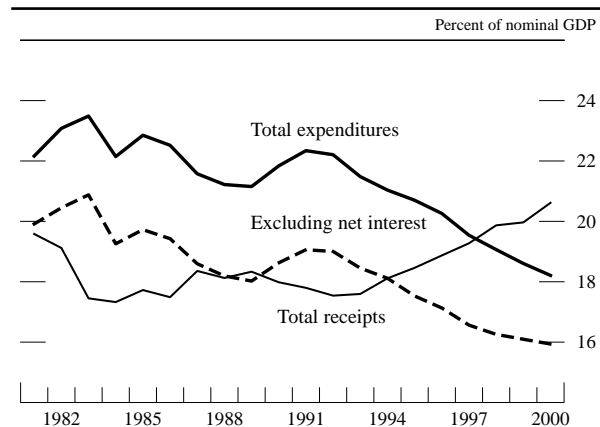
Real consumption and investment expenditures of federal, state, and local governments, the part of government spending that is included in GDP, rose only 1¼ percent in the aggregate during 2000. The increase was small partly because the consumption and investment expenditures of the federal government had closed out 1999 with a large increase in advance of the century date change. Federal purchases in the fourth quarter of 2000 were about 1 percent below the elevated level at year-end 1999. Abstracting from the bumps in the spending data, the underlying trend in real federal consumption and investment outlays appears to have been mildly positive over the past couple of years. The consumption and investment expenditures of state and local governments rose about 2½ percent in 2000 after an unusually large increase of 4¼ percent in 1999. The slowdown in spending was mainly a reflection of a downshift in government investment in structures, which can be volatile from year to year and had posted a large gain in 1999.

Change in real government expenditures on consumption and investment



Total federal spending, as reported in the unified budget, rose 5 percent in fiscal year 2000, the largest increase in several years. A portion of the rise stemmed from shifts in the timing of some outlays in a way that tended to boost the tally for fiscal 2000. But even allowing for those shifts, the rise in spending would have exceeded the increases of other recent years. Outlays accelerated for most major functions, including defense, health, social security, and income security. Of these, spending on health—about three-fourths of which consists of outlays for Medicaid—recorded the biggest increase. Medicaid grants to the states were affected last fiscal year by increased funding for the child health insurance initiative that was passed in 1997 and by a rise in the portion of Medicaid expenses picked up by the federal government. Spending on agriculture rose very sharply for a third year but not as rapidly as in fiscal 1999. The ongoing paydown of debt by the federal government led to a

Federal receipts and expenditures



NOTE. The data are from the unified budget and are for fiscal years.

decline of nearly 3 percent in net interest payments in fiscal 2000 after a somewhat larger drop in these payments in fiscal 1999.

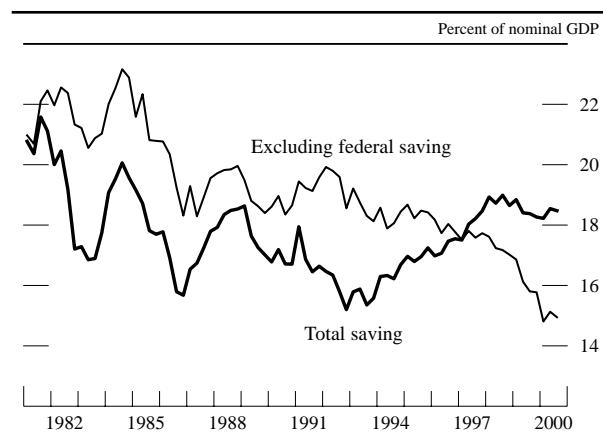
Federal receipts increased 10¾ percent in fiscal year 2000, the largest advance in more than a decade. The increase in receipts from taxes on the income of individuals amounted to more than 14 percent. In most recent years, these receipts have grown much faster than nominal personal income as measured in the national income and product accounts. One important factor in the difference is that rising levels of income and a changing distribution have shifted more taxpayers into higher tax brackets; another is an increase in revenues from taxes on capital gains and other items that are not included in personal income. Receipts from the taxation of corporate profits also moved up sharply in fiscal 2000, rebounding from a small decline the previous fiscal year. With federal receipts rising much faster than spending, the surplus in the unified budget rose to \$236 billion in fiscal 2000, nearly double that of fiscal 1999. The on-budget surplus, which excludes surpluses accumulating in the social security trust fund, rose from essentially zero in fiscal 1999 to \$86 billion in fiscal 2000. Excluding net interest payments, a charge resulting from past deficits, the surplus in fiscal 2000 was about \$460 billion.

Federal saving, which is basically the federal budget surplus adjusted to conform to the accounting practices followed in the national income and product accounts, amounted to about 3½ percent of nominal GDP over the first three quarters of 2000. This figure has been rising roughly 1 percentage point a year over the past several years. Mainly because of that

rise in federal saving, the national saving rate has been running at a higher level in recent years than was observed through most of the 1980s and first half of the 1990s, even as the personal saving rate has plunged. The rise in federal saving has kept interest rates lower than they otherwise would have been and has contributed, in turn, to the rapid growth of capital investment and the faster growth of the economy's productive potential.

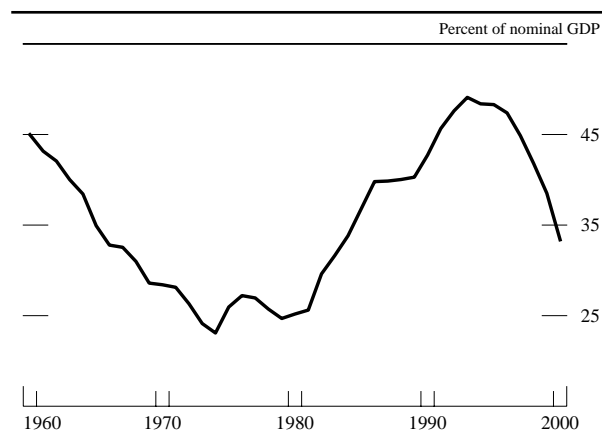
The burgeoning federal budget surplus allowed the Treasury to pay down its debt last year at an even faster pace than in recent years. As of the end of fiscal 2000, the stock of marketable Treasury debt outstanding had fallen about \$500 billion from its peak in 1997. The existing fiscal situation and the anticipation that budget surpluses would continue led the Treasury to implement a number of debt management changes during 2000, many designed to preserve the liquidity of its securities. In particular, the Treasury sought to maintain large and regular offerings of new securities at some key maturities, because such attributes are thought to importantly contribute to market liquidity. In part to make room for continued sizable auctions of new securities, the Treasury initiated a debt buyback program through which it can purchase debt that it previously issued. In total, the Treasury conducted twenty buyback operations in 2000, repurchasing a total of \$30 billion par value of securities with maturities ranging from twelve to twenty-seven years. Those operations were generally well received and caused little disruption to the market. Going forward, the Treasury intends to conduct two buyback operations per month and expects to repurchase about \$9 billion par value of

National saving



NOTE. National saving comprises the gross saving of households, businesses, and governments. The data extend through 2000:Q3.

Federal government debt held by the public



NOTE. The data are as of the end of the fiscal year. Excludes debt held in federal government accounts and by the Federal Reserve System.

outstanding securities in each of the first two quarters of 2001.

Despite conducting buybacks on that scale, the Treasury had to cut back considerably its issuance of new securities. To still achieve large sizes of individual issues at some maturities, the Treasury implemented a schedule of regular reopenings—in which it auctions additional amounts of a previously issued security instead of issuing a new one—for its five-, ten-, and thirty-year instruments. Under that schedule, every other auction of each of those securities is a smaller reopening of the previously auctioned security. At other maturities, the Treasury reduced the sizes of its two-year notes and inflation-indexed securities and eliminated the April auction of the thirty-year inflation-indexed bond. In addition, the Treasury recently announced that it would stop issuing one-year bills following the February auction, after having cut back the frequency of new offerings of that security last year.

These reductions in the issuance of Treasury securities have caused the Federal Reserve to modify some of its procedures for obtaining securities at Treasury auctions, as described in detail below. In addition, the Treasury made changes in the rules for auction participation by foreign and international monetary authority (FIMA) accounts, which primarily include foreign central banks and governmental monetary entities. The new rules, which went into effect on February 1, 2001, impose limits on the size of non-competitive bids from individual FIMA accounts and on the total amount of such bids that will be awarded at each auction. These limits will leave a larger pool of securities available for competitive bidding at the auctions, helping to maintain the liquidity and efficiency of the market. Moreover, FIMA purchases will be subtracted from the total amount of securities offered, rather than being added on as they were in some previous instances, making the amount of funds raised at the auction more predictable.

State and local government debt increased little in 2000. Gross issuance of long-term municipal bonds was well below the robust pace of the past two years. Refunding offerings were held down by higher interest rates through much of the year, and the need to raise new capital was diminished by strong tax revenues. Net issuance was also damped by an increase in the retirement of bonds from previous refunding activity. Credit quality in the municipal market improved considerably last year, with credit upgrades outnumbering downgrades by a substantial margin. The only notable exception was in the not-for-profit health care sector, where downgrades predominated.

The External Sector

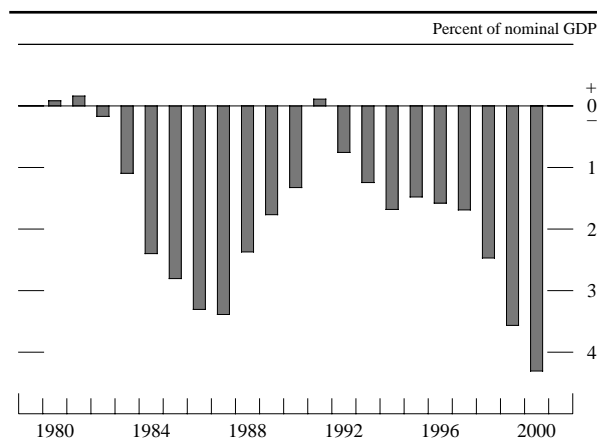
Trade and Current Account

The current account deficit reached \$452 billion (annual rate) in the third quarter of 2000, or 4.5 percent of GDP, compared with \$331 billion and 3.6 percent for 1999. Most of the expansion in the current account deficit occurred in the balance of trade in goods and services. The deficit on trade in goods and services widened to \$383 billion (annual rate) in the third quarter from \$347 billion in the first half of the year. Data for trade in October and November suggest that the deficit may have increased further in the fourth quarter. Net payments on investments were a bit less during the first three quarters of 2000 than in the second half of 1999 owing to a sizable increase in income receipts from direct investment abroad.

U.S. exports of goods and services rose an estimated 7 percent in real terms during 2000. Exports surged during the first three quarters, supported by a pickup in economic activity abroad that began in 1999. By market destination, U.S. exports were strongest to Mexico and countries in Asia. About 45 percent of U.S. goods exports were capital equipment, 20 percent were industrial supplies, and roughly 10 percent each were agricultural, automotive, consumer, and other goods. Based on data for October and November, real exports are estimated to have declined in the fourth quarter, reflecting in part a slowing of economic growth abroad. This decrease was particularly evident in exports of capital goods, automotive products, consumer goods, and agricultural products.

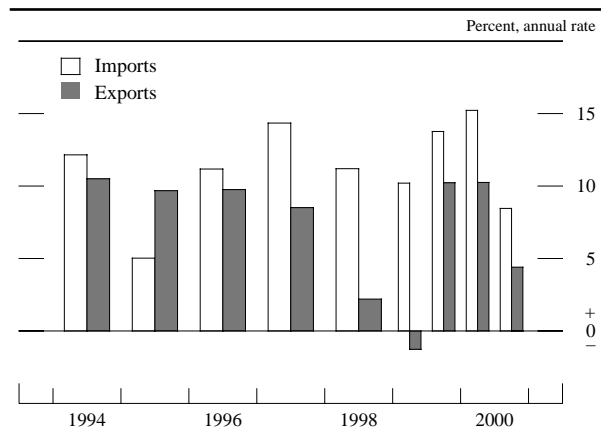
The quantity of imported goods and services expanded rapidly during the first three quarters of

U.S. current account



NOTE. The observation for 2000 is the average of the first three quarters.

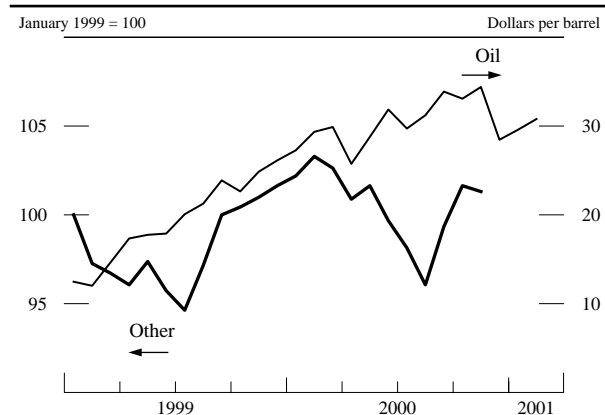
Change in real imports and exports of goods and services



2000, reflecting the continuing strength of U.S. domestic demand and the effects of past dollar appreciation on price competitiveness. Increases were widespread among trade categories. Based on data for October and November, real imports of goods and services are estimated to have risen only slightly in the fourth quarter. Moderate increases in imported consumer and capital goods were partly offset by declines in other categories of imports, particularly industrial supplies and automotive products, for which domestic demand had softened. The price of non-oil imports is estimated to have increased by less than 1 percent during 2000.

The price of imported oil rose nearly \$7 per barrel over the four quarters of 2000. During the year, oil prices generally remained high and volatile, with the spot price of West Texas intermediate (WTI) crude fluctuating between a low of \$24 per barrel in April

Prices for oil and other commodities



NOTE. The data are monthly; the last observation for oil is the average of trading days through February 8, 2001; the last observation for other commodities is November 2000. The oil price is the spot price of West Texas intermediate crude oil. The price for other commodities is a weighted average of thirty-nine nonfuel primary-commodity prices from the International Monetary Fund.

and a high above \$37 per barrel in September. Strong demand—driven by robust world economic growth—kept upward pressure on oil prices even as world supply increased considerably. Over the course of 2000, OPEC raised its official production targets by 3.7 million barrels per day, reversing the production cuts made in the previous two years. Oil production from non-OPEC sources rebounded as well. During the last several weeks of 2000, oil prices fell sharply as market participants became convinced that the U.S. economy was slowing. In early 2001, however, oil prices moved back up when OPEC announced a planned production cut of 1.5 million barrels per day.

Financial Account

The counterpart to the increased U.S. current account deficit in 2000 was an increase in net capital inflows. As in 1999, U.S. capital flows in 2000 reflected the relatively strong cyclical position of the U.S. economy for most of the year and the global wave of corporate mergers. Foreign private purchases of U.S. securities were exceptionally robust—well in excess of the record set in 1999. The composition of U.S. securities purchased by foreigners continued the shift away from Treasuries as the U.S. budget surplus, and the attendant decline in the supply of Treasuries, lowered their yield relative to other debt. Last year private foreigners sold, on net, about \$50 billion in Treasury securities, compared with net sales of \$20 billion in 1999. Although sizable, these sales were slightly less than what would have occurred had foreigners reduced their holdings in proportion to the reduction in Treasuries outstanding. The increased sale of Treasuries was fully offset by larger foreign purchases of U.S. securities issued by government-sponsored agencies. Net purchases of agency securities topped \$110 billion, compared with the previous record of \$72 billion set in 1999. In contrast to the shrinking supply of Treasury securities, U.S. government-sponsored agencies accelerated the pace of their debt issuance. Private foreign purchases of U.S. corporate debt grew to \$180 billion, while net purchases of U.S. equities ballooned to \$170 billion compared with \$108 billion in 1999.

The pace of foreign direct investment inflows in the first three quarters of 2000 also accelerated from the record pace of 1999. As in the previous two years, direct investment inflows were driven by foreign acquisition of U.S. firms, reflecting the global strength in merger and acquisition activity. Of the roughly \$200 billion in direct investment inflows in the first three quarters, about \$100 billion was

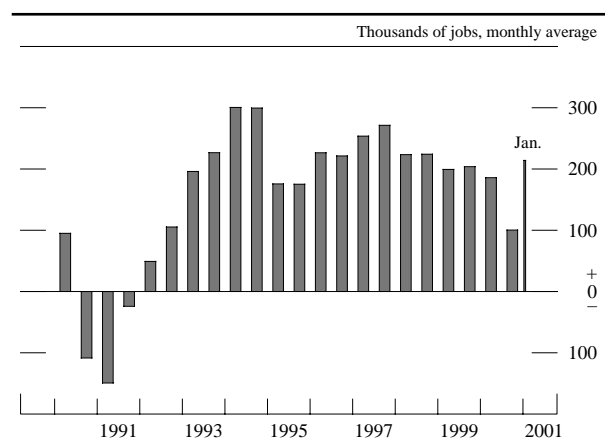
directly attributable to merger activity. Many of these mergers were financed, at least in part, by an exchange of equity, in which shares in the U.S. firm were swapped for equity in the acquiring firm. Although U.S. residents generally appear to have sold a portion of the equity acquired through these swaps, the swaps likely contributed significantly to the \$97 billion capital outflow attributed to U.S. acquisition of foreign securities. U.S. direct investment abroad was also boosted by merger activity and totaled \$117 billion in the first three quarters of 2000, a slightly faster pace than that of 1999.

Capital inflows from foreign official sources totaled \$38 billion in 2000—a slight increase from 1999. Nearly all of the official inflows were attributable to reinvested interest earnings. Modest official sales of dollar assets associated with foreign exchange intervention were offset by larger inflows from some non-OPEC oil exporting countries, which benefited from the elevated price of oil.

The Labor Market

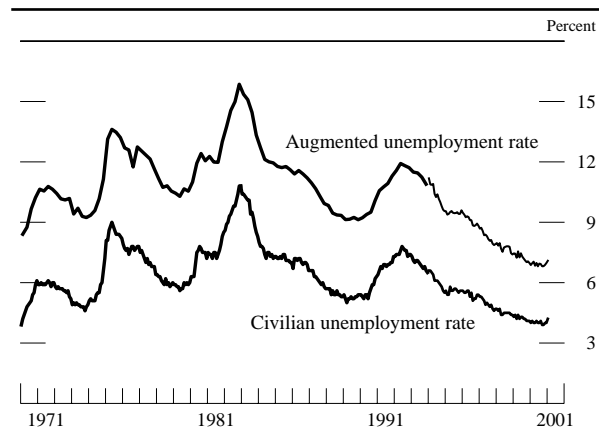
Nonfarm payroll employment increased about 1½ percent in 2000, measured on a December-to-December basis. The job count had risen slightly more than 2 percent in 1999 and roughly 2½ percent a year over the 1996–98 period. Over the first few months of 2000, the expansion of jobs proceeded at a faster pace than in 1999, boosted both by the federal government’s hiring for the decennial Census and by a somewhat faster rate of job creation in the private sector. Indications of a moderation in private hiring started to emerge toward mid-year, but because of volatility of the incoming data a slowdown could not be identified with some confidence until late summer.

Net change in payroll employment



NOTE. Private nonfarm.

Measures of labor utilization



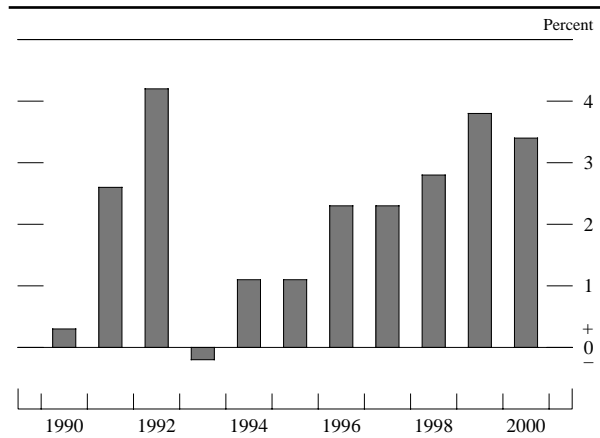
NOTE. The augmented unemployment rate is the number of unemployed plus those who are not in the labor force and want a job, divided by the civilian labor force plus those who are not in the labor force and want a job. The break in data at January 1994 marks the introduction of a redesigned survey; data after that point are not directly comparable with those of earlier periods. The data extend through January 2001.

Over the remainder of the year monthly increases in private employment stepped down further. Job growth came almost to a stop in December, when severe weather added to the restraint from a slowing economy. In January of this year, employment picked up, but the return of milder weather apparently accounted for a sizable portion of the gain.

Employment rose moderately in the private service-producing sector of the economy in 2000, about 2 percent overall after an increase of about 3 percent in 1999. In the fourth quarter, however, hiring in the services-producing sector was relatively slow, in large part because of a sizable decline in the number of jobs in personnel supply—a category that includes temporary help agencies. Employment in construction increased about 2½ percent in 2000 after several years of gains that were considerably larger. The number of jobs in manufacturing was down for a third year, owing to reductions in factory employment in the second half of the year, when manufacturers were adjusting to the slowing of demand. Those adjustments in manufacturing may also have involved some cutbacks in the employment of temporary hires, which would help to account for the sharp job losses in personnel supply. The average length of the workweek in manufacturing was scaled back as well over the second half of the year.

The slowing of the economy did not lead to any meaningful easing in the tightness of the labor market in 2000. The household survey’s measure of the number of persons employed rose 1 percent, about in line with the expansion of labor supply. On net, the unemployment rate changed little; its fourth-quarter

Change in output per hour

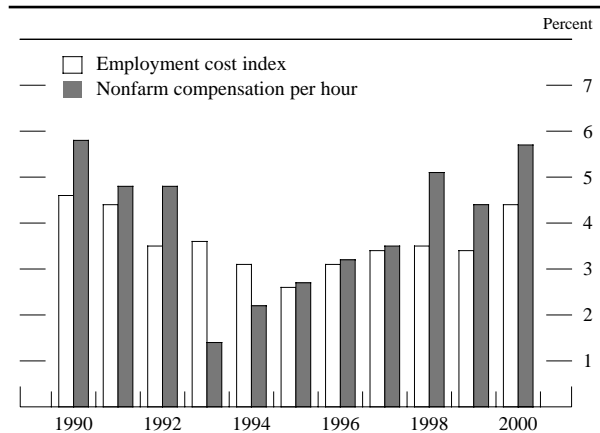


NOTE. Nonfarm business sector.

average of 4.0 percent was down just a tenth of a percentage point from the average unemployment rate in the fourth quarter of 1999. The flatness of the rate through the latter half of 2000, when the economy was slowing, may have partly reflected a desire of companies to hold on to labor resources that had been difficult to attract and retain in the tight labor market of recent years. January of this year brought a small increase in the rate, to 4.2 percent.

Productivity continued to rise rapidly in 2000. Output per hour in the nonfarm business sector was up about 3½ percent over the year as a whole. Sizable gains in efficiency continued to be evident even as the economy was slowing in the second half of the year. Except for 1999, when output per hour rose about 3¾ percent, the past year's increase was the largest since 1992, a year in which the economy was

Measures of the change in hourly compensation



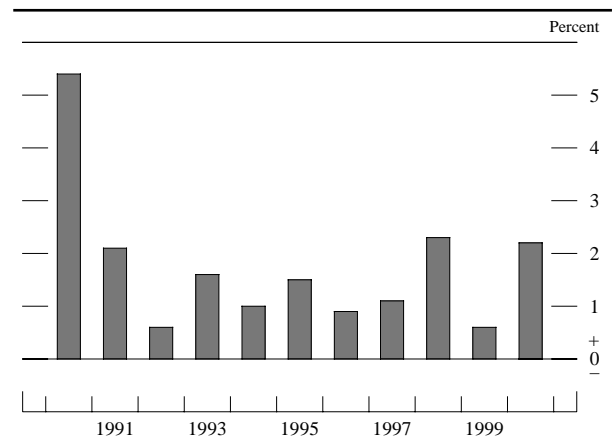
NOTE. For the ECI, change is from December to December; for nonfarm compensation, Q4 to Q4. The ECI is for private industry excluding farm and household workers. Nonfarm compensation per hour is for the nonfarm business sector.

in cyclical recovery from the 1990–91 recession. Cutting through the year-to-year variations in measured productivity, the underlying trend still appears to have traced out a pattern of strong acceleration since the middle part of the 1990s. Support for a step-up in the trend has come from increases in the amount of capital per worker—especially high-tech capital—and from organizational efficiencies that have resulted in output rising faster than the combined inputs of labor and capital.

Alternative measures of the hourly compensation of workers, while differing in their coverage and methods of construction, were consistent in showing some acceleration this past year. The employment cost index for private industry (ECI), which attempts to measure changes in the labor costs of nonfarm businesses in a way that is free from the effects of employment shifts among occupations and industries, rose nearly 4½ percent during 2000 after having increased about 3½ percent in 1999. Compensation per hour in the nonfarm business sector, a measure that picks up some forms of employee compensation that the ECI omits but that also is more subject to eventual revision than the ECI, showed hourly compensation advancing 5¾ percent this past year, up from a 1999 increase of about 4½ percent. Tightness of the labor market was likely one factor underlying the acceleration of hourly compensation in 2000, with employers relying both on larger wage increases and more attractive benefit packages to attract and retain workers. Compensation gains may also have been influenced to some degree by the pickup of consumer price inflation since 1998. Rapid increases in the cost of health insurance contributed importantly to a sharp step-up in benefit costs.

Unit labor costs, the ratio of hourly compensation to output per hour, increased about 2¼ percent in the

Change in unit labor costs



NOTE. Nonfarm business sector.

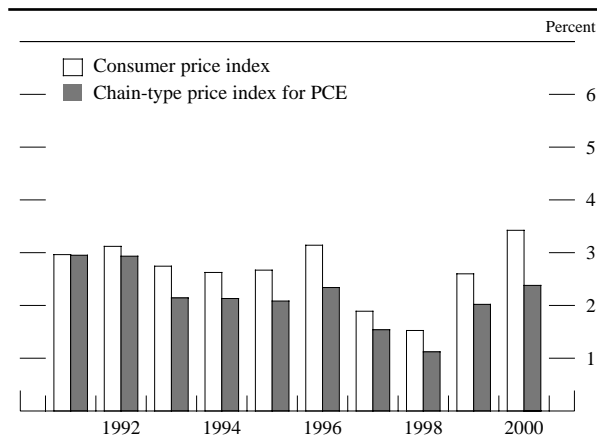
nonfarm business sector in 2000 after having risen slightly more than $\frac{1}{2}$ percent in 1999. Roughly three-fourths of the acceleration was attributable to the faster rate of increase in compensation per hour noted above. The remainder stemmed from the small deceleration of measured productivity. The labor cost rise for the latest year was toward the high end of the range of the small to moderate increases that have prevailed over the past decade.

Prices

Led by the surge in energy prices, the aggregate price indexes showed some acceleration in 2000. The chain-type price index for real GDP, the broadest measure of goods and services *produced* domestically, rose $2\frac{1}{4}$ percent in 2000, roughly $\frac{3}{4}$ percentage point more than in 1999. The price index for gross domestic purchases, the broadest measure of prices for goods and services *purchased* by domestic buyers, posted a rise of almost $2\frac{1}{2}$ percent in 2000 after having increased slightly less than 2 percent the previous year. Prices paid by consumers, as measured by the chain-type price index for personal consumption expenditures, picked up as well, about as much as the gross purchases index. The consumer price index (CPI) continued to move up at a faster pace than the PCE index this past year, and it exhibited slightly more acceleration—an increase of nearly $3\frac{1}{2}$ percent in 2000 was $\frac{3}{4}$ percentage point larger than the 1999 rise. Price indexes for fixed investment and government purchases also accelerated this past year.

The prices of energy products purchased directly by consumers increased about 15 percent in 2000, a few percentage points more than in 1999. In response to the rise in world oil prices, consumer prices of motor fuels rose nearly 20 percent in 2000, bringing the cumulative price hike for those products over the past two years to roughly 45 percent. Prices also rose rapidly for home heating oil. Natural gas prices

Change in consumer prices



increased 30 percent, as demand for that fuel outpaced the growth of supply, pulling stocks down to low levels. Prices of natural gas this winter have been exceptionally high because of the added demand for heating that resulted from unusually cold weather in November and December. Electricity costs jumped for some users, and prices nationally rose faster than in other recent years, about $2\frac{1}{4}$ percent at the consumer level.

Businesses had to cope with rising costs of energy in production, transportation, and temperature control. In some industries that depend particularly heavily on energy inputs, the rise in costs had a large effect on product prices. Producer prices of goods such as industrial chemicals posted increases that were well above the average rates of inflation last year, and rising prices for natural gas sparked especially steep price advances for nitrogen fertilizers used in farming. Prices of some services also exhibited apparent energy impacts: Producers paid sharply higher prices for transportation services via air and water, and consumer airfares moved up rapidly for a second year, although not nearly as much as in 1999. Late in 2000 and early this year, high prices for energy inputs prompted shutdowns in production at some companies, including those producing fertilizers and aluminum.

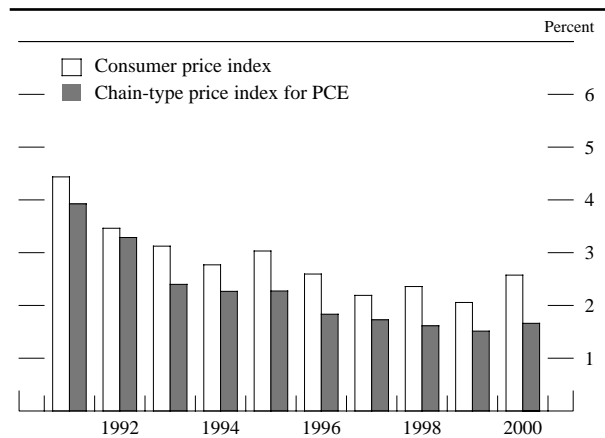
Despite the spillover of energy effects into other markets, inflation outside the energy sector remained moderate overall. The ongoing rise in labor productivity helped to contain the step-up in labor costs, and the slow rate of rise in the prices of non-oil imports meant that domestic businesses had to remain cautious about raising their prices because of the potential loss of market share. Rapid expansion of capacity in manufacturing prevented bottlenecks from developing in the goods-producing sector of the economy

Alternative measures of price change

| Price measure | 1999 | 2000 |
|---------------------------------------|------|------|
| <i>Chain-type</i> | | |
| Gross domestic product | 1.6 | 2.3 |
| Gross domestic purchases | 1.9 | 2.4 |
| Personal consumption expenditures ... | 2.0 | 2.4 |
| Excluding food and energy | 1.5 | 1.7 |
| <i>Fixed-weight</i> | | |
| Consumer price index | 2.6 | 3.4 |
| Excluding food and energy | 2.1 | 2.6 |

NOTE. Changes are based on quarterly averages and are measured to the fourth quarter of the year indicated from the fourth quarter of the preceding year.

Change in consumer prices excluding food and energy



when domestic demand was surging early in the year; later on, an easing of capacity utilization was accompanied by a softening of prices in a number of industries. Inflation expectations, which at times in the past have added to the momentum of rising inflation, remained fairly quiescent in 2000.

Against this backdrop, core inflation remained low in 2000. Producer prices of intermediate materials excluding food and energy, after having accelerated through the first few months of 2000, slowed thereafter, and their four-quarter rise of $1\frac{3}{4}$ percent was only a bit larger than the increase during 1999. Prices of crude materials excluding food and energy fell moderately this past year after having risen about 10 percent a year earlier. At the consumer level, the CPI excluding food and energy moved up $2\frac{1}{2}$ percent in 2000, an acceleration of slightly less than $\frac{1}{2}$ percentage point from 1999 when put on a basis that maintains consistency of measurement. The rise in the chain-type price index for personal consumption expenditures excluding food and energy was $1\frac{3}{4}$ percent, just a bit above the increases recorded in each of the two previous years.

Consumer food prices rose $2\frac{1}{2}$ percent in 2000 after an increase of about 2 percent in 1999. In large part, the moderate step-up in these prices probably reflected cost and price considerations similar to those at work elsewhere in the economy. Also, farm commodity prices moved up, on net, during 2000, after three years of sharp declines, and this turnabout likely showed through to the retail level to some extent. Meat prices, which are linked more closely to farm prices than is the case with many other foods, recorded increases that were appreciably larger than the increases for food prices overall.

The chain-type price index for private fixed investment rose about $1\frac{3}{4}$ percent in 2000, but that small

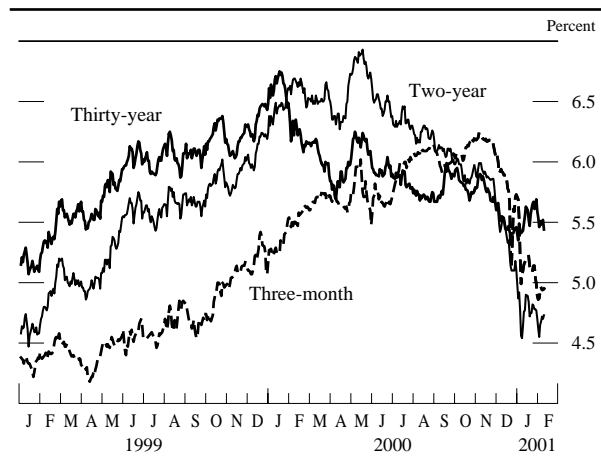
increase amounted to a fairly sharp acceleration from the pace of the preceding few years, several of which had brought small declines in investment prices. Although the price index for investment in residential structures slowed a little, to about a $3\frac{1}{2}$ percent rise, the index for nonresidential structures sped up from a $2\frac{3}{4}$ percent increase in 1999 to one of $4\frac{1}{2}$ percent in 2000. Moreover, the price index for equipment and software ticked up slightly, after having declined 2 percent or more in each of the four preceding years. To a large extent, that turnabout was a reflection of a smaller rate of price decline for computers; they had dropped at an average rate of more than 20 percent through the second half of the 1990s but fell at roughly half that rate in 2000. Excluding computers, equipment prices increased slightly in 2000 after having declined a touch in 1999.

U.S. Financial Markets

Financial markets in 2000 were influenced by the changing outlook for the U.S. economy and monetary policy and by shifts in investors' perceptions of and attitudes toward risk. Private longer-term interest rates generally firmed in the early part of the year as growth remained unsustainably strong and as market participants anticipated a further tightening of monetary policy by the Federal Reserve. Later in the year, as it became apparent that the pace of economic growth was slowing, market participants began to incorporate expectations of significant policy easing into asset prices, and most longer-term interest rates fell sharply over the last several months of 2000 and into 2001. Over the course of the year, investors became more concerned about credit risk and demanded larger yield spreads to hold lower-rated corporate bonds, especially once the growth of the economy slowed in the second half. Banks, apparently having similar concerns, reported widening credit spreads on business loans and tightening standards for lending to businesses. Weakening economic growth and tighter financial conditions in some sectors led to a slowing in the pace of debt growth over the course of the year.

Stock markets had another volatile year in 2000. After touching record highs in March, stock prices turned lower, declining considerably over the last four months of the year. Valuations in some sectors fell precipitously from high levels, and near-term earnings forecasts were revised down sharply late in the year. On balance, the broadest stock indexes fell more than 10 percent last year, and the tech-heavy Nasdaq was down nearly 40 percent.

Rates on selected Treasury securities



NOTE: The data are daily and extend through February 8, 2001.

Interest Rates

The economy continued to expand at an exceptionally strong and unsustainable pace in the early part of 2000, prompting the Federal Reserve to tighten its policy stance in several steps ending at its May meeting. Private interest rates and shorter-term Treasury yields rose considerably over that period, reaching a peak just after the May FOMC meeting. Investors apparently became more concerned about credit risk as well; spreads between rates on lower-rated corporate bonds and swaps widened in the spring, adding to the upward pressure on private interest rates. Long-term Treasury yields, in contrast, remained below their levels from earlier in the year, as market participants became increasingly convinced that the supply of those securities would shrink considerably in coming years and incorporated a “scarcity premium” into their prices. By mid-May, with the rapid expansion of economic activity showing few signs of letting up, rates on federal funds and eurodollar futures, which can be used as a rough gauge of policy expectations, were indicating that market participants expected additional policy tightening going forward.

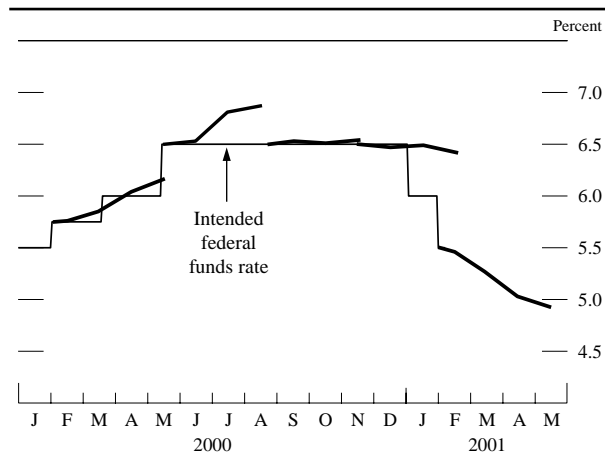
Signs of a slowdown in the growth of aggregate demand began to appear in the incoming data soon after the May FOMC meeting and continued to gradually accumulate over subsequent months. In response, market participants became increasingly convinced that the FOMC would not have to tighten its policy stance further, which was reflected in a flattening of the term structure of rates on federal funds and eurodollar futures. Interest rates on most corporate bonds declined gradually on the shifting

outlook for the economy, and by the end of August had fallen more than $\frac{1}{2}$ percentage point from their peaks in May.

Most market interest rates continued to edge lower into the fall, as the growth of the economy seemed to moderate further. Over the last couple months of 2000 and into early 2001, as it became apparent that economic growth was slowing more abruptly, market participants sharply revised down their expectations for future short-term interest rates. Treasury yields plummeted over that period, particularly at shorter maturities: The two-year Treasury yield dropped more than a full percentage point from mid-November to early January, moving below the thirty-year yield for the first time since early 2000. Yields on inflation-indexed securities also fell considerably, but by less than their nominal counterparts, suggesting that the weakening of economic growth lowered expectations of both real interest rates and inflation.

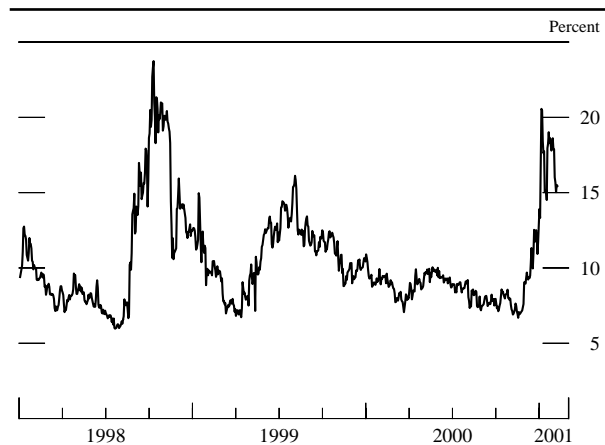
Although market participants had come to expect considerable policy easing over the first part of this year, the timing and magnitude of the intermeeting cut in the federal funds rate in early January was a surprise. In response, investors built into asset prices anticipations of a more rapid policy easing over the near-term. Indeed, the further substantial reduction in the federal funds rate implemented at the FOMC meeting later that month was largely expected and elicited little response in financial markets. Even with a full percentage point reduction in the federal funds rate in place, futures rates have recently pointed to expectations of additional policy easing over coming months. Investors appear to be uncertain about this outlook, however, judging from the recent rise in the

Federal funds futures rates and the intended federal funds rate



NOTE: The thick line segments show the rates on federal funds futures contracts on the day after the scheduled FOMC meetings in February, May, August, and November 2000 and in January 2001.

Implied volatility of short-term interest rates

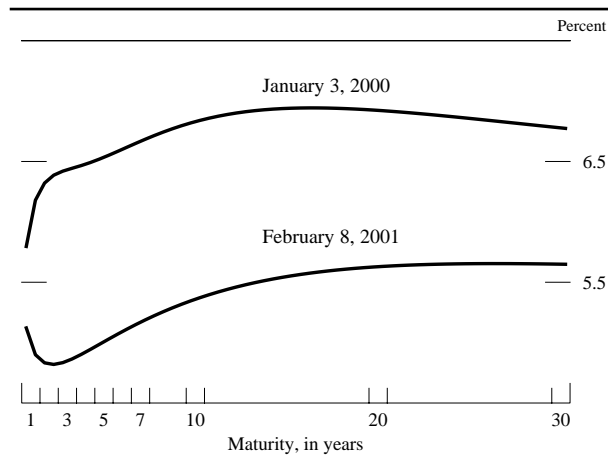


NOTE. The data are daily and extend through February 8, 2001. The series shown is the implied volatility of the three-month eurodollar rate over the coming four months, as calculated from option prices.

implied volatilities of interest rates derived from option prices. On balance since the beginning of 2000, the progressive easing in the economic outlook, in combination with the effects of actual and prospective reductions in the supply of Treasury securities, has resulted in a sizable downward shift in the Treasury yield curve.

The prospect of a weakening in economic growth, along with sizable declines in equity prices and downward revisions to profit forecasts, apparently caused investors to reassess credit risks in the latter part of last year. Spreads between rates on high-yield corporate bonds and swaps soared beginning in September, pushing the yields on those bonds substantially higher. Concerns about credit risk also spilled over into the investment-grade sector, where yield

Treasury yield curve



NOTE. Yield curves are estimated from off-the-run Treasury coupon securities. Yields shown are those on notional par Treasury securities with semiannual coupons.

spreads widened considerably for lower-rated securities. For most investment-grade issuers, though, the effects of the revised policy outlook more than offset any widening in risk spreads, resulting in a decline in private interest rates in the fourth quarter. Since the first policy easing in early January, yield spreads on corporate bonds have narrowed considerably, including a particularly large drop in the spread on high-yield bonds. Overall, yields on most investment-grade corporate bonds have reached their lowest levels since the first half of 1999, while rates on most high-yield bonds have fallen about 2 percentage points from their peaks and have reached levels similar to those of mid-2000.

Although investors at times in recent months appeared more concerned about credit risk than they were in the fall of 1998, the recent financial environment, by most accounts, did not resemble the market turbulence and disruption of that time. The Treasury and investment-grade corporate bond markets remained relatively liquid, and the investment-grade market easily absorbed the high volume of bond issuance over 2000. Investors continued to show a heightened preference for larger, more liquid corporate issues, but they did not exhibit the extreme desire for liquidity that was apparent in the fall of 1998. For example, the liquidity premium for the on-the-run ten-year Treasury note this year remained well below the level of that fall.

Nonetheless, the Treasury market has become somewhat less liquid than it was several years ago. Moreover, in 2000, particular segments of the Treasury market occasionally experienced bouts of unusually low liquidity that appeared related to actual or potential reductions in the supply of individual securities. Given the possibility that liquidity could deteriorate further as the Treasury continues to pay down its debt, market participants reportedly increased their reliance on alternative instruments—including interest rate swaps and debt securities issued by government-sponsored housing agencies and other corporations—for some of the hedging and pricing functions historically provided by Treasury securities. Fannie Mae and Freddie Mac continued to issue large amounts of debt under their Benchmark and Reference debt programs, which are designed to mimic characteristics of Treasury securities—such as large issue sizes and a regular calendar of issuance—that are believed to contribute to their liquidity. By the end of 2000, the two firms together had more than \$300 billion of notes and bonds and more than \$200 billion of bills outstanding under those programs. Trading volume and dealer positions in agency securities have risen considerably since 1998,

and the market for repurchase agreements in those securities has reportedly become more active. Also, several exchanges listed options and futures on agency debt securities. Open interest on some of those futures contracts has picked up significantly, although it remains small compared to that on futures contracts on Treasury securities.

The shrinking supply of Treasury securities and the possibility of a consequent decline in market liquidity also pose challenges for the Federal Reserve. For many years, Treasury securities have provided the Federal Reserve with an effective asset for System portfolio holdings and the conduct of monetary policy. The remarkable liquidity of Treasury securities has allowed the System to conduct sizable policy operations quickly and with little disruption to markets, while the safety of Treasury securities has allowed the System to avoid credit risk in its portfolio. However, if Treasury debt continues to be paid down, at some point the amount outstanding will be insufficient to meet the Federal Reserve's portfolio needs. Well before that time, the proportion of Treasury securities held by the System could reach levels that would significantly disrupt the Treasury market and make monetary policy operations increasingly difficult or costly. Recognizing this possibility, last year the FOMC initiated a study to consider alternative approaches to managing the Federal Reserve's portfolio, including expanding the use of the discount window and broadening the types of assets acquired in the open market. As it continues to study various alternatives, the FOMC will take into consideration the effect that such approaches might have on the liquidity and safety of its portfolio and the potential for distorting the allocation of credit to private entities.

Meanwhile, some measures have been taken to prevent the System's holdings of individual Treasury securities from reaching possibly disruptive levels and to help curtail any further lengthening of the average maturity of the System's holdings. On July 5, 2000, the Federal Reserve Bank of New York announced guidelines limiting the System's holdings of individual Treasury securities to specified percentages of their outstanding amounts, depending on the remaining maturity of the issue. Those limits range from 35 percent for Treasury bills to 15 percent for longer-term bonds. As a result, the System has redeemed some of its holdings of Treasury securities on occasions when the amount of maturing holdings has exceeded the amount that could be rolled over into newly issued Treasury securities under these limits. Redemptions of Treasury holdings in 2000 exceeded \$28 billion, with more than \$24 billion

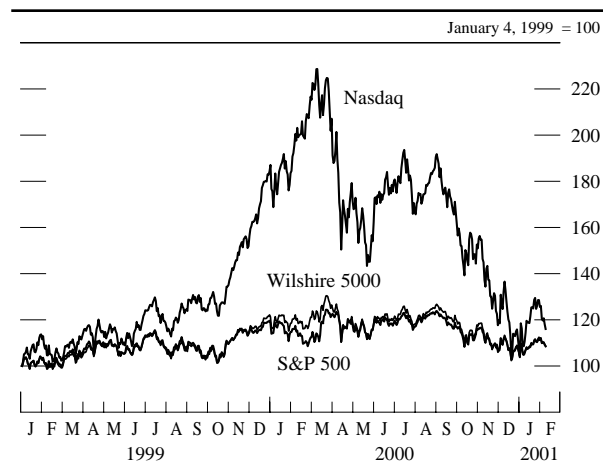
of the redemptions in Treasury bills. In addition, the Federal Reserve accommodated a portion of the demand for reserves last year by increasing its use of longer-term repurchase agreements rather than by purchasing Treasury securities outright. The System maintained an average of more than \$15 billion of longer-term repurchase agreements over 2000, typically with maturities of twenty-eight days.

Equity Prices

After having moved higher in the first quarter of 2000, equity prices reversed course and finished the year with considerable declines. Early in the year, the rapid pace of economic activity lifted corporate profits, and stock analysts became even more optimistic about future earnings growth. In response, most major equity indexes reached record highs in March, with the Wilshire 5000 rising 6¾ percent above its 1999 year-end level and the Nasdaq soaring 24 percent, continuing its rapid run-up from the second half of 1999. Equity prices fell from these highs during the spring, with a particularly steep drop in the Nasdaq, as investors grew more concerned about the lofty valuations of some sectors and the prospect of higher interest rates.

Broader equity indexes recovered much of those losses through August, supported by the decline in market interest rates and the continued strength of earnings growth in the second quarter. But from early September through the end of the year, stock prices fell considerably in response to the downshift in economic growth, a reassessment of the prospects for some high-tech industries, and disappointments in corporate earnings. In December and January, equity

Major stock price indexes



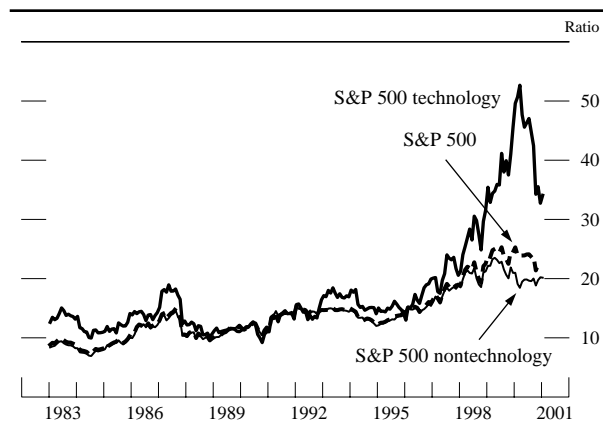
NOTE. The data are daily and extend through February 8, 2001.

analysts significantly reduced their forecasts for year-ahead earnings for the S&P 500. However, analysts apparently view the slowdown in earnings as short-lived, as long-run earnings forecasts did not fall much and remain at very high levels, particularly for the technology sector.

On balance, the Wilshire 5000 index fell 12 percent over 2000—its first annual decline since 1994. The Nasdaq composite plunged 39 percent, leaving it at year-end more than 50 percent below its record high and erasing nearly all of its gains since the beginning of 1999. The broad decline in equity prices last year is estimated to have lopped more than \$1¾ trillion from household wealth, or more than 4 percent of the total net worth of households. Nevertheless, the level of household net worth is still quite high—about 50 percent above its level at the end of 1995. Investors continued to accumulate considerable amounts of equity mutual funds over 2000, although they may have become increasingly discouraged by losses on their equity holdings toward the end of the year, when flows into equity funds slumped. At that time, money market mutual funds expanded sharply, as investors apparently sought a refuge for financial assets amid the heightened volatility and significant drops in equity prices. So far in 2001, major equity indexes are little changed, on balance, as the boost from lower interest rates has been countered by continued disappointments over corporate earnings.

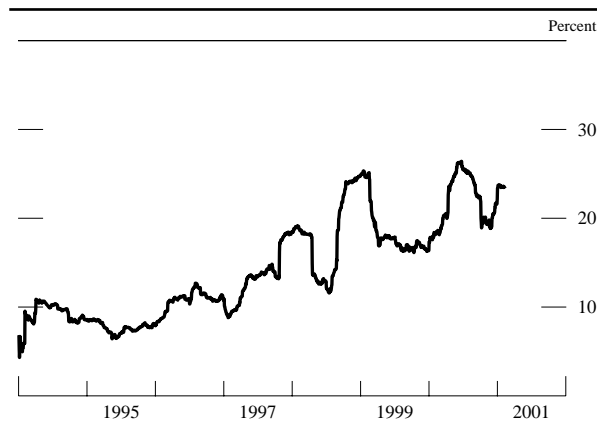
Some of the most dramatic plunges in share prices in 2000 took place among technology, telecommunications, and Internet shares. While these declines partly stemmed from downward revisions to near-term earnings estimates, which were particularly

Price-earnings ratios for the S&P 500 and selected components



NOTE. The data are monthly and extend through January 2001. The ratios are based on I/B/E/S consensus estimates of earnings over the coming twelve months.

Wilshire 5000 volatility



NOTE. The data, which are daily and extend through February 8, 2001, are the standard deviations of daily percent changes in the Wilshire 5000 index over the previous six months, with the standard deviations expressed on an annual basis.

severe in some cases, they were also driven by a reassessment of the elevated valuations of many companies in these sectors. The price-earnings ratio (calculated using operating earnings expected over the next year) for the technology component of the S&P 500 index fell substantially from its peak in early 2000, although it remains well above the ratio for the S&P 500 index as a whole. For the entire S&P 500 index, share prices fell a bit more in percentage terms than the downward revisions to year-ahead earnings forecasts, leaving the price-earnings ratio modestly below its historical high.

The volatility of equity price movements during 2000 was at the high end of the elevated levels observed in recent years. In the technology sector, the magnitudes of daily share price changes were at times remarkable. There were twenty-seven days during 2000 in which the Nasdaq composite index moved up or down by at least 5 percent; by comparison, such outsized movements were observed on a total of only seven days from 1990 to 1999.

Despite the volatility of share price movements and the large declines on balance over 2000, equity market conditions were fairly orderly, with few reports of difficulties meeting margin requirements or of large losses creating problems that might pose broader systemic concerns. The fall in share prices reined in some of the margin debt of equity investors. After having run up sharply through March, the amount of outstanding margin debt fell by about 30 percent over the remainder of the year. At year-end, the ratio of margin debt to total equity market capitalization was slightly below its level a year earlier.

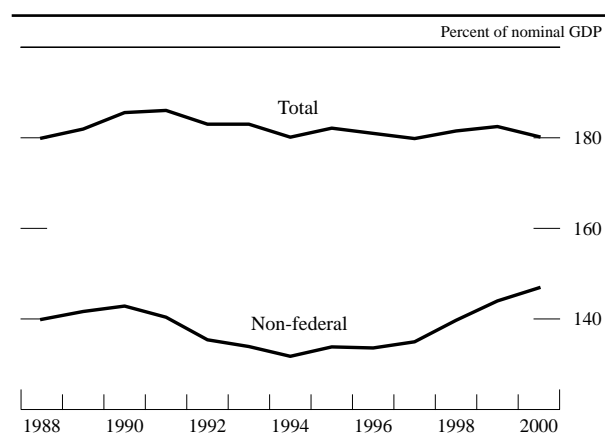
The considerable drop in valuations in some sectors and the elevated volatility of equity price movements caused the pace of initial public offerings to slow markedly over the year, despite a large number of companies waiting to go public. The slowdown was particularly pronounced for technology companies, which had been issuing new shares at a frantic pace early in the year. In total, the dollar amount of initial public offerings by domestic nonfinancial companies tapered off in the fourth quarter to its lowest level in two years and has remained subdued so far in 2001.

Debt and the Monetary Aggregates

Debt and Depository Intermediation

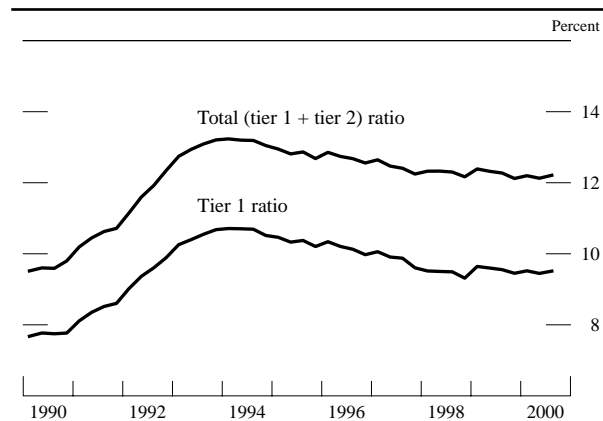
Aggregate debt of domestic nonfinancial sectors increased an estimated 5¼ percent over 2000, a considerable slowdown from the gains of almost 7 percent posted in 1998 and 1999. The expansion of nonfederal debt moderated to 8½ percent in 2000 from 9½ percent in 1999; the slowing owed primarily to a weakening of consumer and business borrowing in the second half of the year, as the growth of durables consumption and capital expenditures fell off and financial conditions tightened for some firms. Some of the slowdown in total nonfinancial debt was also attributable to the federal government, which paid down 6¾ percent of its debt last year, compared with 2½ percent in 1999. In 1998 and 1999, domestic nonfinancial debt increased faster than nominal GDP, despite the reduction in federal debt over those years. The ratio of nonfinancial debt to GDP edged down in 2000, however, as the federal debt paydown accelerated and nonfederal borrowing slowed.

Domestic nonfinancial debt



NOTE: The data are annual.

Regulatory capital ratios of commercial banks

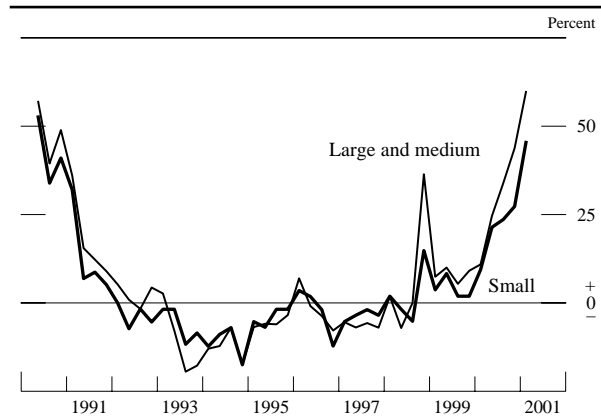


Note. The data, which are quarterly and extend through 2000:Q3, are ratios of capital to risk-weighted assets. Tier 1 capital consists primarily of common equity and certain perpetual preferred stock. Tier 2 capital consists primarily of subordinated debt, preferred stock not included in tier 1 capital, and a limited amount of loan-loss reserves.

Depository institutions continued to play an important role in meeting the demand for credit by businesses and households. Credit extended by commercial banks, after adjustment for mark-to-market accounting rules, increased 10 percent over 2000, well above the pace for total nonfinancial debt. Bank credit expanded at a particularly brisk rate through late summer, when banks, given their ample capital base and solid profits, were willing to meet strong loan demand by households and businesses. Over the remainder of the year, the growth of bank credit declined appreciably, as banks became more cautious lenders and as several banks shed large amounts of government securities.

Banks reported a deterioration of the quality of their business loan portfolios last year. Delinquency and charge-off rates on C&I loans, while low by historical standards, rose steadily, partly reflecting some repayment difficulties in banks' syndicated loan portfolios. Several large banks have stated that the uptrend in delinquencies is expected to continue in 2001. Higher levels of provisioning for loan losses and some narrowing of net interest margins contributed to a fallback of bank profits from the record levels of 1999. In addition, capitalization measures slipped a bit last year. Nevertheless, by historical standards banks remained quite profitable overall and appeared to have ample capital. In the aggregate, total capital (the sum of tier 1 and tier 2 capital) remained above 12 percent of risk-weighted assets over the first three quarters of last year, more than two percentage points above the minimum level required to be considered well-capitalized.

Net percentage of domestic banks tightening standards for commercial and industrial loans, by size of firm



NOTE. The data are based on the Federal Reserve's Senior Loan Officer Opinion Survey on Bank Lending Practices, which is generally conducted four times per year. The data extend through January 2001. Small firms are those with annual sales of less than \$50 million.

In response to greater uncertainty about the economic outlook and a reduced tolerance for risk, increasing proportions of banks reported tightening standards and terms on business loans during 2000 and into 2001, with the share recently reaching the highest level since 1990. The tightening became widespread for loans to large and middle-market firms. A considerable portion of banks reported firming standards and terms on loans to small businesses as well, consistent with surveys of small businesses indicating that a larger share of those firms had difficulty obtaining credit in 2000 than in previous

years. With delinquency rates for consumer and real estate loans having changed little, on net, last year, banks did not tighten credit conditions significantly for loans to households over the first three quarters of 2000. More recently, however, an increasing portion of banks increased standards and terms for consumer loans other than credit cards, and some of the banks surveyed anticipated a further tightening of conditions on consumer loans during 2001.

The Monetary Aggregates

The monetary aggregates grew rather briskly last year. The expansion of the broadest monetary aggregate, M3, was particularly strong over the first three quarters of 2000, as the robust growth in depository credit was partly funded through issuance of the managed liabilities included in this aggregate, such as large time deposits. M3 growth eased somewhat in the fourth quarter because the slowing of bank credit led depository institutions to reduce their reliance on managed liabilities. Institutional money funds increased rapidly throughout 2000, despite the tightening of policy early in the year, in part owing to continued growth in their provision of cash management services for businesses. For the year as a whole, M3 expanded 9¼ percent, well above the 7¾ percent pace in 1999. This advance again outpaced that of nominal income, and M3 velocity—the ratio of nominal income to M3—declined for the sixth year in a row.

Growth of money and debt

Percent

| Period | M1 | M2 | M3 | Domestic nonfinancial debt |
|--|------|-----|------|----------------------------|
| <i>Annual¹</i> | | | | |
| 1990 | 4.2 | 4.2 | 1.9 | 6.7 |
| 1991 | 7.9 | 3.1 | 1.2 | 4.5 |
| 1992 | 14.4 | 1.8 | .6 | 4.5 |
| 1993 | 10.6 | 1.3 | 1.0 | 4.9 |
| 1994 | 2.5 | .6 | 1.7 | 4.8 |
| 1995 | -1.5 | 3.8 | 6.1 | 5.4 |
| 1996 | -4.5 | 4.5 | 6.8 | 5.3 |
| 1997 | -1.2 | 5.6 | 8.9 | 5.4 |
| 1998 | 2.2 | 8.4 | 10.9 | 6.9 |
| 1999 | 1.8 | 6.2 | 7.7 | 6.8 |
| 2000 | -1.5 | 6.3 | 9.2 | 5.3 |
| <i>Quarterly (annual rate)²</i> | | | | |
| 2000:1 | 2.0 | 5.8 | 10.6 | 5.6 |
| 2 | -1.8 | 6.4 | 9.0 | 6.2 |
| 3 | -3.7 | 5.8 | 8.9 | 4.7 |
| 4 | -2.7 | 6.6 | 7.1 | 4.1 |

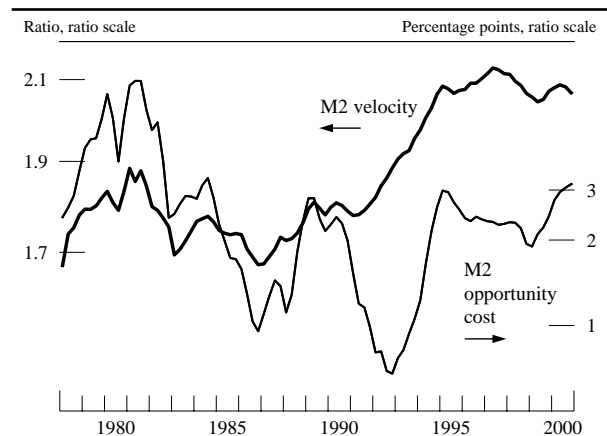
NOTE. M1 consists of currency, travelers checks, demand deposits, and other checkable deposits. M2 consists of M1 plus savings deposits (including money market deposit accounts), small-denomination time deposits, and balances in retail money market funds. M3 consists of M2 plus large-denomination time deposits, balances in institutional money market funds, RP liabilities (overnight and term), and eurodollars (overnight and term). Debt consists of the out-

standing credit market debt of the U.S. government, state and local governments, households and nonprofit organizations, nonfinancial businesses, and farms.

1. From average for fourth quarter of preceding year to average for fourth quarter of year indicated.

2. From average for preceding quarter to average for quarter indicated.

M2 velocity and opportunity cost



NOTE. The data are quarterly. The velocity of M2 is the ratio of nominal gross domestic product to the stock of M2. The opportunity cost of holding M2 is a two-quarter moving average of the difference between the three-month Treasury bill rate and the weighted average return on assets included in M2.

M2 increased 6¼ percent in 2000, about unchanged from its pace in 1999. Some slowing in M2 growth would have been expected based on the rise in short-term interest rates over the early part of the year, which pushed up the “opportunity cost” of holding M2, given that the interest rates on many components of M2 do not increase by the same amount or as quickly as market rates. However, with the level of long-term rates close to that of short-term rates, investors had much less incentive to shift funds out of M2 assets and into assets with longer maturities, which helped support M2 growth. M2 was also boosted at times by households’ increased preference for safe and liquid assets during periods of heightened volatility in equity markets. On balance over the year, the growth of M2 slightly exceeded that of nominal income, and M2 velocity edged down.

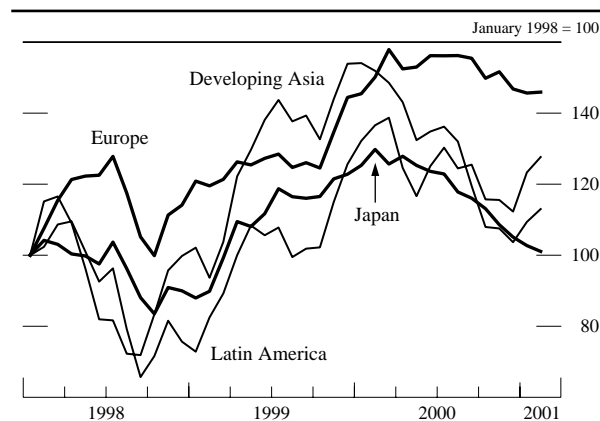
The behavior of the components of M2 was influenced importantly by interest rate spreads. The depressing effect of higher short-term market interest rates was most apparent in the liquid deposit components, including checkable deposits and savings accounts, whose rates respond very sluggishly to movements in market rates. Small time deposits and retail money market mutual funds, whose rates do not lag market rates as much, expanded considerably faster than liquid deposits. Currency growth was held down early in the year by a runoff of the stockpile accumulated in advance of the century date change. In addition, it was surprisingly sluggish over the balance of the year given the rapid pace of income growth, with weakness apparently in both domestic and foreign demands.

International Developments

In 2000, overall economic activity in foreign economies continued its strong performance of the previous year. However, in both industrial and developing countries, growth was strongest early, and clear signs of a general slowing emerged later in the year. Among industrial countries, growth in Japan last year moved up to an estimated 2 percent, and growth in the euro area slowed slightly to 3 percent. Emerging market economies in both Asia and Latin America grew about 6 percent on average in 2000. For Asian developing economies, this represented a slowing from the torrid pace of the previous year, while growth in Latin America, especially Mexico, picked up from 1999. Average foreign inflation edged up slightly to 3 percent, mainly reflecting higher oil prices. Over the first part of the year, monetary authorities moved to tighten conditions in many industrial countries, in reaction to continued strong growth in economic activity that was starting to impinge on capacity constraints, as well as some upward pressures on prices. Interest rates on long-term government securities declined on balance in most industrial countries, especially toward year-end when evidence of a slowdown in global economic growth started to emerge.

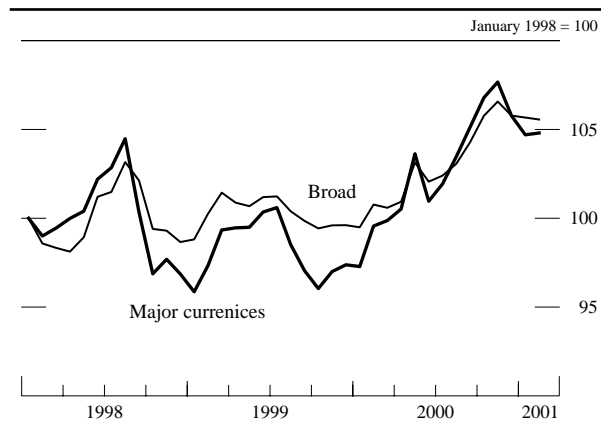
Conditions in foreign financial markets were somewhat more unsettled than in the previous year. Overall stock indexes in the foreign industrial countries generally declined, most notably in Japan. As in the United States, technology-oriented stock indexes were extremely volatile during the year. After reaching peaks in the first quarter, they started down while experiencing great swings toward mid-year, then fell sharply in the final quarter, resulting in net declines

Foreign equity indexes



NOTE. The data are monthly. The last observations are the average of trading days through February 8, 2001.

Nominal U.S. dollar exchange rate indexes



NOTE. The data are monthly. Indexes are trade-weighted averages of the exchange value of the dollar against major currencies and against the currencies of a broader group of important U.S. trading partners. Last observations are the average of trading days through February 8, 2001.

for the year of one-third or more. Stock prices in emerging market economies were generally quite weak, especially in developing Asia, where growth in recent years has depended heavily on exports of high-tech goods. Although there was no major default or devaluation among emerging market economies, average risk spreads on developing country debt still moved higher on balance over the course of the year, as the threat of potential crises in several countries, most notably Argentina and Turkey, heightened investor concerns.

The dollar's average foreign exchange value increased over most of the year, supported by continued robust growth of U.S. activity, rising interest rates on dollar assets, and market perceptions that longer-term prospects for U.S. growth and rates of return were more favorable than in other industrial countries. Part of the rise in the dollar's average value was reversed late in the year when evidence emerged that the pace of U.S. activity was slowing much more sharply than had been expected. Despite this decline, the dollar's average foreign exchange value against the currencies of other major foreign industrial countries recorded a net increase of over 7 percent for the year as a whole. The dollar also strengthened nearly as much on balance against the currencies of the most important developing country trading partners of the United States. So far this year, the dollar's average value has remained fairly stable.

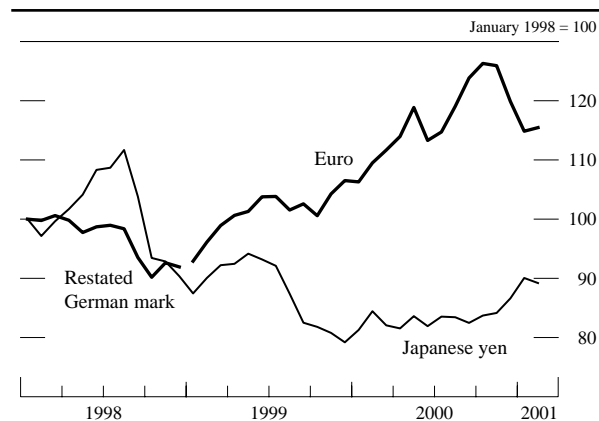
Industrial Economies

The dollar showed particular strength last year against the euro, the common currency of much of

Europe. During the first three quarters of the year, the euro continued to weaken, and by late October had fallen to a low of just above 82 cents, nearly one-third below its value when it was introduced in January 1999. The euro's decline against the dollar through most of last year appeared to be due mainly to the vigorous growth of real GDP and productivity in the United States contrasted with steady but less impressive improvements in Europe. In addition, investors may have perceived that Europe was slower to adopt "new economy" technologies, making it a relatively less attractive investment climate. In September, a concerted intervention operation by the monetary authorities of G-7 countries, including the United States, was undertaken at the request of European authorities to provide support for the euro. The European Central Bank also made intervention purchases of euros on several occasions acting on its own. Late in the year, the euro abruptly changed course and started to move up strongly, reversing over half of its decline of earlier in the year. This recovery of the euro against the dollar appeared to reflect mainly a market perception that, while growth was slowing in both Europe and the United States, the slowdown was much sharper for the United States. For the year as a whole, the dollar appreciated, on net, about 7 percent against the euro.

The European Central Bank raised its policy interest rate target six times by a total of 175 basis points over the first ten months of the year. These increases reflected concerns that the euro's depreciation, tightening capacity constraints and higher oil prices would put upward pressure on inflation. While core inflation—inflation excluding food and energy—

U.S. dollar exchange rate against the euro and the Japanese yen



NOTE. Foreign currency units per dollar. Restated German mark is the mark-dollar exchange rate rescaled by the official conversion factor between the mark and the euro. Last observations are the average of trading days through February 8, 2001.

remained well below the 2 percent inflation target ceiling, higher oil prices pushed the headline rate above the ceiling for most of the year. Real GDP in the euro area is estimated to have increased about 3 percent for 2000 as a whole, only slightly below the rate of the previous year, although activity slowed toward the end of the year. Growth was supported by continued strong increases in investment spending. Net exports made only a modest contribution to growth, as rapid increases in exports were nearly matched by robust imports. Overall activity was sufficiently strong to lead to a further decline in the average euro-area unemployment rate to below 9 percent, a nearly 1 percentage point reduction for the year.

The dollar rose about 12 percent against the Japanese yen over the course of 2000, roughly reversing the decline of the previous year. Early in the year, the yen experienced periods of upward pressure on evidence of a revival of activity in Japan. On several of these occasions, the Bank of Japan made substantial intervention sales of yen. By August, signs of recovery were strong enough to convince the Bank of Japan to end the zero interest rate policy that it had maintained for nearly a year and a half, and its target for the overnight rate was raised to 25 basis points. Later in the year, evidence emerged suggesting that the nascent recovery in economic activity was losing steam, and in response the yen started to depreciate sharply against the dollar.

For the year as a whole, Japanese real GDP is estimated to have increased about 2 percent, a substantial improvement from the very small increase of the previous year and the decline recorded in 1998. Growth, which was concentrated in the first part of the year, was led by private nonresidential investment. In contrast, residential investment slackened as the effect of tax incentives waned. Consumption rebounded early in the year from a sharp decline at the end of 1999 but then stagnated, depressed in part by record-high unemployment and concerns that ongoing corporate restructuring could lead to further job losses. Public investment, which gave a major boost to the economy in 1999, remained strong through the first half of last year but then fell off sharply, and for the year as a whole the fiscal stance is estimated to have been somewhat contractionary. Inflation was negative for the second consecutive year, with the prices of both consumer goods and real estate continuing to move lower.

The dollar appreciated 4 percent relative to the Canadian dollar last year. Among the factors that apparently contributed to the Canadian currency's weakness were declines in the prices of commodities

that Canada exports, such as metals and lumber, and a perception by market participants of unfavorable differentials in rates of return and economic growth prospects in Canada relative to the United States. For the year as a whole, real GDP growth in Canada is estimated to have been only slightly below the strong 5 percent rate of 1999, although, as in most industrial countries, there were signs that the pace of growth was tailing off toward the end of the year. Domestic demand continued to be robust, led by surging business investment and solid personal consumption increases. In the first part of the year, the sustained rapid growth of the economy led Canadian monetary authorities to become increasingly concerned with a buildup of inflationary pressures, and the Bank of Canada matched all of the Federal Reserve's interest rate increases in 2000, raising its policy rate by a total of 100 basis points. By the end of the year, the core inflation rate had risen to near the middle of the Bank of Canada's 1 percent to 3 percent target range, while higher oil prices pushed the overall rate above the top of the range. So far this year, the Bank of Canada has only partially followed the Federal Reserve in lowering interest rates, and the Canadian dollar has remained little changed.

Emerging Market Economies

In emerging market economies, the average growth rate of economic activity in 2000 remained near the very strong 6 percent rate of the previous year. However, there was a notable and widespread slowing near the end of the year, and results in a few individual countries were much less favorable. Growth in developing Asian economies slowed on average from the torrid pace of the previous year, while average growth in Latin America picked up somewhat. No major developing country experienced default or devaluation in 2000, but nonetheless, financial markets did undergo several periods of heightened unrest during the year. In the spring, exchange rates and equity prices weakened and risk spreads widened in many emerging market economies at a time of a general heightening of financial market volatility and rising interest rates in industrial countries, as well as increased political uncertainty in several developing countries. After narrowing at mid-year, risk spreads on emerging market economy debt again widened later in the year, reflecting a general movement on financial markets away from riskier assets, as well as concerns that Argentina and Turkey might be facing financial crises that could spread to other emerging market economies. Risk spreads generally narrowed in the early part of 2001.

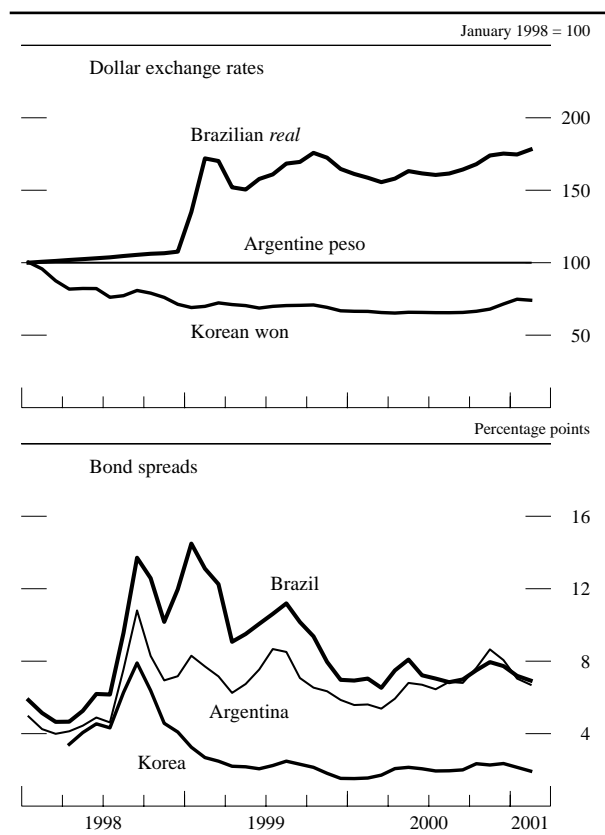
Among Latin American countries, Mexico's performance was noteworthy. Real GDP rose an estimated 7 percent, an acceleration from the already strong result of the previous year. Growth was boosted by booming exports, especially to the United States, favorable world oil prices, and a rebound in domestic demand. In order to keep inflation on a downward path in the face of surging domestic demand, the Bank of Mexico tightened monetary conditions six times last year, pushing up short-term interest rates, and by the end of the year the rate of consumer price inflation had moved below the 10 percent inflation target. The run-up to the July presidential election generated some sporadic financial market pressures, but these subsided in reaction to the smooth transition to the new administration. Over the course of the year, the risk spread on Mexican debt declined on balance, probably reflecting a favorable assessment by market participants of macroeconomic developments and government policies, reinforced by rating upgrades of Mexican debt. During 2000, the peso depreciated slightly against the dollar, but by less than the excess of Mexican over U.S. inflation.

Argentina encountered considerable financial distress last year. Low tax revenues due to continued weak activity along with elevated political uncertainty greatly heightened market concerns about the ability of the country to fund its debt. Starting in October, domestic interest rates and debt risk spreads soared amid market speculation that the government might lose access to credit markets and be forced to abandon the exchange rate peg to the dollar. Financial markets began to recover after an announcement in mid-November that an IMF-led international financial support package was to be put in place. Further improvement came in the wake of an official announcement in December of a \$40 billion support package. The fall in U.S. short-term interest rates in January eased pressure on Argentina's dollar-linked economy as well.

Late in the year, Brazilian financial markets received some negative spillover from the financial unrest in Argentina, but conditions did not approach those prevailing during Brazil's financial crisis of early 1999. For 2000 as a whole, the Brazilian economy showed several favorable economic trends. Real GDP growth increased to an estimated 4 percent after being less than 1 percent the previous two years, inflation continued to move lower, and short-term interest rates declined.

Growth in Asian developing countries in 2000 slowed from the previous year, when they had still been experiencing an exceptionally rapid bounceback from the 1997–1998 financial crises experienced by several countries in the region. In Korea, real GDP growth last year is estimated to have been less than half of the blistering 14 percent rate of 1999. Korean exports, especially of high-tech products, started to fade toward the end of 2000. Rapid export growth had been a prominent feature of the recovery of Korea and other Asian developing economies following their financial crises. In addition, a sharp fall in Korean equity prices over the course of the year, as well as continued difficulties with the process of financial and corporate sector restructuring, tended to depress consumer and business confidence. These developments contributed to the downward pressure on the won seen near the end of the year. Elsewhere in Asia, market concerns over heightened political instability were a major factor behind financial pressures last year in Indonesia, Thailand, and the Philippines. In China, output continued to expand rapidly in 2000, driven by a combination of surging exports early in the year, sustained fiscal stimulus, and some recovery in private consumption. In contrast, growth in both Hong Kong and Taiwan slowed, especially in the latter part of the year. In Taiwan, the exchange

Selected emerging markets



NOTE. The data are monthly. Bond spreads are the J.P. Morgan Emerging Market Bond Index (stripped Brady-bond) spreads over U.S. Treasuries. Last observations are the average of trading days through February 8, 2001.

rate and stock prices both came under downward pressure as a result of the slowdown in global electronics demand and apparent market concerns over revelations of possible weaknesses in the banking and corporate sectors.

Turkey's financial markets came under severe strain in late November as international investors withdrew capital amid market worries about the health of Turkey's banks, the viability of the government's reform program and its crawling peg

exchange rate regime, and the widening current account deficit. The resulting liquidity shortage caused short-term interest rates to spike up and led to a substantial decline in foreign exchange reserves held by the central bank. Markets stabilized somewhat after it was announced in December that Turkey had been able to reach loan agreements with the IMF, major international banks, and the World Bank in an effort to provide liquidity and restore confidence in the banking system.